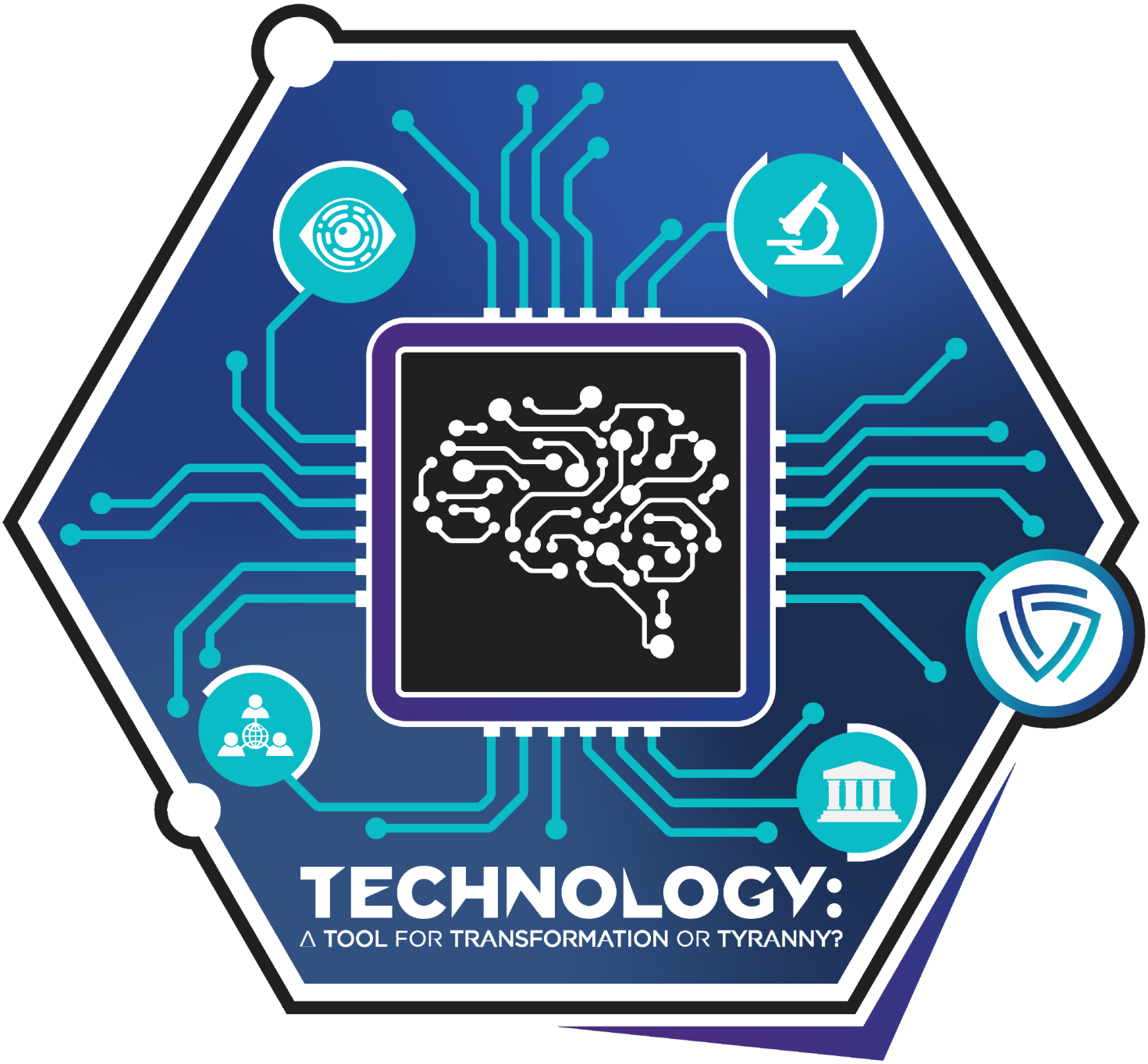
PROGRAM



February 17-22, 2025
Baltimore Convention Center
#AAFS2025

AAFS
AMERICAN ACADEMY OF FORENSIC SCIENCES

JFS MISSION STATEMENT

To advance forensic science research, education, and practice by publishing peer-reviewed articles of the highest quality and impact.

JFS METRICS

Impact Factor: **1.5**

CiteScore: **4**

Accepts Ratio: **39.5%**

JFS JOURNAL OF FORENSIC SCIENCES

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36

days average from submission to first decision

14

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JOURNAL OF FORENSIC SCIENCES

THE OFFICIAL PUBLICATION OF THE AAFS

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ISHI
INTERNATIONAL SYMPOSIUM ON HUMAN IDENTIFICATION
PALM BEACH, FL | NOVEMBER 3-6, 2025

WELCOME LETTER

Christopher R. Thompson, MD
2024-25 AAFS President

It is my pleasure to welcome everyone to Baltimore, Maryland, and the 77th AAFS Annual Scientific Conference. The theme for this meeting is "Technology: A Tool for Transformation or Tyranny," and the program is filled with presentations addressing this topic as it relates to the forensic sciences. This title may sound a bit hyperbolic to some, but technological advances are happening at a remarkable, perhaps exponential pace, and will be ubiquitous in almost every field of forensic science in the near future. These tools (e.g., Artificial Intelligence [AI], forensic genealogy, risk assessment algorithms) have tremendous promise but also great potential peril.

The Keynote, Plenary Session, Interdisciplinary Symposium, workshops, and other presentations will focus on the responsible, ethical, and just use of technology in the forensic sciences. Our keynote speaker, Michael Rogers, will discuss the latest advances in AI and its applications, as well as the new criminal activities it has enabled. The session will close with an overview of the emerging topic of ethical practices and the proper disclosure of AI-assisted work. The Plenary Session will explore technological advancement and its transformative potential through a dynamic and thought-provoking panel of experts, advisers, and other stakeholders, who will share their perspectives on the benefits and risks of technology and AI. The panel will include individuals from the executive, legislative, and judicial branches of the federal government and state governments. The Interdisciplinary Symposium will take a deeper dive into the use of different technologies in the forensic sciences, including the legal implications of the use of such technologies.

We also are always pleased to welcome our Student Academy guests, who can utilize this learning opportunity to get acquainted with a variety of disciplines in the forensic sciences. For slightly more seasoned attendees, our Young Forensic Scientist Forum provides an excellent venue for mentorship and networking. And please take advantage of the Last Word Society presentations and the Bring Your Own Slides forum.

In addition to the excellent scientific content, there are many other activities planned for the week, so please make sure to preview them at www.aafs.org. Some highlights include (but are not limited to): a Monday Welcome Reception for international attendees (sponsored by the International Affairs Committee), a Tuesday AAFS Diversity Outreach Committee Reception and Attendee Welcome Reception, and a Thursday Wine and Cheese Reception. Last but certainly not least, the social events will be capped off by a Closing Reception titled "Club 77." Club 77 promises an evening of excitement, glamour, and good company as we come together to celebrate the culmination of another incredible conference. Indulge in light desserts and drinks, hit the dance floor, or test your luck and skill at our array of casino games, from blackjack to roulette. The evening also offers a meaningful opportunity to give back—a portion of each ticket sold will benefit the work of the Forensic Sciences Foundation. Make sure to bring your gambling chops!

On another note, when you see our staff at the Hilton or around the Baltimore Convention Center, please remember to show them your appreciation for all the hard work they do in putting on this annual conference and on behalf of the Academy membership in general. Their dedication and commitment make this meeting possible, and we owe them our sincerest gratitude.

Lastly, I hope that during (and after) the conference, we "continue the conversation" around the meeting theme on an Academy-wide basis and hope that the future leadership and membership address these issues in as proactive a manner as they can. Based on my experiences with upcoming AAFS leaders and members, I am quite certain that we are in good hands. Welcome to Charm City!

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OFFICERS AND OFFICIALS

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Vice President:	James Caruso, MD
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Secretary:	Marcus Rogers, PhD

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Engineering & Applied Sciences:	Helmut Brosz, BASc
Forensic Nursing Science:	Jamie Ferrell, MBA
General:	Claire Shepard, MS
Jurisprudence:	Pamela King, JD
Odontology:	Gary Bell, DDS
Pathology/Biology:	Chris Milroy, MD, LLB
Psychiatry & Behavioral Science:	Karen Rosenbaum, MD
Questioned Documents:	Linton Mohammed, PhD
Toxicology:	Dan Anderson, MS

Section Officers

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Chair: Debra Zinni, PhD
Secretary: Teresa Wilson, PhD

Criminalistics
Chair: Sheree Hughes, PhD
Secretary: Agnes Winokur, MS

Digital & Multimedia Sciences
Chair: Kathryn Seigfried-Spellar, PhD
Secretary: Joseph Levi White, PhD

Engineering & Applied Sciences
Chair: Carole Chaski, PhD
Secretary: David Pienkowski, PhD

Forensic Nursing Science
Chair: Amy Carney, PhD
Secretary: Janean Fossum, BSN, RN

General
Chair: Brian Janysek, MFS
Secretary: Gina Londino-Smolar, MS

Jurisprudence
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Secretary: Gary McDonald, JD

Odontology
Chair: Denise Murmann, DDS
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Pathology/Biology
Chair: Owen Middleton, PhD
Secretary: Lavinia Iancu, PhD

Psychiatry & Behavioral Science
Chair: Sebastien Prat, MD
Secretary: Giuseppe Troccoli, MD

Questioned Documents
Chair: Kevin Kulbacki, MSFS
Secretary: Tobin Tanaka, BSc

Toxicology
Chair: Diane Moore, PhD
Secretary: Dayong Lee, PhD

2025 Program Committee

Program Chair:	Karen Rosenbaum, MD
Program Co-Chair:	Claire Shepard, MS
Plenary Session:	Dean De Crisce, MD Marla Carroll, BS
Case Break Sessions:	Stephanie Domitrovich, JD, PhD Alex Krotulski, PhD
Poster Sessions:	Melissa Connor, PhD Amy Carney, PhD
Workshops:	Kevin Kulbacki, MSFS Gina Londino-Smolar, MS
Luncheon Seminars:	Carole Chaski, PhD Jason Paroff, JD
Last Word Society:	Kenneth Melson, JD Carla Noziglia, MS
Bring Your Own Slides:	J.C.U. Downs, MD Joseph Prahlow, MD
Student Academy:	Lynn Schneeweis, MS Ginesse Listi, PhD
Interdisciplinary Symposium:	Yong Guan, PhD Katharine Pope, MA
Local Arrangements:	Jennifer Love, PhD
YFSF Representative:	Emily Rue, PhD
Anthropology:	Jaymelee Kim, PhD Rebecca Wilson-Taylor, PhD
Criminalistics:	Lynn Schneeweis, MS Tiffany Rodriguez, MS
Digital & Multimedia Sciences:	Josh Brunty, ScD Christina Malone, MSFS
Engineering & Applied Sciences:	Kurt Weiss, MS
Forensic Nursing Science:	Laura La Cagnina, DNP Jessica Volz, DNP
General:	Brian Clark, MFS Robert Hunkeler, MFS
Jurisprudence:	Colin Bellair, JD Mary Dayton, JD
Odontology:	Khlea Sumani, DMD
Pathology/Biology:	Noemi Procopio, PhD
Psychiatry & Behavioral Science:	George Annas, MD, MPH Marc Cohen, MD
Questioned Documents:	Timothy Campbell, BSc Zain Bhaloo, MSc
Toxicology:	Erin Karschner, PhD Svante Vikingsson, PhD

GENERAL INFORMATION

Registration Desk Hours

Sunday	February 16	1:00 pm	-	5:00 pm
Monday	February 17	6:45 am	-	5:00 pm
Tuesday	February 18	6:45 am	-	6:00 pm
Wednesday	February 19	6:45 am	-	5:00 pm
Thursday	February 20	6:45 am	-	5:00 pm
Friday	February 21	6:45 am	-	4:00 pm

Exhibit Hall Hours

Wednesday	February 19	11:30 am	-	4:00 pm
Thursday	February 20	9:00 am	-	2:00 pm
AAFS Reception	(Exhibits Open)	6:00 pm	-	8:00 pm
Friday	February 21	9:00 am	-	1:00 pm

All times are in the U.S. Eastern Time Zone

Media Statement: The American Academy of Forensic Sciences (AAFS) does not comment on forensic cases or medicolegal investigations. Media releases will be issued by the AAFS Board of Directors only in response to matters deemed pertinent to the business of the Academy. The sitting AAFS President is the only member of the Academy authorized to provide comment on behalf of the Academy. Comments, views, and opinions expressed by all other members of the Academy reflect the comments, views, and opinions of the individual solely.

Registrant Minimum Age: All registrants and presenters at the AAFS Annual Scientific Conference must be at least 18 years old at the time of the conference.

Lost Badge Policy: Lost, misplaced, stolen, or forgotten badges will incur a replacement fee equal to the original purchase amount of your registration. If your badge was complimentary, the fee will be the current, on-site rate.

Author Information: The *Journal of Forensic Sciences* encourages authors to submit previously unpublished reports and papers presented at the AAFS annual conference. For full instructions on manuscript preparation, consult the Information for Authors available at: https://www.aafs.org/resources/journal-of-forensic-sciences/information-for-authors/.

Manuscripts must be submitted electronically via the *Journal of Forensic Sciences* Manuscript Central site: http://mc.manuscriptcentral.com/jofs. For questions, please contact: jfs.editor@att.net.

Reminders:

- Video and/or audio recording of any session(s) or parts thereof is not permitted without prior approval from the AAFS.
- English is the official language of the AAFS and its meetings; neither oral nor written translations will be provided.
- Although precautions are taken to prevent schedule changes, speakers and program schedules may change due to unforeseen circumstances.
- As a courtesy to others, please silence your cell phone when attending the sessions.
- The AAFS has a zero-tolerance policy for discrimination or harassment of any kind, including bullying, offensive language, inappropriate gestures, acts of violence, or any other form of harassment. We also require that you refrain from any disruptive behavior that undermines our constructive and inclusive environment. In digital interactions, carefully consider the potential impact of sharing sensitive or triggering content. Be mindful of cultural differences and diverse perspectives. Treat others with respect. Any inappropriate behavior during a presentation will not be tolerated and may result in being removed from the session.

Future AAFS Annual Conferences

2026 AAFS Annual Conference
February 9-14, 2026
Ernest N. Morial Convention Center
New Orleans, LA

2027 AAFS Annual Conference
February 15-20, 2027
Rosen Shingle Creek Convention Center
Orlando, FL

2028 AAFS Annual Conference
February 21-25,2028
Caesar's Palace
Las Vegas, NV

SEXUAL MISCONDUCT RESOURCES AND INFORMATION

AAFS takes the safety of its meeting attendees seriously and strives to promote a welcoming experience for all. In order to promote a safe environment for meeting attendees, we have resources for meeting attendees about sexual misconduct.

What is sexual misconduct?
Sexual misconduct is an umbrella term that includes different types of sexual violence, including sexual harassment and sexual assualt. (https://www.rainn.org/types-sexual-violence)

What is sexual harassment?
Sexual harassment includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature in the workplace or learning environment, according to the Equal Employment Opportunity Commission. (www.rainn.org/articles/sexual-harassment?gclid=CjwKCAjw2P-KBhByEiwADBYWCqz0g1E4mRJrXf5TN-EQ-JYXo2Q7USO-Yrtu1c9kIaUmTmrEtpmsaxoCbiQQAvD_BwE)

What is sexual assault?
The term sexual assault refers to sexual contact or behavior that occurs without explicit consent of the victim.
(www.rainn.org/articles/sexual-assault)

What do I do if I experience sexual misconduct during the annual conference?
- Call 911.
- Call the AAFS ‘‘safe person’’ number below or contact another member of the AAFS staff.
- Locate security personnel at the conference venue.
- Report conduct to the AAFS Ethics Committee.
- Refer to the resources list below.

What do I do if I have witnessed sexual misconduct during the annual conference?
- Talk to the victim/survivor. Encourage them to review this resource page.
- Direct them to the AAFS ‘safe person’ or another member of the AAFS staff
- Direct them to security personnel at the conference venue.
- If the person is in immediate danger, call 911.

Resources:

AAFS “safe person”: 917-678-7197

Maryland Crimes Victims’ Resource Center
301-952-0063
www.mdcrimevictims.org

Baltimore Police Department
410-637-8849
www.baltimorepolice.org/contact-baltimore-police-department
National Sexual Assault Hotline: 1-800-656-4673
National Domestic Violence Hotline: 1-800-799-7233

RAINN
www.rainn.org
Resources include definitions, statistics, crisis line, and crisis chat.

National Sexual Violence Resource Center
www.nsvrc.org
Resources for survivors, including definitions, where to get help, and post-assault recovery.

National Domestic Violence Hotline
www.thehotline.org
Resources include definitions, local resources/legal aid, crisis line, and crisis chat.

No member or Affiliate of the Academy shall participate in unacceptable behavior at an annual Academy conference, to include times not specifically in session or at gatherings, social or otherwise, not specifically a part of the Academy program. Unacceptable behavior includes, but may not be limited to, harassment; intimidation; discrimination; physical abuse; physical assault, verbal abuse; inappropriate use of nudity or sexual images; threats; stalking; unwanted sexual comments or advances; or derogatory comments related to gender, gender identity and expression, sexual orientation, disability, physical appearance, body size, race, religion, national origin, or political positions.

CONFERENCE EXTRAS

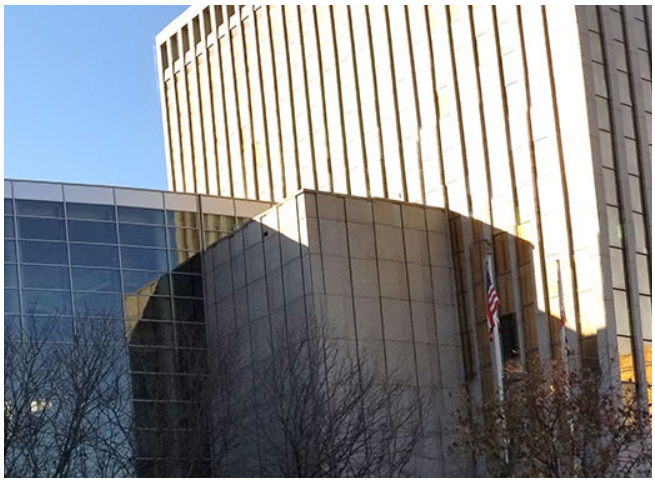
The 2025 conference offers not only top-tier educational content, but a number of ways for you to enjoy Baltimore, connect with fellow attendees, and maximize your experience throughout the week. Check out some of the below opportunities offered to attendees of the AAFS Annual Scientific Conference:

TUESDAY – FEBRUARY 18

Facility Tour: Baltimore Crime Lab

Take a peek inside the world-class facility home to the Baltimore Crime Lab and Forensic Science and Evidence Services Division of the Baltimore Police Department. Their team is opening their doors to allow AAFS attendees a special look at how they operate to support the region. Limited space will be available, and tours will be approximately 2.5 hours. Transportation to/from the facility will be provided.

Special thanks to Division Chief Rana Dellarocco, MSFS, for partnering with us to offer this opportunity.



FRIDAY – FEBRUARY 21 | 8:00 PM

Closing Celebration: "Club 77"

Feeling lucky? It's all 7's at Club 77, our casino-themed closing celebration! Try your hands at the game tables, dance the night away, and even possibly win a weekend getaway package to Las Vegas, courtesy of Caesar's Palace!

Taking place Friday evening, your ticket includes music, desserts, entertainment, games, and more. Dress your best to impress lady luck and close out the conference with your friends and colleagues!

Note: This event is ticketed and is not included in your registration. You may purchase additional tickets for any guests you may wish to invite, even if they are not registered for the main conference itself. All guests must be 18 years or older.

Cost: $77 per ticket

A portion of each ticket will support the programs of the Forensic Sciences Foundation and the Humanitarian and Human Rights Resource Center.

AWARDS

Distinguished Fellow

Jennifer F. Limoges, MS

Ms. Limoges is the Associate Director/Toxicology at the New York State Police Forensic Investigation Center. She received her BS in Chemistry from Clarkson University and her MS in Forensic Science from the University of New Haven. She began working for the New York State Police as a forensic scientist in 1994.

Ms. Limoges' primary area of expertise is impaired driving toxicology. She helped launch New York State's evidential oral fluid drug testing program in 2023. She co-authored the 2013 *Journal of Analytical Toxicology* publication, "Recommendations for Toxicological Investigation of Drug Impaired Driving and Motor Vehicle Fatalities," as well as the 2017 and 2021 updates. She also co-authored the National Traffic Law Center's "Drug Toxicology for Prosecutors" monograph. She regularly provides training to toxicologists, law enforcement officers, attorneys, judges, and other traffic safety stakeholders at the local and national level.

Ms. Limoges is also very passionate about forensic science standards. She worked to establish the Academy Standards Board (ASB) and currently serves as the Chair. She is a member of the ASB Toxicology Consensus Body and is a past member of the Organization of Scientific Area Committees (OSAC) Toxicology Subcommittee and Scientific Working Group for Forensic Toxicology (SWGTOX). She regularly assists toxicology laboratories to reach conformance and educates stakeholders on the benefits of standards for quality testing, improved data collection, and equitable justice.

Ms. Limoges is an active member of the American Academy of Forensic Sciences (AAFS) and Society of Forensic Toxicologists (SOFT). She regularly contributes to the significant work done by the joint SOFT/AAFS Drugs & Driving and SOFT/AAFS Oral Fluid Committees. She is a Past President of SOFT, a Past President of the Northeastern Association of Forensic Scientists (NEAFS), a member of the International Association of Chemical Testing (IACT), and is certified by the American Board of Criminalistics (ABC-GKE). Ms. Limoges is part of the National Safety Council's Alcohol, Drugs, and Impairment Division (NSC ADID) and has been on their Executive Committee since 2008. She received the NSC ADID's prestigious Robert F. Borkenstein Award in 2023 for her outstanding contributions to the field of alcohol and drug-related traffic safety.

Outstanding Early Career Achievement in Forensic Science Award

Alex J. Krotulski, PhD

Humanitarian and Human Rights Resource Center's Clyde Snow Award

Abuelas de Plaza de Mayo

FSF Warren-Young Scholarship

Lacey R. Dougharty, BS

FSF Emerging Forensic Scientist Award

Sydney Q. Chizmeshya, MSc
Megan F. McGuire
Enrica Macorano, MD

FSF Jan S. Bashinski Criminalistics Graduate Thesis Assistance Grant

Jaycie Esteban, BS

NEAFS Regional Award

Megan Chambers, PhD

SECTION AWARDS

The Section Awards will be presented during Section Business Meetings on Wednesday, February 19.

Section Award Honorees

Anthropology Section's	
Ellis R. Kerley Research Award	Katherine E. Weisensee, PhD
J. Lawrence Angel Award	Alexis L. VanBaarle, MS Debra
Section Service Award	Prince Zinni, PhD
	Teresa Wilson, PhD
Criminalistics Section's	Charlotte J. Word, PhD
Paul L. Kirk Award	Karolyn L. Tontarski, MS
Mary E. Cowan Outstanding Service Award	Jack Hietpas, PhD
Meritorious Service Award	
Digital & Multimedia Sciences Section's	Jason R. Lewis, PhD
Outstanding Case Study Award	Brandon Epstein, MS
Outstanding Research Award	Nina Matulis, MS
Outstanding Student Research Award	
Engineering & Applied Sciences Section's	Helmut G. Brosz, BASc
Steven Charles Batterman Award	
Forensic Nursing Science Section's	Nancy Downing PhD, RN, FAAN
Forensic Nurse Scientist Award	Virginia A. Lynch MSN, RN, FCNS
Forensic Nurse Innovator Award	Jamie Ferrell MBA, BSN, RN
Distinguished Forensic Nursing Service Award	
General Section's	Micaela A. Ascolese, MS
Robert Gaffney Achievement Award	Brett E. Harding, MBA
John R. Hunt Award	
Jurisprudence Section's	Pamela A. W. King, JD
Harold A. Feder Jurisprudence Section Award	
Odontology Section's	Kenneth W. Aschheim, DDS
Lester Luntz Odontology Award	
Pathology/Biology Section's	Nasim Haghandish, MD, PhD James
Best Resident Paper Award	L. Caruso, MD
Milton Helpern Award	Baneshwar Singh, PhD
Award for Achievement in the Forensic Life Sciences	
Toxicology Section's	Michael T. Truver, PhD
Irving Sunshine Award	Jesse Meekins, BS
June K. Jones Scholarship Award	Sara Walton, MS
	Michael H. Baumann, PhD
Annual Lectureship in Toxicology	

BUSINESS MEETINGS

Attend Your Section's Annual Business Meeting!

Wednesday, February 19

1:00 pm	-	3:15 pm	Anthropology
1:00 pm	-	2:30 pm	Criminalistics
1:30 pm	-	3:15 pm	Digital & Multimedia Sciences
1:30 pm	-	3:15 pm	Engineering & Applied Sciences
1:30 pm	-	3:00 pm	Forensic Nursing Science
1:30 pm	-	3:15 pm	General
1:45 pm	-	3:15 pm	Jurisprudence
2:00 pm	-	3:15 pm	Odontology
1:30 pm	-	3:00 pm	Pathology/Biology
1:15 pm	-	3:15 pm	Psychiatry & Behavioral Science
1:00 pm	-	3:00 pm	Questioned Documents
1:30 pm	-	3:15 pm	Toxicology

All times are in the U.S. Eastern Time Zone

Attend the AAFS Annual Business Meeting for a Chance to Win a Complimentary Meeting Registration!

The Annual Business Meeting of the Fellows and Members of the AAFS will be held on Wednesday, February 19, at 3:45 pm. It is essential that all Fellows and Members attend this very important meeting in order to reach a quorum for the voting process. Agenda items include the election of 2025-26 Officers, consideration of bylaw amendments, a summary of AAFS activities during the past year, and plans for the future.

As an incentive to attend, all Fellows and Members present will automatically be entered in a drawing for a complimentary meeting registration to attend the 2026 AAFS Annual Scientific Conference in New Orleans, LA.

FINANCIAL CONTRIBUTORS

The American Academy of Forensic Sciences would like to thank the following for their contribution to the 77th Annual Scientific Conference:

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CONTINUING EDUCATION

General Information

All meeting sessions are lectures with one or more speakers. Continuing professional education credits will be offered for physicians, dentists, and attorneys. Continuing education credit applications will be submitted for physicians, nurses, and dentists. Attorneys may request CLE credit; please see the "Legal" section.

To register for continuing education credit, please complete the appropriate section on the meeting Registration Form. An individual must be a registrant to obtain continuing education credit. Fees charged for continuing education credits are based on projected costs of providing the various types of continuing education credit. The AAFS has adopted a user-pay approach so that those individuals who benefit from the specific continuing education program are responsible for the costs incurred.

In order to be in compliance with accrediting organizations, introductions and breaks have been deducted from the total hours. Please note that continuing education credit is not available for all sessions. All continuing education credit recipients will receive certificates with the number of continuing education hours awarded. Attendance reports are filed with the appropriate state or national agency, as required.

Learning Objectives of the AAFS Continuing Education Program

- Recognize the perspectives and roles of the various forensic science disciplines
- Assess current concepts and practices
- Discuss relevant forensic science issues related to science, evidence and the law
- Identify strategies for researching descriptive studies, technology and methods, diagnostics, interpretation and testimony
- Review administrative functions performed by forensic scientists

American Board of Criminalists Approval

The American Academy of Forensic Sciences (AAFS) is approved by the American Board of Criminalistics (ABC) to offer continuing education points for approved workshops for criminalists and forensic scientists. The ABC maintains responsibility for the program, and credit may be awarded to ABC Fellows, Diplomates, and Affiliates.

Overall Purpose and Objective Statements for Major Aspects of AAFS Programs

Workshops and Special Sessions

Purpose: To provide an opportunity for experts to present material and to lead discussion and practical exercises related to forensic science methods, procedures, diagnosis, investigation, professional relations and practices, communication, administration, and professional development.
Learning Overview: Detailed individually in each workshop and special session announcement and description.

Plenary and Keynote Sessions

Purpose: To provide a multidisciplinary presentation and discussion of issues related to the forensic science profession.
Learning Overview: Attendees will be able to: a) identify the challenges the forensic science profession has faced and will continue to face in terms of ensuring quality; b) identify ways to deal with the variances each challenge presents; and c) identify the entities which have influence over setting the quality standards in the field of forensic science.

Oral and Poster Section Scientific Sessions

Purpose: To provide an opportunity for presentation and discussion of case reports, descriptive studies, review presentations, research, administrative issues, and investigative/diagnostic methods regarding topics and issues of importance to a primary discipline among the forensic sciences.
Learning Overview: To meet the educational objectives stated by each presenter for his/her/their presentation.

Last Word Society

Purpose: To provide a retrospective forensic analysis of historical events and to provide education about the history and evolution of forensic sciences as well as the modern methods and technologies used to re-examine past events of forensic science interest. Emphasis is placed on the evaluation of the original opinions and case outcome and on the development of newer hypotheses based on the re-analysis.
Learning Overview: To meet the educational objectives stated by each presenter for his/her/their presentation.

CONTINUING EDUCATION

Guidelines For Claiming Credit

As the sponsor of Continuing Education Credit, the AAFS recognizes that the forensic science disciplines are inextricably linked and that interdisciplinary knowledge is critical to promote competence in forensic practice. As a result, the claiming of credit for varous continuing education activities related to medicine, dentistry, law, and other forensic disciplines need not be limited to one's primary professional specialty. For example, a forensic pathologist from the Pathology/Biology Section may gain very useful and relevant information by attending a presentation in the Anthropology Section scientific session. It is appropriate to claim continuing medical education credit for that session. Many other examples exist where the claiming of continuing education credit is appropriate for attending sessions that cover material related to, but which lay outside of, one's primary professional area of expertise.

It is the conference attendee's responsibility to document which program sessions were attended and to determine those sessions for which continuing education credit may be claimed. The AAFS operates under the assumption that meeting attendees will, in general, be unlikely to attend sessions that will not be beneficial to their professional practice and that the claim for continuing education credit is justified if a session contains scientific or practice-related information that may bring new knowledge, may affirm current knowledge, or may provide information that could possibly modify one's professional practices.

Those who wish to receive continuing education credit must register and pay the Continuing Education Credit fee during registration. CE Credit Request instructions will be made available before the conference, and credit must be claimed using the online CE portal. AAFS will provide CE Credit worksheets on-site for tracking of applicable hours.

Joint Accreditation Statement

JOINTLY ACCREDITED PROVIDER™
INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, this activity has been planned and implemented by the Postgraduate Institute for Medicine and the American Academy of Forensic Science. Postgraduate Institute for Medicine is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Physician Continuing Medical Education Credit

The Postgraduate Institute for Medicine designates this live activity for a maximum of 37.5 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Dental Continuing Education Credit

This continuing education activity has been planned and implemented in accordance with the standards of the ADA Continuing Education Recognition Program (ADA CERP) through joint efforts between Postgraduate Institute for Medicine and the American Academy of Forensic Sciences.

Postgraduate Institute for Medicine is an ADA CERP Recognized Provider. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of the credit hours by boards of dentistry. The Postgraduate Institute for Medicine designates this activity for 37.5 continuing education credits. Concerns or complaints about a CE Provider may be directed to the provider or to the Commission for Continuing Education Provider Recognition at www.ada.org/cerp.

Legal Continuing Education Credit

Continuing legal education credit will be awarded on an hour-for-hour basis. Attorneys may file the AAFS-issued CLE certificate with their respective state bars. Please note that AAFS is not a pre-approved provider for any state. Each claimant is responsible for any CLE credit approval requirements, including any claim applications, documentation, or fees required in order to submit their CLE credit to their respective state board.

Non Physician Continuing Education Credit

A general non physician certificate of attendance will be available.

General Continuing Education Credit

General continuing education credit is offered for those practicing the various forensic science disciplines not represented in the aforementioned list.

Nursing Continuing Education Credit

The Postgraduate Institute for Medicine designates this live activity for a maximum 37.5 Continuing Nursing Education (CNE) credits. Nurses should claim only the credit commensurate with the extent of their participation in the activity.

DIVERSITY AND INCLUSION IN FORENSIC SCIENCE FORUM AND RECEPTION

Open to All Meeting Registrants

Tuesday, February 18, 2025 **8:00 pm - 10:00 pm**

Moderated by the AAFS Diversity Outreach Committee

The goal of the Diversity Outreach Committee (DOC) Session is to enlighten and initiate dialog regarding diversity, equity, and inclusion initiatives within the AAFS and the greater forensic science community. Participants will hear from an invited speaker on their perspectives and experiences on issues related to diversity and inclusion. The DOC hopes that this interactive session will promote dialog on navigating diversity, equity, and inclusion within forensic science throughout an ever-changing social climate.

This year's session will focus on the hundreds of innocent and currently incarcerated prisoners in the United States. Of those, close to 58% are Black/African American, and over half of all wrongfully incarcerated have had faulty forensics at the heart of their cases. Join the DOC as we have a fireside chat with both Marvin Andersen, a wrongfully convicted exoneree, and a member of the Innocence Project staff as we discuss the role, implications, and impacts of forensic science in wrongful convictions and how the fields can help with exoneration efforts.

MENTORSHIP PROGRAM GATHERING

Tuesday, February 18, 2025 **4:30 pm - 6:00 pm**

If you are an up-and-coming forensic scientist interested in being partnered with an experienced colleague who can advise you in your career progression, help you network, and assist in learning new skills, then please consider signing up for the AAFS Mentorship Program.

The 2025 Mentorship Program Gathering will bring together those mentees with mentors who are willing to help guide personal growth within the individual AAFS sections. Refreshments will be served.

For those unable to make it to Baltimore or have a conflict, but are interested in the Mentorship Program, please let us know by contacting mentorship@aafs.org.

STUDENT ACADEMY

Pre-Registration Required ($35/Person)

Tuesday, February 19, 2025 **9:00 am - 2:00 pm**

The purpose of the Student Academy of Forensic Sciences is to bring to the attention of high school students the vital importance of the application of scientific principles to the administration of justice. It acquaints the participants with the role of the forensic science disciplines in the legal system as well as the education and training required for the career in each discipline.

Chair:
Lynn A. Schneeweis, MS
Massachusetts State Police Crime Laboratory
Maynard, MA

Co-Chair:
Ginesse A. Listi, PhD
Louisiana State University
Baton Rouge, LA

Faculty:
Anthropology
Lauren R. Pharr Parks, PhD
Memphis, TN

Criminalistics:
Kelly L. Knight, MS
George Mason University
Fairfax, VA

Digital & Multimedia Sciences
Douglas Lacey, MS
BEK TEK LLC
Stafford, VA

Engineering & Applied Sciences:
Roy Crawford, PE
R.R. Crawford Engineering, Inc.
Whitesburg, KY

Forensic Nursing Science
Amy Y. Carney, PhD
California State University
San Marcos, CA

General:
Natalie M. Borgan, MS
FBI
Detroit, MI

Jurisprudence:
M.J. Menendez, JD
NMS Labs
Willow Grove, PA

Odontology:
Lillian A. Nawrocki, DDS
Orlando, FL

Pathology/Biology:
Jamie Downs, MD
forensiX, LLC
Johns Island, SC

Psychiatry & Behavioral Science:
Karen B. Rosenbaum, MD
Psychiatrist
New York, NY

Questioned Documents:
Meg O'Brien, MS
U.S. Secret Service
Washington, DC

Toxicology:
George F. Jackson, PhD
NJ Office of the Chief State Medical Examiner
Burlington Township, NJ

Ashraf Mozayani, PhD
Texas Southern University
Houston, TX

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STUDENT ACADEMY

Program:

9:00 am - 9:10 am	**Introduction** *Lynn A. Schneeweis, MS*
9:10 am - 9:20 am	**Welcome** *Christopher R. Thompson, MD*
9:20 am - 9:30 am	**"The Case"** *Ginesse A. Listi, PhD*

The Forensic Sciences Group I Disciplines

9:30 am - 10:45 am	**Pathology/Biology** *Jamie Downs, MD*
	Anthropology *Lauren R. Pharr Parks, PhD*
	Odontology *Lilliian A. Nawrocki, DDS*
	Toxicology *George F. Jackson, PhD; Ashraf Mozayani, PhD*
	Digital & Multimedia Sciences *Douglas Lacey, BS, MS*
	Forensic Nursing Science *Amy Y. Carney, PhD*
10:45 am - 11:00 am	**Q&A, Assignment, and Break**

The Forensic Sciences Group II Disciplines

11:00 am - 12:15 pm	**General** *Natalie M. Borgan, MS*
	C**riminalistics** *Kelly L. Knight, MS*
	Questioned Documents *Meg O'Brien, MS*
	Engineering & Applied Sciences *Roy Crawford, BSME*
	Psychiatry & Behavorial Science *Karen B. Rosenbaum, MD*
12:15 pm - 1:30 pm	**Lunch and Student Trivia**
1:30 pm - 1:45 pm	**Case Conclusion** *M.J. Menendez, JD*
1:45 pm - 2:00 pm	**Wrap-Up**

All times are in the U.S. Eastern Time Zone

FEPAC SESSION

Accreditation of Forensic Science Academic Programs

Tuesday, February 18, 2025 ***Pre-Registration Not Required—Open to All Meeting Attendees*** **8:30 am – 12:45 pm**

Chair:
Heidi Eldridge, PhD
The George Washington University
Washington, DC

Commissioner:
Pamela Marshall, PhD
Duquesne University
Pittsburgh, PA

Commissioner:
Amy Brodeur, MFS
Boston University School of Medicine
Boston, MA

Commissioner:
Thomas Brettell, PhD
Cedar Crest College
Allentown, PA

Commissioner:
A. Karl Larsen, PhD
University of Illinois
Chicago, IL

Learning Overview: Upon completion of this session, the participant should be able to understand the process of accreditation through the AAFS FEPAC mechanism and be able to participate in the process as a reviewer of academic programs. Participants from academic programs will also learn about the process of accreditation from different perspectives.

Program Description: This session has been developed to assist academic institutions offering undergraduate and graduate degree programs in forensic science and forensic digital evidence to prepare for the accreditation process through the FEPAC. This session will also assist future on-site evaluators (academic and practitioners) to prepare for on-site evaluations of academic programs. Successful completion of this session will qualify participants for consideration to serve as on-site evaluators for FEPAC in the future (please note that participants must still meet other FEPAC requirements, such as membership in the AAFS and designation as either a practitioner or academician). This training session will highlight updates to the FEPAC Standards for Accreditation and provide valuable information for both program directors and on-site evaluators.

The FEPAC is a standing committee of the AAFS with a membership that includes five educators, five forensic science practitioners, and a public member as voting members. The mission of the FEPAC is to maintain and enhance the quality of forensic science education through a formal evaluation and recognition of college-level academic programs. The FEPAC has been accrediting programs since 2004. The primary function of the committee is to develop and maintain standards and to administer an accreditation program that recognizes and distinguishes high-quality undergraduate and graduate forensic science programs. Forty-five institutions comprising a total of 51 academic programs are currently accredited. Additional information on FEPAC can be found on the FEPAC website.

Program:

8:30 am - 9:00 am	**Introduction and Welcoming Remarks/Module 1: What to Know About FEPAC** *Heidi Eldridge, PhD*
9:00 am - 9:30 am	**Module 2: An Overview of the FEPAC Application Process** *Thomas Brettell, PhD*
9:30 am - 10:00 am	**Module 3: A Review of Self-Study Standards 3.0—General for All Programs** *Pamela Marshall, PhD*
10:00 am - 10:15 am	**BREAK**
10:15 am - 10:45 am	**Module 4: A Review of Self-Study Standards 4.0—Undergraduate Programs** *Pamela Marshall, PhD*
10:45 am - 11:15 am	**Module 5: A Review of Self-Study Standards 5.0—Graduate Programs** *A. Karl Larsen, PhD*
11:15 am - 11:45 am	**Module 6: Accreditation Decisions and Categories, Appeals Process, Annual Reports, Substantive Changes, and Post-Visit Survey** *Heidi Eldridge, PhD*
11:45 am - 12:15 pm	**Module 7: FEPAC On-Site Evaluator Training** *Amy Brodeur, MFS*
12:15 pm - 12:45 pm	**Questions and Answers** *FEPAC Commissioners and Accreditation Manager*

STANDARDS FROM AROUND THE WORLD

S1 Standards Around the World: How Is the World of Standards Influencing the Future of Forensics?

Monday, February 17, 2025 **8:30 am – 5:00 pm** **CE Hours:** 7.5

Presenters:

Teresa L. Ambrosius, BA
AAFS Standards Board
Colorado Springs, CO

Erin P. Forry, MS
RTI International
Research Triangle Park, NC

Allison Getz, MS
National Institute of Standards and Technology
Gaithersburg, MD

Christoph Hemme, DMD
German Bundeswehr/NATO
Munich, Germany

Samiah Ibrahim, BA, BSc
ForensInk, Ottawa
Ontario, Canada

Brian Milewski
ASTM International
West Conshohocken, PA

Mark Mogle, BS
U.S. Department of Justice
ICITAP
Washington, DC

Niamh Nic Daeid, PhD
Leverhulme Research Centre for Forensic Science
University of Dundee
Dundee, Scotland

Antonel Olckers, PhD
African Academy of Forensic Sciences & DNAbiotec
Pretoria, South Africa

Carolina Rojas, MFS
Department of Forensic Sciences
Organismo de Investigación Judicial
Poder Judicial
San Joaquín, Heredia, Costa Rica

Sheila Willis, DSc
Leverhulme Research Centre for Forensic Science
University of Dundee
Dundee, Scotland

Agnes D. Winokur, PhD
Drug Enforcement Administration
Miami, FL

Ivana Wolff, MA
International Criminal Court
Mendoza, Argentina

Program Description: Multiple forensic and standards organizations around the world are working with the forensic practitioners and partnering with respective stakeholders across the standards community to develop standards that can increase reliability on forensic analysis results and public trust in the forensic disciplines. These responsive programs and activities are designed to engage professionals across the world of standards and conformity assessment and ensure the strength and efficacy standardization.

There are numerous routes to the development of standards around the world. ISO, the International Organization for Standardization is a non-governmental organization that develops and publishes standards for products, processes, services, and systems. They also help facilitate global trade by providing common standards across different countries. In the US, the American National Standards Institute (ANSI) accredits standards developing organizations that develop discipline specific standards. National Standards Bodies (NSB) are organizations that prepare standards for global use. Each country or economy usually has one recognized NSB.

The morning will have presentations from non-US labs and how they are implementing and getting involved in standards development. An international Forensic Science Academy and a National Standards Body on their involvement with the development and implementation of Forensic Science Standards. In addition, information will be presented on how international standards have been addressing the emergence of machine learning and artificial intelligence, as well as the challenges when developing these standards.

The afternoon will focus on ISO and the TC on Forensics, NATO development of standards, a perspective on international standards from a university, and law enforcement development organization.

Educational Objectives: After attending this presentation, attendees will have a better understanding of how labs and organizations around the world are developing and implementing both US and International Standards. Attendees will also have a better understanding of how they can get involved in standards development around the world.

Impact Statement: The presentation will impact the forensic science community by creating greater awareness of how standards are currently being drafted, used, and implemented internationally and the impact of standards in forensic sciences.

STANDARDS FROM AROUND THE WORLD

S1 Standards Around the World: How Is the World of Standards Influencing the Future of Forensics?

Program:

8:30 am - 8:45 am	**Welcome and Introduction** *Samiah Ibrahim, BA, BSc*
8:45 am - 9:15 am	**Introduction to the Forensic Standards** *Teresa L. Ambrosius, BA; Agnes D. Winokur, PhD; Allison Getz, MS*
9:15 am - 9:45 am	**From Vision to Reality: Costa Rica's Model in Advancing Forensic Science Through Standards** *Carolina Rojas, MFS*
9:45 am - 10:15 am	**Implementation Standards in Laboratory Development** *Sheila Willis, DSc*
10:15 am - 10:30 am	**International Standards in Forensic Anthropology** *Ivana Wolff, MA*
10:30 am - 11:00 am	**International AI Standards** *Agnes D. Winokur, PhD*
11:00 am - 11:30 am	**African Academy of Forensic Sciences** *Antonel Olckers, PhD*
11:30 am - 12:00 pm	**Morning Q&A**
12:00 pm - 1:30 pm	**BREAK**
1:30 pm - 2:00 pm	**ASTM and International Standards** *Brian Milewski*
2:00 pm - 2:30 pm	**ISO Forensics Committee on ISO Goals Projects** *Erin Forry, MS*
2:30 pm - 3:00 pm	**NATO Implementation/Development of Standards** *Christoph Hemme, DMD*
3:00 pm - 3:30 pm	**International Standards – University Perspective** *Niamh Nic Daeid, PhD*
3:30 pm - 4:00 pm	**International Law Enforcement Development Organization ICITAP (DOJ)** *Mark Mogle, BS*
4:00 pm - 5:00 pm	**Afternoon Q&A**

YOUNG FORENSIC SCIENTISTS FORUM

Open to All Meeting Registrants—Pre-Registration Encouraged

S2 Back to Your Future: Forensic Opportunities in the AI Era

Tuesday, February 18, 2025 **8:00 am – 5:30 pm** **CE Hours:** 7.5

YFSF Chair:
Sara C. Zapico, PhD
New Jersey Institute of Technology
Smithsonian Institution
Newark, NJ

Presenters:
Joe Adserias-Garriga, PhD
Mercyhurst University
Erie, PA

Joanna Collins, MFS
LINUS Investigations and Consulting
San Antonio, TX

Victoria M. Dominguez, PhD
Lehman College, CUNY
Bronx, NY

Sarah Ellingham, PhD
International Committee of the Red Cross
Schwarzenbek, Germany

Brandon Epstein, MS
Magnet Forensics
Freehold, NJ

Joe Adserias-Garriga, PhD
Mercyhurst University,
Erie, PA

Maryann Hobbs, PhD
SNA International
Honolulu, HI

Cheryl Hunter
American Academy of Forensic Sciences
Colorado Springs, CO

Douglas S. Lacey, MS
BEK TEK LLC
Stafford, VA

Steven B. Lee, PhD
San Jose State University and FIU
Miami, FL

Christina A. Malone, MSFS
USACIL
Atlanta, GA

Katherine N. Scafide, PhD, RN
George Mason University
Fairfax, VA

Valerie Sgheiza, PhD
SNA International
Joint Base Pearl Harbor-Hickam, HI

Christopher Thompson, MD
David Geffen School of Medicine at UCLA
Los Angeles, CA

Dirk M. Vastrick, BA
Dirk Vastrick Presents
Spokane Valley, WA

Program Description: The overall theme of the 2025 AAFS Conference is *Technology: A Tool for Transformation or Tyranny?* This year the YFSF Committee has chosen the theme *Back To Your Future: Forensic Opportunities In the AI Era* to showcase the various career paths young forensic scientists can choose, particularly focused on technological specialties, but also displaying how new technologies impact current forensic practices. This full-day session will present the opportunity for attendees to learn about the many career paths one can take in the forensic science community, and how each plays a unique role in advancing the field.

The speakers have a vast range of knowledge and experiences that will shed light on the ways forensic scientists use technology in the pursuit of justice. Specifically, our presenters will showcase various disciplines in forensic science, speak about performing research in the field, and offer professional development advice as well as international perspectives and practices. The YFSF offers this session in an effort to integrate young professionals and students into the field through presentations by professionals with significant experience in forensic science. Further, the session this year will offer a resume review workshop, so do not forget to bring your updated resume to the session! We will offer an end-of-the-day mixer for attendees to have an opportunity to meet and speak with the session's presenters as well as other distinguished professionals representing a multitude of forensic science disciplines and expertise.

Educational Objectives: The Young Forensic Scientists Forum (YFSF) offers students and young professionals the opportunity to interact with professionals in the forensic science community as they begin their careers. This session presents attendees with the chance to learn about the multitude of careers available in forensic science as well as develop professional skills that are essential for the job-hunting process. Our mission is to provide the education, mentorship, and resources necessary to champion students and young forensic scientists to promote interest, membership, and participation with AAFS and the forensic science community for years to come.

Impact on the Forensic Science Community: After attending this session, attendees will have a better understanding of the diversity of roles and career paths in the forensic science community and how each plays an integral part in furthering the field on a national and international level. Additionally, attendees will have the opportunity to sharpen their professional skills in resume writing and making impactful introductions.

S2 Back to Your Future: Forensic Opportunities in the AI Era

Program:

8:30 am - 8:45 am	**Introduction to the Special Session** *Maryann Hobbs, PhD; Sai Zapico, PhD*
8:45 am - 9:10 am	**Careers in Forensic Psychiatry** *Christopher Thompson, MD*
9:10 am - 9:30 am	**Forensic Sciences: Creating Your Path** *Joanna Collins, MFS*
9:30 am - 9:50 am	**AAFS Membership** *Cheryl Hunter*
9:50 am - 10:20 am	**The Young Forensic Scientist's Compass: Navigating Careers and Growth** *Mirna Ghemrawi, PhD*
10:20 am - 10:30 am	**BREAK**
10:30 am - 11:00 am	**Illuminating the Invisible: Leveraging AI and Alternate Light for Forensic Bruise Detection** *Katherine Scafide, PhD, RN*
11:00 am - 11:30 am	**Getting Hired Faster and Better: Who Do AI Tools Really Cheat?** *Dirk Vastrick, BA*
11:30 am - 12:00 pm	**Digital and Multimedia Forensics: One "Byte" at a Time** *Doug Lacey, MS*
12:00 pm - 1:00 pm	**BREAK**
1:00 pm - 1:20 pm	**Not All Black and White: Developing a Career in Digital and Multimedia Forensics** *Christina Malone, MSFS*
1:20 pm - 2:00 pm	**Back to Basics: Why Hard Forensics Skills Will Remain Relevant in the AI Era** *Sarah Ellingham, PhD*
2:00 pm - 2:30 pm	**How Technology Elevates the PM (and AM) Skeletal Analysis** *Joe Adserias-Garriga, PhD*
2:30 pm - 3:00 pm	**Field Sites and Microscope Fields: A Multidisciplinary Path in Forensic Anthropology** *Victoria Dominguez, PhD*
3:00 pm - 3:15 pm	**BREAK**
3:15 pm - 3:40 pm	**R We There Yet?: Coding to Buffer Financial Stress During Education and Training** *Valerie Sgheiza, PhD*
3:40 pm - 4:00 pm	**Forensic Science Careers: Resources, Tips, and Opportunities** *Steve Lee, PhD*
4:00 pm - 4:30 pm	**From Patrol Officer to Digital Examiner: My Evolution in Crime Solving** *Brandon Epstein, MS*
4:30 pm - 5:00 pm	**Resume Review Workshop** *Dirk Vastrick, BA*
5:00 pm - 5:30 pm	**Meet the Speakers Mixer**

INTERDISCIPLINARY SYMPOSIUM

Open to All Meeting Registrants—Pre-Registration Encouraged

S3 Technology: A Tool for Transformation or Tyranny?

Tuesday, February 18, 2025 **1:00 pm – 6:00 pm** **CE Hours:** 3.5

Chair:
Yong Guan, PhD
Iowa State University
Ames, IA

Co-Chair:
Katharine Pope, MA
RTI International
Research Triangle Park, NC

Presenters:

Kenneth Aschheim, DDS
NYC Office of the Chief Medical Examiner
New York, NY

JoAnn Buscaglia, PhD
FBI Laboratory
Quantico, VA

Alicia Carriquiry, PhD
Iowa State University
Ames, IA

Sarah Chu, PhD
Perlmutter Center for Legal Justice at Cardozo Law
New York, NY

Nancy Downing, PhD, RN
UNTHSC College of Nursing
Fort Worth, TX

Zeno Geradts, PhD
Ministry of Security and Justice
Den Haag, Netherlands

Thomas P. Paonessa, Jr., MS
The MITRE Corporation
McLean, VA

Katherine Scafide, PhD, RN
George Mason University
School of Nursing
Fairfax, VA

Hon. Donald Shelton, JD, PhD (*ret.*)
University of Michigan-Dearborn
Saline, MI

Lucas Zarwell, MSFS
National Institute of Justice
Washington, DC

Program Description: The 2025 AAFS Annual Scientific Conference's Interdisciplinary Symposium (IDS) spotlights the theme "Technology: A Tool for Transformation or Tyranny?" through a dynamic program of three keynote talks and two engaging panel discussions. The free event brings together leading experts representing all sections of forensic science in a mission to explore how technology shapes the field. IDS keynote speakers are Dr. Joanne Buscaglia from the FBI, Mr. Thomas P. Paonessa Jr. from MITRE, and Mr. Lucas Zarwell from the NIJ. Their presentations will address the integration of cutting-edge technology into forensic operations, the importance of adhering to the scientific method, and the challenges of transitioning innovative research into practical applications.

The first IDS panel, moderated by Dr. Yong Guan, focuses on "Artificial Intelligence (AI) in Forensics" and features insights from Zeno Geradts, JoAnne Buscaglia, Thomas P. Paonessa Jr., Kenneth Aschheim, and Alicia Carriquiry. This session explores the dual role of AI in forensic science—its potential to enhance accuracy and efficiency, alongside ethical concerns such as bias and privacy risks. Speakers detail real-world case studies and emerging AI tools to shed light on the question of whether AI serves as a transformative ally or a potential threat in the pursuit of justice.

The second IDS panel, moderated by Katharine Pope, delves into "Emerging Technologies and Legal Implications" and features insights from Alicia Carriquiry, Lucas Zarwell, Donald Shelton, Katherine Scafide, Nancy Downing, and Sarah Chu. This session explores how advancements in forensic tools transform investigations while raising critical legal and ethical questions. Topics range from probabilistic genotyping and forensic investigative genetic genealogy to policies safeguarding data collected during the criminal process. The entire IDS aims to provide forensic professionals with valuable insights into leveraging technology responsibly while addressing its challenges, fostering a thoughtful and collaborative approach to the future of forensic science across the sections.

S3 Technology: A Tool for Transformation or Tyranny?

Educational Objectives: Participants will gain a comprehensive understanding of the transformative role of technology in forensic science, critically evaluating its dual capacity as a tool for innovation and a source of ethical and operational challenges. Attendees will learn about advancements in artificial intelligence and emerging technologies, their implications for forensic practices, and the evolving legal and societal standards shaping the future of forensic applications.

Impact on the Forensic Science Community: The 2025 IDS aims to provide attendees with an understanding of how emerging technologies are transforming forensic science and its applications in justice. Participants will gain insights into the dual role of artificial intelligence (AI) as both a tool for enhancing accuracy and a potential source of ethical challenges, such as systemic bias and privacy concerns. Presenters will also emphasize the importance of critical thinking and adherence to the scientific method in evaluating technological advancements, as well as the challenges of transitioning research into operational practice. By exploring real-world examples, legal implications, and case studies, attendees will learn how to responsibly adopt and integrate technologies such as probabilistic genotyping, forensic investigative genetic genealogy, and AI tools, while addressing ethical, legal, and practical concerns. Additionally, IDS aims to foster interdisciplinary dialogue on how technology can support victims of violence and uphold justice, ensuring that forensic innovations contribute positively to society.

Program:

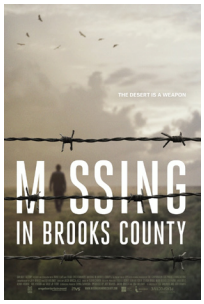
1:00 pm – 1:10 pm	**Opening Remarks** *Christopher R. Thompson, MD*
1:01 pm – 1:45 pm	**A Multidisciplinary Perspective on Research, Development, Technology, and Transition Into Forensic Science Operations** *JoAnn Buscaglia, PhD*
1:45 pm – 2:30 pm	**The Facts Matter—Trust the Scientific Method** *Thomas P. Paonessa, Jr., MS*
2:30 pm – 3:00 pm	**A Perspective on Adopting New Technology in Forensics—This Isn't "New"** *Lucas Zarwell, MSFS*
3:00 pm – 3:15 pm	**BREAK**
3:15 pm – 4:30 pm	**Artificial Intelligence (AI) in Forensics** *Yong Guan, PhD (Moderator); Zeno Geradts, PhD; JoAnn Buscaglia, PhD; Thomas P. Paonessa, Jr., MS; Kenneth Aschheim, DDS; Alicia Carriquiry, PhD*
4:30 pm – 6:00 pm	**Emerging Technologies and Legal Implications** *Katharine Pope, MA (Moderator); Alicia Carriquiry, PhD; Lucas Zarwell, MSFS; Donald Shelton, JD, PhD; Katherine Scafide, PhD; Nancy Downing, PhD, RN; Sarah Chu, PhD*

HUMANITARIAN AND HUMAN RIGHTS RESOURCE CENTER

Open to All Meeting Registrants

Special Documentary

Tuesday, February 18, 2025 **4:00 PM – 5:30 PM**



The FSF and HHRRC are pleased to offer AAFS attendees a special viewing of *Missing in Brooks County,* a documentary focusing on the forensic investigations of missing and deceased migrants at the Southern border in Texas, as well as the forensic crisis that has resulted. Immediately following the documentary, there will be a open discussion with Kate Spradley, PhD, Professor of Anthropology at Texas State University, whose work is featured in the documentary.

Film Description: Migrants go missing in rural South Texas more than anywhere else in the U.S. For many families whose loved ones have disappeared after crossing the Mexico border, activist detective Eddie Canales is their last hope. Unlock the mysteries and confront the agonizing facts of life and death in Brooks County, 80 miles north of the border. For more information on the documentary: https://www.missinginbrookscounty.com/

Poster Session

Tuesday, February 18, 2025 **6:00 pm – 8:00 pm**

Moderator:
Dawnie W. Steadman, PhD
HHRRC Chair
Director, Forensic Anthropology Center
University of Tennessee
Knoxville, TN

Co-Moderator:
Jeri D. Ropero-Miller, PhD
AAFS Past President (2021-2022)
FTCOE Project Director
RTI International
Research Triangle Park, NC

The Humanitarian and Human Rights Resource Center (HHRRC) of the American Academy of Forensic Sciences (AAFS), with support from the National Institute of Justice's (NIJ's) Forensic Technology Center of Excellence (FTCOE), provides needed resources and support to apply modern forensic science to global humanitarian and human rights projects. This HHRRC Poster Session is an open meeting where attendees can learn about the application of forensic science to investigate humanitarian and human rights injustices. More information on this event is available at https://forensiccoe.org/event-2025-hhrrc-virtual-library/.

1. **Death in Flight: Exploring Migration-Related Fatalities in Greece**
   Despoina E. Flouri; Sophia R. Mavroudas; Christina Karydi; Antonios Papadomanolakis; Konstantinos Moraitis; Elena F. Kranioti
2. **International Capacity-Building Workshop for Human Rights Defenders and Clinicians (Forensic Doctors and Psychologists/Psychiatrists) on Techniques for Collecting Physical and Psychological Evidence of Torture**
   Jean C. Fogno; Hilaire Kamga; Bruno Wembe
3. **Toward a More Accurate Enumeration of Migrant Mortality Along the United States–Mexico Border: A Definition and First Count**
   Alberto Giordano; Nicholas Herrmann; Molly Miranker; Rachel Daniell; Molly A. Kaplan; Veronica Flores-Guillen; Jasmine Hernandez; Heather Edgar; Kate Spradley; Cate E. Bird
4. **"They Are Our Parents"—The Identification and Mapping of Mass Graves Resulting from Operation Condor in Paraguay**
   Jacob A. Harris; Adriana Sartorio; Rogelio Goiburú; Katelyn Bolhofner
5. **Capacity-Building Workshop on the Potential of Stable Isotopes in Deceased Migrant Identification in Tanzania**
   Isaac Onoka; Tiffany B. Fracchia
6. **Advocating for the Dead: An Interdisciplinary Path Toward Restructuring the Medicolegal Death Investigation System in the Texas Borderlands**
   Courtney C. Siegert; Carina Marques; Molly A. Kaplan; Victoria M. Swenson; Kate Spradley; Nora Salinas; Vanessa Alaniz; Dina Nunez; Eddie Canales; Cate E. Bird; Jason Wiersema
7. **Restoring Personhood and Dignity to the Ancestors in the East Marshall Street Well: Community-Engaged Research in Forensic Science**
   Tal Simmons; Baneshwar Singh; Filipa Simão
8. **Restoring the Voices of the Forgotten: The Hunan LongYue Peace and Public Welfare Center's Efforts to Reunite World War II National Revolutionary Army Soldiers With Their Homeland and Families in China**
   Chunlong Sun; Hao Yu; Derek Congram; Lei Hou
9. **Humanitarian Forensic Action Using a Holistic Anthropological Approach**
   Victoria M. Swenson; Courtney C. Siegert; Chloe P. McDaneld; Ivanna Robledo; Abi Jose; Molly A. Kaplan; Kelsey Fox; Zoe Becker; Kate Spradley; Carina Marques; Aracely Balderas; Gabriella Rios Bradley; Victoria Rosas; Isabella Zapata; Amerika Garcia Grewal; Mike Garcia; Nora Salinas; Vanessa Alaniz; Dina Nunez; Eddie Canales; Mercedes Doretti; Cate E. Bird; Jason Wiersema

KEYNOTE ADDRESS

Open to All Meeting Registrants

Wednesday, February 19, 2025 **8:30 am – 9:30 am**

Michael Rogers

New York, NY

The AI Challenge: Promises, Puzzles, and Perils

Few technologies have evolved as quickly as Artificial Intelligence (AI), with implications for everything from jurisprudence to laboratory work. This Keynote Address will look at the latest advances in the technology and its applications, as well as the new criminal activities it has enabled. The session will close with an overview of the emerging—and difficult—topic of ethical practices and the proper disclosure of AI-assisted work.

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Michael Rogers is a best-selling author, technology pioneer, and futurist who also recently served as futurist-in-residence for *The New York Times*. His consultancy, Practical Futurist, has worked with companies ranging from FedEx, Boeing, and NBC Universal to Microsoft and Pfizer, focusing on how organizations can think about the future in useful ways. He speaks to audiences worldwide and is a regular guest on radio and television.

Rogers began his career as a writer for *Rolling Stone* magazine. He co-founded *Outside* magazine, then launched *Newsweek's* technology column, winning numerous journalism awards. For ten years, he was vice president of *The Washington Post Company's* new media division, leading both the newspaper and *Newsweek* into the new century and earning patents for multimedia technology as well as awards for his online coverage of 9/11. He is also a best-selling novelist whose books have been published worldwide, chosen for the Book-of-the-Month club, and optioned for film.

Rogers studied physics and creative writing at Stanford University, with additional studies in finance and management at the Stanford Business School Executive Program. He lives in New York City and is currently working on book and television projects. His latest book is *Email from the Future: Notes from 2084*.

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PLENARY SESSION

Open to All Meeting Registrants

Wednesday, February 19, 2025 **10:00 am – 11:30 am** **CE Hours:** 1.5

A Double-Edged Sword; Exploring the Benefits and Perils of Technology and Artificial Intelligence

Welcoming Remarks

Christopher R. Thompson, MD
AAFS President
American Academy of Forensic Sciences
Los Angeles, CA

Plenary Session Chair:
Dean De Crisce, MD
Psychiatrist, Special Treatment Unit
Avenel, NJ

Plenary Session Co-Chair:
Marla E. Carroll, BS
Forensic Video & Audio Associates, Inc.
Plantation, FL

Panel Participants

Eric Bloedorn, PhD
MITRE
McLean, VA

Marc Greene, PhD
National Institute of Justice
Washington, DC

Devin Kelsey, MBA
US Congressional
Forensic Science Caucus
Washington, DC

Donald Shelton, JD, PhD
University of Michigan-Dearborn
Saline, MI

Melissa Taylor, MS
National Institute of Standards and Technology
Gaithersburg, MD

Paul Ward, PhD
MITRE
McLean, VA

The unprecedented development of technology and artificial intelligence in the past decade or two has transformed society in almost all sectors. Technology is rapidly increasing efficiency, productivity, and communication. Artificial intelligence, in particular, offers immense potential in forensic science, economics, education, and health care, which might be expected to increase the accuracy and ease of analysis and decision-making processes. However, these tools of transformation pose very real perils involving potential social and economic disruption as well as concerns about monitoring and privacy. These systems can amplify bias if not developed with appropriate regulations in an ethical framework to ensure responsible development and implementation of these powerful tools.

Within the field of forensic sciences and the administration of justice, technology and artificial intelligence promise improved analysis of large data sets, automated workflows, improved crime scene reconstruction, recovery of digital evidence, facial recognition, potential predictive analysis, streamlined judicial processes, and improved complex expert testimony, among other benefits. However technological algorithms can overshadow the human element and intuition, enhance bias, violate privacy, and create philosophical challenges regarding transparency and accountability.

PLENARY SESSION

Open to All Meeting Registrants

This plenary session will explore technological advancement and its transformative potential through a dynamic and thought-provoking panel of experts, advisers, and other stakeholders who will share their perspectives on the benefits and risks of technology and artificial intelligence. The panel will delve into topics such as technological development, the transformative potential for scientific analysis, automation, and predictive abilities as well as challenges such as security risks, bias, assurances, regulatory frameworks, and the need for transparency. The session will address critical technological, ethical, legal, and practical concerns associated with these advancements.

Through interactive discussion, this plenary session aims to enable forensic scientists to have a more expansive understanding of how technology and artificial intelligence may be harnessed while mitigating the risks. A question-and-answer session inviting audience participation will allow consideration of the complexities of these issues. We hope to foster ongoing dialog, collaboration, and clarity regarding the challenges and opportunities presented by advanced technologies to ensure the integrity and reliability of forensic sciences. This will be a thought-provoking and insightful session, and we invite you to join us as we stand at the intersection of forensic science and the digital age while striving for the equitable administration of justice.

Program:

10:00am – 10:10am	**Opening Remarks and Introduction** *Christopher Thompson, MD; Dean De Crisce, MD; Marla Carroll, MS; Beth Lavach, MA*
10:10am – 11:00am	**Panel Discussion: Individual Statements and Moderated Questions** *All Panel Participants*
11:00am – 11:25am	**Questions From the Audience** *All Panel Participants*
11:25am – 11:30am	**Closing Remarks** *Christopher Thompson, MD; Dean De Crisce, MD; Marla Carroll, MS*

CASE BREAK SESSIONS

CB1 "Excited Delirium": Abuse, Use, and Bias of This Term in the Courtroom

Tuesday, February 18, 2025 **8:30 am – 9:30 am** **CE Hour:** 1.0

Stephanie Domitrovich, PhD
Administrative Office of PA Courts
Erie, PA

Milton Nuzum III, JD
Former Judge
Vincent, OH

Educational Objectives: Attendees will assume the role of the judge in each hypothetical case to determine the admissibility of expert testimony on the cause of death by applying the appropriate evidentiary standards for admissibility of the testimony. Underlying each scenario is the controversy of racial or ethnic bias affecting the diagnosis of cause of death. Attendees will understand how the diagnosis can impact the potential criminal or civil liability on the part of the responding law enforcement officers or first responders involved in each case. Is there qualified immunity for law enforcement? Attendees will understand the dilemmas that judges have in admitting testimony proffered by experts in these cases and how those dilemmas have been or are resolved.

Impact on the Forensic Science Community: This presentation will inform the forensic science community by presenting a series of hypothetical emergency scenarios based on actual court cases where law enforcement and first responders are dispatched to an emergency crime scene resulting in detention and treatment of an alleged perpetrator. Each scenario involves a tragic situation that results in the death of the perpetrator at the scene. Attendees will understand the dilemmas that judges have in admitting testimony proffered by experts in these cases and how those dilemmas have been or are resolved.

Program Description: After attending this presentation, attendees will understand legal principles for the qualification of expert witnesses and foundational requirements of admissibility expert testimony in civil and criminal cases specifically related to fatalities diagnosed as resulting from "Excited Delirium". While this diagnosis is recognized as a valid diagnosis in the medical community, not all embrace its validity. Attendees will understand the controversy of this diagnosis as a shield from liability for abusive injury and racial bias by law enforcement and first responders.

Each death is diagnosed by an expert as caused by excited delirium. At issue in each scenario is whether the death was from natural causes, self-inflicted, excessive force, or inappropriate medical treatment. Attendees will assume the role of the judge in each hypothetical case to determine the admissibility of expert testimony on the cause of death by applying the appropriate evidentiary standards for admissibility of the testimony. Is there qualified immunity for law enforcement?

CB2 The Collapse of Surfside: A Multifaceted Approach to Disaster Victim Identification

Tuesday, February 18, 2025 **10:00 am – 11:00 am** **CE Hour:** 1.0

Heather A. Walsh-Haney, PhD
Florida Gulf Coast University
Human Identity and Trauma Analysis Laboratory
Fort Myers, FL

Micki Besse, MS
Florida Gulf Coast University
Human Identity and Trauma Analysis Laboratory
Fort Myers, FL

Katherine Kenerson, MD
Florida District 11 Office of the Medical Examiner
Miami, FL

Kenneth Hutchins, MD
Florida District 11 Office of the Medical Examiner
Miami, FL

Benjamin Mathis, MD
Florida District 11 Office of the Medical Examiner
Miami, FL

Educational Objectives: After this presentation, attendees will understand the protocols and technologies implemented after a mass fatality event in Surfside, FL.

Impact on the Forensic Science Community: This presentation introduces the forensic science community to physical and digital decedent documentation following a mass fatality incident with a closed population from a forensic anthropological perspective as guided by the needs of the medical examiner and law enforcement personnel as well as the various community stakeholders.

Program Description: Forensic Anthropologists (FA) are called to assist in the discovery, recovery, inventory, and estimation of the Minimum Numbers of Individuals (MNI) represented by skeletal remains, irrespective of the decomposition state of the decedent. FAs also assist in the process of identification, trauma analysis, and reunification of human remains to their legal next of kin following mass fatality incidents.1-3 On June 24, 2021, the South Champlain condominium collapsed, prompting the search, rescue, and recovery of a closed population comprised of 98 fatalities. Post-incident, the FAs were responsible for creating a skeletal inventory and MNI as requested by the medical examiner, law enforcement, families, and community leaders.

CB3 Forensic Identification of Synthetic Data: Identification and Isolation Techniques

Wednesday, February 19, 2025 **7:15 am – 8:15 am** **CE Hour:** 1.0

Joseph C. Sremack, MS
Forensic Data Analytics
Marcum LLP
New York, NY

Educational Objectives: Attendees will gain an understanding of what synthetic data is and how it is used, scenarios in which synthetic data needs to be identified in an investigation, and the results of techniques applied to the identification process. The presentation will focus on a case study, in which synthetic data was present, on how fraud analysis techniques were applied to identify the special characteristics of synthetic data and the analysis findings and results.

Impact on the Forensic Science Community: The presentation will provide the forensic science community with a better understanding of the emerging area of synthetic data, why it matters to a variety of cases requiring forensic analysis, and how such data can be identified and isolated vis-à-vis ground truth data.

Program Description: Synthetic data represents a new class of data that poses risks to large-scale forensic data analysis if not properly accounted for and isolated during an investigation. The use of synthetic data extends beyond artificial model training data, as it can be used to create falsified transactions or simply be indistinguishable from ground truth data. The presence of synthetic data increases risks to data reduction efforts and increases the likelihood of false positives.

CB4 Maximizing the Impact of Social Science Research and Evaluation on Forensic Science: The NIJ's Role in the Integration of Science

Wednesday, February 19, 2025 **7:15 am – 8:15 am** **CE Hour:** 1.0

Danielle M. Crimmins, PhD
National Institute of Justice
Department of Justice
Washington, DC

Jillian Barnas, PhD
AAAS/NIJ
Washington, DC

Jonathan McGrath, PhD
U.S. Customs and Border Protection
Houston, TX

Educational Objectives: After attending this presentation, attendees will understand: (1) how social science research and evaluation provides objective evidence to advance the fair and impartial administration of justice; (2) the application of social science research and evaluation methods to study the forensic science disciplines, including examples from the National Institute of Justice (NIJ's)'s Social Science and Forensic Research (SSRFS) portfolio; and (3) a discussion of the benefits, challenges, and future research directions to address the needs of the field.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by discussing the benefits and challenges of using social science research to formulate meaningful research questions and develop rigorous research designs to advance the impact and understanding of the forensic sciences. This presentation will also foster a discussion between researchers and forensic science practitioners on ways to assess and measure the impact of forensic science disciplines.

Program Description: The effective use of forensic science provides timely and impactful answers to the criminal justice system. The application of social science research methods and multidisciplinary partnerships can shed light on how the criminal justice system and forensic science practitioners can maximize the role and value of the forensic sciences. As forensic science innovations are implemented into practice, advancements such as the identification of emerging drug threats, 3D virtual microscopy for firearms evidence, digital and multimedia evidence, and rapid DNA and other field deployable technologies offer opportunities to empirically examine their impact on justice system outcomes. For instance, social science methods can aid in understanding how the implementation of current and new technologies, methods, or workflow processes impact backlog reduction, capacity enhancement, cost relative to benefit, workforce development, and case closure efficiency.

CB5 The Role of Y-STR Analysis in Forensic Genetic Genealogy (FGG)

Thursday, February 20, 2025 **7:15 am – 8:15 pm** **CE Hour:** 1.0

Colleen M. Fitzpatrick, PhD
President, Identifinders International LLC
Fountain Valley, CA

Educational Objectives: Upon attending this presentation, attendees will gain insight into the evolution of Forensic Investigative Genetic Genealogy (FGG) from Y-chromosomal Short Tandem Repeat (Y-STR) analysis through autosomal SNP testing. Case studies will be presented illustrating the use of Y-STR FGG to generate investigative leads on cases where the DNA has been exhausted or where a mixture is present. Attendees will also learn how Y-STR FGG can reduce the complex genealogical research often required by autosomal SNP testing by narrowing the possibilities within a family tree to only individuals with a given last name. The presentation will include statistics indicating the probability of successfully obtaining a last name using the technique.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating the synergy that exists between Y-STR and autosomal SNP analysis techniques. The presentation will broaden the understanding of how FGG developed over the past few years to become a powerful tool that has brought resolution to over 1,100 cold cases as of December 2023.

Program Description: Y-STR testing was first introduced in 2000 by several Direct-to-Consumer (DTC) DNA testing companies as a means of complementing genealogical records with genetic data. The popularity of Y-STR analysis as a tool for genealogical research grew rapidly, especially among male adoptees, because of the patrilinear co-inheritance of the Y chromosome with the family surname. A male adoptee could take a Y-STR test; a match found in the FGG databases would indicate a possible name for his birth father.

CB6 Fiction vs. Science: The Yara Gambirasio Case on Netflix

Thursday, February 20, 2025 **7:15 am – 8:15 am** **CE Hour:** 1.0

Luciano Garofano, PhD
Italian Academy of Forensic Science
Parma, Emilia-Romagna, Italy

Michele Vaira, JD
Criminal Procedure and International Criminal Law
Vaira Law Firm
Parma, Italy

Educational Objectives: After attending this presentation, participants will understand how journalistic investigations and TV dramas can mislead the perception of the facts established in criminal trials.

Impact on the Forensic Science Community: This presentation will highlight the danger that biased informati'n may influence public opinion on the fairness of judicial decisions and, in jury-based legal systems, sway the jury's perspective.

Program Description: The case concerns the murder of Yara Gambirasio, a 13-year-old girl, which took place on February 26, 2010, in a small town called Brembate di Sopra (Bergamo-Italia). Three months after her disappearance, on February 25, 2011, her dead body was found in a field, frozen and partially decomposed. Yara had several stab wounds, including to her throat, but she died of starvation and cold.

CB7 Unveiling Forensic Signatures: Leveraging Soil Microbiome and Enzymatic Responses to Detect Cyanide-Induced Deaths

Friday, February 21, 2025 **7:15 am – 8:15 am** **CE Hour:** 1.0

Aby Joseph
Amity University Dubai
Dubai, United Arab Emirates

Jannath Manaf, MASc
Amity University Dubai
Dubai, United Arab Emirates

Muhammad Safar S. P.S, MASc
Amity University Dubai
Dubai, United Arab Emirates

Educational Objectives: By the end of the presentation, attendees will have a comprehensive understanding of how soil microbiome and enzymatic responses to cyanide can enhance forensic detection methods, along with practical knowledge on implementing these techniques in real-world forensic settings.

Impact on the Forensic Science Community: This presentation will have a profound impact on the forensic science community by introducing innovative methodologies to improve cyanide detection in postmortem investigations. The proposed integration of soil microbiome analysis and enzymatic activity profiling represents a significant advancement over conventional toxicological techniques, which often fall short in detecting cyanide in extensively decomposed remains.

Program Description: This study investigates the responses of soil microbiomes and enzymatic activities to cyanide exposure from decomposing rodent remains, aiming to improve forensic detection methods for cyanide-induced deaths. Cyanide is a potent poison that poses significant challenges in forensic investigations due to its rapid degradation and the complexity of detecting it in extensively decomposed bodies. This research combines microbial community analysis, enzymatic assays, and advanced analytical techniques to develop more reliable methods for identifying cyanide exposure postmortem.

CB8 Forensic Examination of Environmental Crime and Its Solutions

Friday, February 21, 2025 **7:15 am – 8:15 am** **CE Hour:** 1.0

Ashfaq Ahmed Kharal, Jr., PhD
Supreme Court
Lahore, Punjab, Pakistan

Educational Objectives: The attendees are interested in a green and clean environment and are using technology to trace the elements of crimes creating pollution and hazards.

Impact on the Forensic Science Community: No one can deny the impact of a clean environment as it is a need not only in this era but is very emphatic all the time without any discrimination and the use of technology for highlighting these crimes by forensic analysis is the most important impact.

Program Description: Environmental forensic examinations are an essential component of environmental crime investigations. Environmental forensic whizzes assist factfinders in reenacting the occasion timeline, assessing the size of the destruction and causality. Their sentiments are of ultimate germaneness to environmental criminal stuff. Thus, it is critical to confirm that expert examinations are steered following scientific canons providing reasonably more truthful and steadfast results. In the article, two different slants to the organization of environmental forensic examinations were equated. Forensic examination has been conducted in two states, especially in Russia; the consolidated and more rigid model has been practical concerning environmental forensic studies, while in Poland, such inspections are navigated by decentralized forensic laboratories and self-regulating consultants. The authors deliberated existing variances and parallels between those two methods.

DEEP-DIVE SESSIONS

New in 2025, the Professional Deep-Dive Breakouts are designed to showcase content and topics not typically included in the oral scientific session or poster session categories, but are still of strong interest and importance to the forensic and greater professional communities. These sessions are designed to be highly engaging and interactive with the attendees, focusing on professional development topics, technology use cases, and other content aimed at furthering personal and professional skills and knowledge.

DD1 Leveraging Forensic Science Standards Development to Boost Your Professional Growth

Thursday, February 20, 2025 **1:00 pm – 2:00 pm** **CE Hour:** 1.0

Kris Cano, MA
Signature Science, LLC
Scottsdale, AZ

J. Keith Pinckard, MD, PhD
Travis County Medical Examiner Office
Austin, TX

Educational Objectives: After attending this presentation, attendees will learn about the importance of documentary standards in forensic sciences, how the standards development process works, and how participating in standards development can help develop skills and abilities that can advance one's career trajectory while also advancing the field.

Impact on the Forensic Science Community: Participating in standards development is more than just a task; it is an opportunity to shape the future of forensic science and advance your career. By embracing this work, you not only contribute to the quality and consistency of forensic practice but also enhance your own professional growth and leadership capabilities. This session aims to help you recognize and leverage these benefits, turning what may seem like a thankless task into a powerful career-building tool.

Program Description: The process of standards development and implementation in forensic science can indeed seem daunting and underappreciated. Engaging in standards development sharpens your skills and deepens your understanding of the forensic science field. It challenges you to think critically, solve complex problems, and engage with a wide range of perspectives from professionals with diverse expertise. This process enhances your ability to lead, communicate effectively, and navigate complex scenarios—skills that are invaluable as you advance in your career. By participating in the creation and implementation of standards, you position yourself as a leader within your organization and the broader forensic community. These experiences not only boost your leadership credentials, but also amplify your influence in shaping your field's direction. By contributing to the development of these standards, you help ensure that forensic practices are consistent, scientifically sound, and widely accepted. Being involved in standards development can set you apart from your peers and open doors to new opportunities. It demonstrates your commitment to the field and your willingness to tackle challenging and sometimes unglamorous tasks. This proactive approach can lead to recognition, career advancement, and greater professional satisfaction. The skills you develop in standards development are transferable to other areas of your career. Whether it's crafting policies, handling crucial conversations, or managing public perception, developing the analytical and strategic thinking involved in standards work will serve you well.

DD2 Legal Admissibility of Digital Evidence in the Era of AI-Generated/Synthetic Media

Thursday, February 20, 2025 **4:00 pm – 5:00 pm** **CE Hour:** 1.0

Brandon Epstein, MS
Magnet Forensics
Freehold, NJ

Chichi Lee, LLM
Middlesex County District Attorney's Office
Waltham, MA

Educational Objectives: Attendees with a legal background will learn the authentication issues surrounding AI-generated or -modified synthetic media such as photos and videos, including several proposals to amend the authentication rules under Fed. R. Evid. 901(a). They will also learn how to admit expert testimony on synthetic media under Fed. R. Evid. 702, including possible challenges to the experts' qualifications, principles, and methods.

Attendees with a forensic background will learn the issues that may come up in court from pretrial motions in limine to qualify the expert under Fed. R. Evid. 702. Forensic expert attendees will learn how an attorney will present their testimony in court and what an opposing party might contest as to their qualifications, principles, methods. While going through these, the attendees will also learn the relevant technology surrounding synthetic media.

Impact on the Forensic Science Community: Because synthetic media authentication is new, this presentation will introduce the admissibility of synthetic media authentication in court to the forensic science community. This presentation will allow the forensic experts to: (1) understand if their qualifications and their training that they provide to future experts will pass the legal muster, and (2) allow the forensic experts to have a preview of their future testimony in court; whether they are understandable to non-experts and reliable under the law, with a portion of a mock direct examination. With this presentation, scientists will be able to work with legal practitioners to overcome the hurdles in court and further their trustworthiness in the legal world with this new, developing authentication method.

Program Description: Although synthetic media, such as Adobe Photoshop, is not new, generative AI has created a new era of synthetic media. Now, synthetic media is accessible to the general public without training, is easier to manipulate, and is easier to create on a large scale. When AI-generated or -altered photos or videos are knocking on the court's door, they will undoubtedly impact how lawyers and judges look at both civil and criminal cases.

This presentation will introduce the issues surrounding the unavoidable challenges to the authenticity of photos and videos introduced in court where attorneys and judges have to deal with authentication under Fed. R. Evid. 901. This presentation will also discuss and comment on several proposals to alter Rule 901 in response to the rise in AI-generated synthetic media.

But there's more. With AI-generated synthetic media, the ability of detecting synthetic media and authenticating photos and videos becomes paramount. This is especially true in the era of synthetic media where the jury may start questioning everything they see or hear. This presentation will introduce how a synthetic media authentication expert passes Daubert v. Merrell Dow Pharmaceuticals, Inc. and Fed. R. Evid. 702. With a portion of a mock direct examination, the presentation will walk you through the expert's qualifications, the underlying facts and data, and the reliable principles and methods the expert uses. In that vein, we will also see some of the challenges the opposing party may present.

DD3 Balancing the Scales: Supporting Mental Health in Forensic Science

Thursday, February 20, 2025 **4:30 pm – 6:00 pm** **CE Hours:** 1.5

Kevin Kulbacki, MSFS
KDX Forensic Consulting
Chicago, IL

CANCELED

Educational Objectives: By the end of this session, attendees will be able to: (1) identify common mental and emotional health challenges faced by forensic practitioners and their root causes, (2) apply at least two evidence-based strategies for personal mental health resilience shared during the session, (3) evaluate organizational practices that foster supportive mental health environments and determine how these can be implemented in their own workplaces, and (4) engage in peer-sharing to adopt innovative tips and ideas for enhancing mental well-being in forensic science roles.

Impact on the Forensic Science Community: The mental and emotional well-being of forensic practitioners is critical to maintaining the integrity and effectiveness of their work. This session highlights the importance of addressing mental health at both personal and organizational levels, creating a platform for open dialogue and shared learning within the forensic science community. By equipping attendees with practical tools, fostering peer connections, and promoting awareness, the session aims to cultivate a healthier, more resilient workforce. The insights gained will not only benefit individual practitioners but also contribute to a more supportive culture across forensic agencies, enhancing the overall quality and sustainability of the field.

Program Description: Forensic practitioners often face unique mental and emotional challenges due to the nature of their work. This session brings together insights from diverse perspectives to address these challenges and explore solutions. Through presentations by a practitioner, an organizational leader, and a mental health professional, attendees will gain actionable strategies to enhance individual resilience, foster supportive workplace cultures, and access professional resources. The session concludes with an open discussion, inviting participants to share practices, tips, and ideas to collectively improve well-being in the forensic field.

DD4 Determining the Viability of Breathwork and Meditation as Intervention Techniques for Stress in the Forensic Science Community

Friday, February 21, 2025 **8:00 am – 9:00 am** **CE Hours:** 1.5

Prateek Shetty, BSc
University of Central Oklahoma
Edmond, OK

Keisha Jones, MS
University of Central Oklahoma
Edmond, OK

Educational Objectives: Attendees of the presentation will learn about the impact of breathwork (cyclic sighing) and meditation as methods to mitigate workplace stress in the forensic science field. Data gathered from analyzing variations in stress among students studying forensic science and professionals working in the field before and after implementing the interventions will be discussed along with the future implications and research opportunities. Session attendees can expect to learn the methods implemented in the study, practice them during this presentation, and join a discussion about how these methods could be implemented in their everyday lives.

Impact on the Forensic Science Community: Attending this session will allow participants to learn about stress mitigation techniques such as breathwork (cyclic sighing) and meditation, which can be implemented in their personal lives and help them combat workplace stressors that come with being a part of the forensic science community. Learning and practicing these exercises can contribute to the growth of a holistically healthy forensic science workspace in the present and future.

Program Description: Are you stressed out because of the things that happen at work? Do you want to improve how you deal with stress in the workplace? Are you a prospective or present member of the forensic science workforce? If your answer to one or all these questions was a resounding, “YES,” this session is for you!

Join the discussion to share personal stories of stress in the field. Learn what research has to say about how practicing breathwork and meditation could impact the busy life of a forensic science professional. But don’t worry, you won’t be bored with just the numbers from a research study. You will also get to practice these exercises and take these tools with you to use in your everyday life as a forensic science professional or student.

Join us in this session as we explore the possibilities of using our breathing patterns to help build a holistically healthy forensic science workforce for the present and the future!

DD5 Misconceptions and Limitations of Words Commonly Used in the Forensic Sciences—What Do They REALLY Mean?

Friday, February 21, 2025 **9:30 am – 10:30 am** **CE Hour:** 1.0

Charlotte Word, PhD
Charlotte Word Consulting
Richmond, VA

John D. Schmid, JD
Sixth District Public Defender's Office
Duluth, MN

Educational Objectives: After attending this session, both forensic science practitioners and members of the legal community should have an increased awareness of terms and associated language with a high susceptibility of being misinterpreted during judicial proceedings. Attendees should gain an increased understanding and appreciation of the meaning and strengths of the four focus areas to be discussed, along with their limitations and common misinterpretations. Insights into the need for effective training and communications with robust safeguards to ensure the reliability of forensic science evidence presented in court should be gained by the attendees, along with knowledge regarding mechanisms of improvement and potential ways to overcome any apparent obstacles.

Impact on the Forensic Science Community: This presentation will impact the forensic science community through training and discussions aimed to improve stakeholder competence, performance, and outcomes by facilitating an accurate understanding of common laboratory quality assurance terms frequently misinterpreted in court proceedings. By increasing awareness of the strengths and limitations of scientific and legal safeguards, forensic science practitioners will be better equipped to avoid misstatements and errors in testing, reporting, and testimony.

Program Description: Quality crime/forensic science laboratories routinely participate in audits to achieve accreditation as well as training competency and proficiency testing, conduct validation studies prior to commencing casework testing with a new method or product, and provide discovery following jurisdictional requirements. These practices are in place to ensure reliability of the testing conducted and the results reported. However, the roles and meaning of these processes are often misunderstood both by laboratory personnel and the legal community. The goal of this session is to address these issues by providing training regarding these topic areas and their potential to collectively ensure reliability while addressing the misunderstandings among stakeholders about the limitations of each individual safeguard.

The four primary discussion areas will focus on: (1) laboratory accreditation and audits; (2) competency and proficiency testing; (3) validation studies; and (4) legal rules of evidence and discovery. The training and discussions will address: (1) what each of these terms actually mean in the context of the laboratory, including their strengths and limitations; (2) how they are often misunderstood in the legal context; (3) ways in which they are miscommunicated through conversations and during testimony in court; and (4) an exploration of ways to overcome identified obstacles and common misunderstandings. The attendees will be encouraged to engage in discussions regarding the proper use of the terms, their perceived misunderstandings and communicating their own ideas for improvement.

This session will be targeted to a mixed audience of legal and scientific practitioners with diverse experiences and backgrounds.

DD6 Using Forensic Investigative Genetic Genealogy (FIGG) Technology Ethically and Responsibly

Friday, February 21, 2025 **1:00 pm – 2:00 pm** **CE Hour:** 1.0

Catherine Cupples Connon, PhD
Virginia Commonwealth University
Richmond, VA

Educational Objectives: After attending this deep-dive session, attendees will be aware of key concerns regarding the use of FIGG and the need to use this technology in an ethical and responsible manner. We will discuss: (1) what types of cases this technology should be limited to, (2) privacy considerations, (3) use of approved genetic genealogy databases, (4) the intersection of law enforcement, forensic laboratories, and FIGG investigators, and (5) appropriate and necessary documentation. Last, we will also address the needs for legislation, research, and FIGG certification/training.

Impact on the Forensic Science Community: This session will impact the forensic science community by offering much-needed guidance surrounding appropriate practices of the emerging FIGG field and its related technologies.

Program Description: FIGG is a new and emerging field of forensic DNA analysis that serves as an investigative tool for law enforcement. Though powerful, it is not appropriate for use with all forensic cases containing DNA evidence. Currently, it is specifically reserved for violent crimes in which a traditional Short Tandem Repeat (STR) profile has not been fruitful from an investigative standpoint, including unidentified human remains cases. Furthermore, when we think about privacy concerns, we must consider the fact that individuals unassociated with the crime may be linked to it for no reason other than being genetically related to the individual in question; thus, necessary precautions must be taken to protect their identities. As an extension of this, only genetic genealogy databases that have been approved for law enforcement use may be utilized—with strict regulation and oversight to boot. Such databases include GEDmatch Pro and FamilyTreeDNA. Throughout this process, cooperation and collaboration of law enforcement, the forensic laboratory, and the FIGG investigator is crucial. These roles will be discussed, including whether overlap is acceptable or if complete separation is needed. Accurate documentation is essential; we will discuss finding a balance between thoroughness and timeliness to ensure quality documentation.

The session will conclude with discussions of what is still needed with respect to legislative regulations, research related to the technology itself, as well as what kind of formal FIGG certification/training is needed, if any.

LUNCHEON SEMINAR

Pre-Registration Required — $85

LS1 Empowering Forensic Science: How Technology, Building Intelligence, and Human-Centered Design Can Revolutionize the Forensic Workplace

Thursday, February 20, 2025 **11:30 am – 1:00 pm** **CE Hour:** 1.0

Jinhee Lee
Crime Lab Design
Royal Oak, MI

Scott Morgan, BS
Crime Lab Design
Royal Oak, MI

Patrick Slattery
Crime Lab Design
Royal Oak, MI

Ken Mohr, BS
Crime Lab Design
Royal Oak, MI

Jon Howard
Crime Lab Design
Royal Oak, MI

Program Description: Global case studies from Asia and the Middle East illustrate the successful application of automated waste management, delivery systems, and Automated Guided Vehicles (AGVs) in addressing staff shortages and reducing physical strain. Notably, 95% of newly built hospitals in the United States now use Tissue Sample Movement Pneumatic Tube Systems, which enhance sample transport efficiency. Medical Examiner's Offices (MEOs) benefit from automated racking systems that increase storage capacity while reducing physical strain on staff, and Automated Mobile Robots (AMRs) streamline the handling of hazardous samples, thereby optimizing case load processing.

By embracing these advancements, forensic facilities can significantly improve operational efficiency, minimize manual labor, and better support a predominantly female workforce.

These technological innovations offer strategic solutions to counteract the projected shortage of over 30,000 forensic analysts in the United States. This session will provide critical insights, using real world examples and data, into how these technologies enhance the quality of life for forensic staff and set new benchmarks for industry best practices.

Educational Objectives: This session will explore how advanced technologies and intelligent building systems can support staff and transform their forensic environments by optimizing case load processing and reducing physical strain, while ensuring a secure and healthy work environment. Attendees will learn to implement Automated Guided Vehicles (AGVs), automated gurneys, RFID Tracking Systems, and Environmental Controls to enhance security, chain of custody, and indoor air quality. Through a data-driven review of global case studies, participants will see how these technologies improve safety, functionality, and efficiency in forensic facilities. By the end, attendees will have a clear understanding of how these technologies can drive measurable improvements in forensic outcomes today and into the future.

Impact Statement: A new generation of predominantly female forensic scientists is revolutionizing the field, demanding state-of-the-art facilities and systems that support their important work and minimize physical strain. Attendees will learn that by incorporating cutting-edge technology and optimizing case load processing, forensic facilities can not only ensure a healthier and safer working environment by reducing workplace injuries but can directly contribute to significant percentage gains in productivity and case load management. Attendees will leave the presentation with the knowledge needed to catalyze change at their facilities, armed with data proving that labs that embrace innovative technology, automation, and human-centered design are better equipped to meet the challenges created by the global demand for forensic science while mitigating the projected shortage of 30,000 analysts in the United States.

WORKSHOPS

Pre-Registration Required—$275

W1 Pediatric Fracture Healing in Cases of Suspected Non-Accidental Trauma: Clinical, Radiographic, Anthropological, and Histological Perspectives and New Technologies

Monday, February 17, 2025 **8:30 am – 5:00 pm** **CE Hours: 6.0**

Program Description: Physical abuse in children results in >500 deaths in the United States each year.[1] Patterned and repetitive skeletal fracture is often observed in these decedents, reflecting the typically serial nature of pediatric NAI. Accurate estimation of TSI for antemortem fractures is critical for identification, evaluation, and adjudication of fatal pediatric NAI.

However, TSI estimation has been described as an "inexact science," due to lack of recognition, understanding, and scientific validation of existing TSI methods.2.3These methods derive from a variety of inter-disciplinary sources with unknown accuracy, reliability, consistency, and limited understanding of variables that impact fracture healing. This has necessitated extreme caution in use of TSI estimations in the adjudication of fatal pediatric NAI.

Multidisciplinary approaches to understanding pediatric fracture healing that focus on scientifically validated methodologies are imperative for developing best practice recommendations and standards for forensic pediatric skeletal trauma analysis in pediatric death investigations.

This workshop provides a multidisciplinary approach for understanding and estimating pediatric fracture TSI. Best practice recommendations for analysis and interpretation of pediatric skeletal fracture and its timing are presented using interdisciplinary technologies involving imaging (Computed Tomography [CT], radiology), microscopy (light microscopy, histology), and machine learning. The scientific foundation for pediatric fracture repair and its timing is considered, as is application of these methods to the broader context of pediatric case adjudication and public health. Hands-on examination of case study examples allows participants to put topics covered into practice with a focus on interdisciplinary collaboration.

Educational Objectives: After attending this workshop, participants will understand how antemortem skeletal fractures can be used to help interpret, document, and adjudicate medicolegal cases of Non-Accidental Injury (NAI) in pediatric deaths. Attendees will learn the anatomical basis for and variables affecting pediatric skeletal fracture, repair, and timing (i.e., Time Since Injury or TSI). Using multidisciplinary technology, including histology, light microscopy, radiology, and machine learning, they will learn to critically evaluate current methodological approaches for evaluating pediatric fracture healing and estimating TSI. Applications of pediatric antemortem fracture data toward public health (including advocacy for children's health) will be explored.

Impact Statement: This workshop will impact the forensic community by providing multidisciplinary perspectives and methodological training for critically evaluating and interpreting skeletal fracture and its timing in pediatric death investigations. This training will help the forensic community determine best practice approaches to pediatric fracture interpretations that are scientifically based, legally defensible, and applicable to public health efforts toward prevention of non-accidental child injury.

Target Audience: Anthropology, Forensic Nursing Science, General, Jurisprudence, Pathology/Biology

Knowledge Level Required: Intermediate

Chair:
Diana Messer, PhD
West Tennessee Regional Forensic Center
Memphis, TN

Co-Chair:
Donna C. Boyd, PhD
Radford University
Radford, VA

Presenters:
Bradley J. Adams
Office of the Chief Medical Examiner
New York, NY

Andrew Baker, MD
Hennepin County
Medical Examiner's Office
Minnetonka, MN

Farah W. Brink, MD
Nationwide Children's Hospital
Columbus, OH

Jered B. Cornelison, PhD
Western Michigan University
Homer Stryker MD School of Medicine
Kalamazoo, MI

Carolyn V. Isaac, PhD
Michigan State University
East Lansing, MI

Andy Tsai, MD, PhD
Boston Children's Hospital
Harvard Medical School
Boston, MA

WORKSHOPS

W1 Pediatric Fracture Healing in Cases of Suspected Non-Accidental Trauma: Clinical, Radiographic, Anthropological, and Histological Perspectives and New Technologies

Program:

8:30 am – 8:45 am	**Introduction: Pediatric Fatal Death Investigations, Skeletal Fracture, and Its Timing** *Diana Messer, PhD; Donna Boyd, PhD*
8:45 am – 9:15 am	**Infant Fracture Dating: Leveraging Histology, Radiology, and AI** *Andy Tsai, MD*
9:15 am – 10:15 am	**Gross and Microscopic Evaluation of Pediatric Fractures at Autopsy** *Andrew Baker, MD*
10:15 am – 10:45 am	**BREAK/Individual Case Study Assessment Time**
10:45 am – 11:15 am	**Light Microscopy of Pediatric Healing Fractures** *Donna Boyd, PhD*
11:15 am – 12:00 pm	**A Histomorphological Approach to Fracture Age Estimation** *Jered Cornelison, PhD; Carolyn Isaac, PhD*
12:00 pm – 1:30 pm	**BREAK/Individual Case Study Assessment Time**
1:30 pm – 2:00 pm	**Protocol and Best Practices for Documenting and Analyzing Pediatric Healing Fractures at the New York City Office of the Medical Examiner** *Bradley Adams, PhD*
2:00 pm – 2:30 pm	**Assessing the Scientific Validity of TSI Estimation** *Diana Messer, PhD; Donna Boyd, PhD*
2:30 pm – 3:00 pm	**Using Deep Learning to Estimate Time-Since-Injury of Healing Fractures** *Farah Brink, MD; Diana Messer, PhD*
3:00 pm – 3:30 pm	**BREAK/Individual Case Study Assessment Time**
3:30 pm – 4:00 pm	**Clinical Approach to Fracture Healing in Cases of Suspected Child Physical Abuse** *Farah Brink, MD*
4:00 pm – 4:30 pm	**Pediatric Skeletal Trauma Analysis in Broader Legal and Public Health Context: Adjudicating and Preventing Child Deaths** *Donna Boyd, PhD, Diana Messer, PhD*
4:30 pm – 5:00 pm	**Interactive Case Study Discussion and Wrap-Up** *Donna Boyd, PhD; Diana Messer, PhD*

Pre-Registration Required—$275

W2 Implementing Recommendations From the NIST/NIJ Expert Working Group on Human Factors in Forensic DNA Interpretation Report

Tuesday, February 18, 2025 **8:30 am – 5:00 pm** **CE Hours: 6.5**

Program Description: In May 2024, the NIST/ NIJ EWG on Human Factors in Forensic DNA Interpretation published a comprehensive report containing 44 recommendations for how to reduce the likelihood and consequence of errors in forensic DNA interpretation.

In this workshop, we will guide participants through the EWG's process, highlight key findings, discuss controversial topics, and present the final recommendations. The workshop will focus on the following areas:

- Training and Education
- Quality Assurance
- Cognitive Bias and Error Reduction
- Interpretation
- Reporting and Testimony
- Management
- Work Environment
- Expressing Evidence Strength
- Research
- Technology
- The "How" and "When" Questions in DNA Analysis

This workshop is relevant to DNA and other forensic science practitioners, laboratory management, researchers, legal practitioners, and anyone interested in improving decision-making in forensic science. Participants will be expected to actively engage with the material and provide feedback on the relevance and feasibility of implementing the recommendations in their practice.

We will use an interactive approach to help participants develop a plan to implement any recommendations that will provide value in their practice. Join us for a comprehensive session that aims to enhance your understanding and application of human factors in forensic DNA interpretation, ultimately contributing to better practices and safer justice outcomes.

Educational Objectives: In this workshop, we will guide participants through the process undertaken by the National Institute of Standards and Technology (NIST)/National Institute of Justice (NIJ) Expert Working Group (EWG) on Human Factors in Forensic DNA Interpretation. We will highlight the key findings and controversial topics and present the final recommendations from the report published in May 2024. This workshop will focus on providing examples of how forensic science service providers are already implementing these recommendations in their practice.

Upon completion of this workshop, participants will: 1) be familiar with the published recommendations from the NIST/NIJ EWG on Human Factors in Forensic DNA Interpretation report, 2) understand the implications of these recommendations for their practice, 3) Recognize how these recommendations aim to improve DNA examination practices, 4) Critique the recommendations and discuss their relevance and feasibility in participants' own practices and the wider forensic DNA community, and 5) Have the tools to implement the recommendations in their own practice.

Impact Statement: The study of human factors in forensic science is crucial to understanding the interaction between humans and the systems they use. By addressing human factor issues, we can identify and mitigate the likelihood and consequence of errors and biases, improve laboratory culture, staff morale, and productivity. This workshop encapsulates four years of effort dedicated to understanding human factors in forensic DNA interpretation, providing valuable guidance for DNA analysts, laboratory management, and legal practitioners to enhance practice and achieve safer justice outcomes.

Target Audience: General, Jurisprudence, Pathology/Biology

Knowledge Level Required: Basic

WORKSHOPS

W2 Implementing Recommendations From the NIST/NIJ Expert Working Group on Human Factors in Forensic DNA Interpretation Report

Chair:
Angela Spessard, MSFS
Maryland State Police
Pikesville, MD

Co-Chair:
Jarrah R. Kennedy, MSFS
Kansas City Police Crime Laboratory
Kansas City, MO

Presenters:
Niki Osborne, PhD
Human Factors Training and Consultancy
Remuera, New Zealand

Melissa Taylor, BA
National Institute of Standards and Technology
Gaithersburg, MD

Hope Zagaria, MSFS
Bureau of Justice Assistance
Washington, DC

Program:

8:30 am – 9:00 am	**Participant and Facilitator Introductions** *Melissa Taylor, BA*
9:00 am – 10:30 am	**Introduction to the NIST/NIJ Expert Working Group Series** *Melissa Taylor, BA* **Introduction to Key Concepts Used Throughout the NIST/NIJ Expert Working Group on Human Factors in Forensic DNA Interpretation Report** *Niki Osborne, PhD* **Interpretation and Technology** *TBD*
10:30 am – 10:45 am	**BREAK**
10:45 am – 12:00 pm	**Quantitative and Qualitative Expressions of DNA Results** *Hope Zagaria, MSFS* **Reporting and Testimony** *Jarrah Kennedy, MSFS*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 3:00 pm	**Reporting and Testimony Continued** *Jarrah Kennedy, MSFS; Michelle Madrid, MS* **Interpretation of DNA Results Considering Alleged Activities** *Jarrah Kennedy, MSFS; Niki Osborne, PhD*
3:00 pm – 3:15 pm	**BREAK**
3:15 pm – 5:00 pm	**Education, Training, and Professional Credentialing** *Angie Spessard, MSFS* **Management & QA/QC** *Niki Osborne, PhD; Angie Spessard, MSFS* **Final Thoughts** *All Presenters*

Pre-Registration Required—$275

W3 A Military Criminal Investigative Organization and the Boon and Bane of Technology

Monday, February 17, 2025 **8:30 am – 5:30 pm** **CE Hours: 6.75**

Program Description: The attendees will be provided with an understanding of military-specific investigations, how we utilize technology to assist us in solving our investigations, as well as the problems technology has presented over the past ten years. There will be multiple case studies of deaths, child sexual abuse material, and other felony level crimes demonstrating the benefits and risks associated with our reliance on technology. There will be information pertaining to our newly established Cold Case Unit, which has assisted in numerous cold cases and has current cold cases they are investigating. There will also be a capabilities brief of what we as an MCIO can assist outside agencies with.

Educational Objectives: The attendees will learn how a Military Criminal Investigative Organization (MCIO) has applied technology to the investigative process and what has assisted them, as well as how it has hindered the investigative process. There will be discussions concerning death investigations, cold case investigations, and military resources to our partner agencies, challenges of Closed Circuit Television, and challenges during armed conflicts.

Impact Statement: This presentation will impact the forensic science community by providing examples of best practices with inter-agency partnerships, differing ways technology can be used to solve investigations, being a resource to assist with cold cases that may have a Department of Defense nexus, and how technology can be used in austere environments to solve investigations.

Target Audience: Digital & Multimedia Sciences, General Jurisprudence

Knowledge Level Required: Basic

CANCELED

Workshop Chair:
Vanessa R. Neff, MFS
Department of the Army
Criminal Investigation Division
Woodbridge, VA

Co-Chair:
Matt Geniuk, MSc
Department of the Army
Criminal Investigation Division
Fort Sam Houston, TX

Presenters:
Chris Adams, MFS
Department of the Army
Criminal Investigation Division
Quantico, VA

Tim Bartman, BAS
Department of the Army
Criminal Investigation Division
Fort Moore, GA

Ethan Dodson, MSFS
Central Texas Field Office
Department of the Army
Criminal Investigation Division
Fort Cavazos, TX

Michael Allen Easter, Jr., MSFS
Department of the Army
Criminal Investigation Division
Fredericksburg, VA

Pedro Hernandez, Jr., MFS
Department of the Army
Criminal Investigation Division
El Paso, TX

Dale Sajdak, MSFS
Department of the Army
Criminal Investigation Division
Stedman, NC

Jessica A. Veltri, MS
Department of the Army
Criminal Investigation Division
Stafford, VA

Bryce Wolford, MA
Department of the Army
Criminal Investigation Division
Quantico, VA

W3 A Military Criminal Investigative Organization and the Boon and Bane of Technology

Program:

8:30 am – 8:45 am	**Introduction** *Matt Geniuk, MS*
8:45 am – 10:15 am	**Military Resources for Cold Case Investigations** *Jessica A. Veltri, MS; Chris Adams, MFS*
10:15 am – 11:00 am	**Bridging The Gap: Law Enforcement and the Digital Divide** *Pedro Hernandez, Jr., MFS*
11:00 am – 11:15 am	**BREAK**
11:15 am – 12:00 pm	**Dowsing Rods: Bane or Boon?** *Michael Allen Edwards, Jr., MSFS*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 1:45 pm	**Benefits of Facial Recognition in CSAM Investigations** *Bruce Wolford, MA*
1:45 pm – 2:30 pm	**Overreliance on Technology and the Pitfalls** *Dale Sajdak, MSFS*
2:30 pm – 3:15 pm	**Challenges of Excavating Human Remains in a Combat Zone** *Ethan Dodson, MSFS*
3:15 pm – 3:30 pm	**BREAK**
3:30 pm – 4:15 pm	**CCTV and the Challenges it Brings** *Tim Bartman, BAS*
4:15 pm – 5:00 pm	**Limits of Technology in a Missing Soldier Investigation** *Vanessa R. Neff, MFS*
5:00 pm – 5:30 pm	**Final Wrap-Up and Questions** *Matt Geniuk, MS*

CANCELED

Pre-Registration Required—$275

W4 Forensic Science Adaptation to Artificial Intelligence

Monday, February 17, 2025 **8:30 am – 4:35 pm** **CE Hours: 6.25**

Program Description: This workshop was developed by the Forensic Science Foundation (FSF) Educational Committee. The workshop will explore the transformative potential of Artificial Intelligence (AI) in forensic science. It will delve into the basics of AI analyses, discuss strategies for implementing AI-enabled tools in pattern evidence, and present innovative biometrics solutions for digital forensics. The workshop will also evaluate novel approaches to media authentication in the age of AI-generated content, apply AI in fire debris analysis and forensic DNA analysis, and discuss the use of generative AI for rapid detection of novel drugs in toxicology samples. Last, it will provide a historical perspective on the development of AI and discuss its challenges in forensic science. Attendees will gain insights into the state of AI in forensic science, learn about current tools, and understand the considerations in the development and evaluation of AI-based techniques in the field.

Educational Objectives: The proposed presentations are poised to significantly impact the forensic science community by integrating AI into various aspects of forensic analysis. They aim to enhance understanding of AI principles, propose strategies for implementing AI-enabled tools in pattern evidence analysis, and explore innovative biometrics solutions. They also seek to evaluate novel approaches to media authentication in the face of AI-generated content, apply AI in fire debris analysis and forensic DNA analysis, and use generative AI for rapid detection of novel drugs in toxicology samples. Last, they provide a historical perspective on the development of AI and discuss its challenges in forensic science. Collectively, these presentations could lead to more accurate, efficient, and objective forensic analyses, ultimately contributing to a more effective criminal justice system.

Impact Statement: This presentation will impact the forensic science community by providing examples of best practices with inter-agency partnerships, differing ways technology can be used to solve investigations, be a resource to assist with cold cases that may have a Department of Defense nexus, and how technology can be used in austere environments to solve investigations.

Target Audience: All Sections

Knowledge Level Required: Basic

Chair:
Gina Londino-Smolar, EdD
IU Indianapolis
Indianapolis, IN

Co-Chair:
JCU Downs, MD
forensX, LLC
Johns Island, SC

Presenters:
Carole E. Chaski, PhD
Institute for Linguistic Evidence
Georgetown, DE

Brandon Epstein, MS
Medex Forensics
Madison, WI

Ting-Yu Huang, PhD
Central Police University
Taipei City, Taiwan

Michael A. Marciano, PhD
Syracuse University
Syracuse, NY

David Pienkowski, MBA, PhD
University of Kentucky
Lexington, KY

Kathryn C. Seigfried-Spellar, PhD
Purdue University
West Lafayette, IN

Aaron M. Shaprio, PhD
Provincial Health Services
Authority of British Columbia
Vancouver, BC, Canada

Henry Swofford, PhD
National Institute of Standards
and Technology
Gaithersburg, MD

Jorn Yu, PhD
Sam Houston State University
Huntsville, TX

W4 Forensic Science Adaptation to Artificial Intelligence

Program:

8:30 am – 8:35 am	**Welcome** *Gina Londino-Smolar, EdD*
8:35 am – 8:50 am	**Introduction** *David Pienkowski, MBA, PhD*
8:50 am – 9:35 am	**The Impact of Artificial Intelligence on Forensic DNA Analysis** *Michael A. Marciano, PhD*
9:35 am – 10:20 am	**A New Horizon in Digital Forensics Through Knuckle and Fingernail Bed Biometrics** *Kathryn C. Seigfried-Spellar, PhD*
10:20 am – 10:30 am	**BREAK**
10:30 am – 11:15 am	**Evaluating Novel Approaches to Media Authentication in the Age of AI-Generated Content** *Brandon Epstein, MS*
11:15 am – 12:00 pm	**Transfer Learning of Data Classification for Fire Debris Analysis** *Jorn Yu, PhD; Ting-Yu Huang, PhD*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 1:45 pm	**Navigating Implementation of AI-Enabled Tools in Pattern Evidence** *Henry Swofford, PhD*
1:45 pm – 2:30 pm	**The Search for the Unknown: Using Generative AI to Detect Novel Drugs in Toxicology Samples** *Aaron M. Shaprio, PhD*
2:30 pm – 2:45 pm	**BREAK**
2:45 pm – 3:30 pm	**Forensic Computational Linguistics: History, Examples, and Challenges of Artificial Intelligence in Forensic Science** Carole E. Chaski, PhD
3:30 pm – 4:30 pm	**Questions and Answers Panel Session** *All Presenters*
4:30 pm – 4:35 pm	**Closing Remarks** *Gina Londino-Smolar, EdD*

Proceeds from this workshop will benefit the Forensic Sciences Foundation

Pre-Registration Required—$275

W5 The Sherry Black Investigation—A Journey for Justice

Monday, February 17, 2025 **8:30 am – 4:00 pm** **CE Hours: 5.5**

Program Description: This program will take the attendees through the high-profile, 10-year investigation of the murder of Sherry Black. She was murdered in her small bookstore located on her property in South Salt Lake City, UT, on November 30, 2010. The program will start with the initial call to the South Salt Lake City Police Department and the processing of the crime scene by the Utah Bureau of Forensic Services Laboratory System. The evidence recovered at the scene and the impact the evidence had on the investigation will be discussed. The presentation will show the initial forensic testing and the results of the analysis. The Behavioral Analysis conducted on both the crime and offender will be reviewed with the attendees, and the evidence-based conclusions will be explained. Investigative Genetic Genealogy has become a critical tool in identifying unknown remains and unknown offenders in many violent crimes. We will discuss how this was used during the investigation, and how the offender was eventually identified. The attendees will learn the proper way to obtain reference samples to ensure that any results will not be questioned. This presentation will describe the prosecutorial process from the time of the offender's arrest through his sentencing. We will discuss considerations when prosecuting cold case homicides. Finally, the attendees will learn the steps that were taken to pass Utah SB156, also known as the "Sherry Black Bill." This legislative act introduces a more structured framework for law enforcement's utilization of optional genetic testing databases when investigating violent crimes.

Educational Objectives: After attending this presentation, attendees will gain a working knowledge of the process of violent crime investigation. Attendees will recognize: (1) the initial crime scene and evidence collection; (2) forensic analysis of the evidence; (3) crime acene assessment and behavior analysis; (4) Investigative Genetic Genealogy; (5) prosecutorial considerations and the impact on families.

Impact Statement: This presentation will impact the forensic science community by exploring a violent homicide from the initial investigation through the ten years of investigation, culminating in the identification and conviction of the offender. During this investigation, many forensics sciences disciplines were involved; this presentation discusses these practices and their application to homicide investigation.

Target Audience: General, Jurisprudence, Psychiatry & Behavioral Science

Knowledge Level Required: Basic

Chair:
Katherine M. Brown, PhD
Tarleton State University
College Station, TX

Co-Chair:
Kelsie Bryand, MS
Sam Houston State University
Huntsville, TX

Presenters:
Heidi Miller
Founder
Sherry Black Foundation
Sandy, UT

Erin BE Ryan, BS
Director
Sherry Black Foundation
Midway, UT

Patrick J. Zirpoli
Sr. Investigative Consultant
Sherry Black Foundation
Milanville, PA

W5 The Sherry Black Investigation—A Journey for Justice

Program:

8:30 am – 8:45 am	**Introduction** *Heidi Miller*
8:45 am – 10:00 am	**The Initial Investigation** *Patrick J. Zirpoli*
10:00 am – 10:15 am	**BREAK**
10:15 am – 11:00 am	**Assessing Criminal Behavior: An Introduction** *Patrick J. Zirpoli*
11:00 am – 12:00 pm	**Criminal Behavior Assessment of the Sherry Black Murder** *Patrick J. Zirpoli*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 2:15 pm	**Utilizing Investigative Genetic Genealogy** *Patrick J. Zirpoli*
2:15 pm – 2:45 pm	**Prosecutorial Considerations and Impacts on Families** *Patrick J. Zirpoli; Erin BE Ryan, BS; Heidi Miller*
2:45 pm – 3:00 pm	**BREAK**
3:00 pm – 3:45 pm	**Utah SB156 "Sherry Black Bill"** *Erin BE Ryan, BS*
3:45 pm – 4:00 pm	**Closing Remarks** *Heidi Miller*

Pre-Registration Required—$275

W6 NIST/MSP Hypergeometric Sampling Software for Seized-Drug Analysis

Monday, February 17, 2025 **8:00 am – 5:00 pm** **CE Hours: 6.75**

Program Description: This full-day workshop will present a new statistical sampling app developed by the National Institute of Standards and Technology (NIST) and the MSP to apply hypergeometric sampling to seized-drug evidence. The theory behind the calculations in the app will be thoroughly discussed, along with tools and techniques for both conceptualizing and deploying statistical sampling plans in seized-drug laboratories. Topics covered will include sample size selection, uncertainty quantification, generation of appropriate population inferences for net weight and identification purposes, and appropriate reporting language for net weight, unit count, and extrapolation scenarios.

Educational Objectives: After attending this workshop, the attendees will understand how different hypergeometric sampling tools can be used in a forensic laboratory to improve the information provided about the population of drugs submitted.

Impact Statement: This workshop will impact the forensic science community by providing an alternative to the sampling tools currently available on the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG) website. The presenters will highlight the reasons why Maryland State Police (MSP) decided to provide statistical data for evidence submitted with a possession with intent to distribute charge. One of the current challenges of statistical sampling of seized-drug evidence is that the complex mixtures of street samples do not always have the same controlled substances reported for each specimen tested. This sampling app will allow a statistical statement to be more easily made in more situations than the hypothesis testing approach.

Target Audience: Criminalistics

Knowledge Level Required: Basic

Chair:
Sandra E. Rodriguez-Cruz, PhD
Drug Enforcement Administration
Dulles, VA

Co-Chair:
Catherine Savage, MS
Maryland State Police
Forensic Sciences Division
Pikesville, MD

Presenters:
Laurel Bobka, MSFS
Maryland State Police
Walkersville, MD

William Guthrie, MS
National Institute of Standards and Technology
Gaithersburg, MD

Jack Prothero, PhD
National Institute of Standards and Technology
Westminster, CO

Joshua Smith, BS
Charles County Sheriff's Office
Windsor Mill, MD

WORKSHOPS

W6 NIST/MSP Hypergeometric Sampling Software for Seized-Drug Analysis

Program:

8:00 am –	10:00 am	**Welcome and Presentation of the Hypergeometric Sampling App for Seized-Drug Analysis** *Jack Prothero, PhD; Laurel Bobka, MSFS*
10:00 am –	11:00 am	**Histories and Components of Sampling Plans** *Sandra E. Rodriguez-Cruz, PhD; Laurel Bobka, MSFS*
11:00 am –	12:00 pm	**Mathematics Underlying Hypergeometric Sampling and Tool Demos** *Jack Prothero, PhD; Sandra E. Rodriguez-Cruz, PhD*
12:00 pm –	1:00 pm	**BREAK**
1:00 pm –	4:00 pm	**Hands-On Exercises: Comparison of Hypergeometric Sampling App to SWGDRUG SD6 and ENFSI Calculators** *Joshua Smith, BS; Catherine Savage, MS*
4:00 pm –	4:30 pm	**Discussion of Estimated Net Weight and Tablet Count Estimations, Including Estimation of Uncertainty of Measurement for Weight Measurements** *Joshua Smith, BS*
4:30 pm –	5:00 pm	**FAQs: "What Do I Say if a Lawyer Asks X?"** *All Presenters*

WORKSHOPS

Pre-Registration Required—$275

W7 *DSM* Demystified: Medical Disorders in the Courtroom

Monday, February 17, 2025 **8:30 am – 6:00 pm** **CE Hours: 7.5**

Program Description: This presentation is designed to equip legal professionals with the knowledge to confidently discuss the mental health in court proceedings, explore alternative diagnostic options, and understand the crucial distinctions between legal and medical definitions of disorders. Participants will delve into real case examples to see theory in action and gain practical insights into challenging opposing experts and selecting the right expert witnesses.

Interactive elements will include engaging group discussions and role-playing scenarios to enhance learning and retention. Role-playing in this session will involve analyzing various case scenarios from jurisdictions with different legal standards and tests. Participants will engage in mini mock trials with forensic evaluations where they will apply their understanding of the *DSM*'s authority, forensic limitations, and the distinction between legal and medical definitions of disorders. By attending this session, you will not only enhance your ability to navigate forensic evaluations but also ensure ethical and accurate representations of mental health in legal contexts. Join us to transform your courtroom strategies and become a more effective advocate for your clients.

Educational Objectives: The goals of this workshop are to:

- Understand and articulate the role of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) in legal settings.
- Analyze the limitations and challenges of relying on the *DSM* for legal determinations of mental health issues.
- Identify and compare alternative diagnostic manuals and systems used in mental health assessments.
- Differentiate between legal versus medical definitions of mental disorders in the assessment and testimony of mental health conditions.
- Acquire knowledge to effectively challenge the testimony and findings of opposing experts in court.
- Learn to identify potential weaknesses or biases in expert evaluations and testimonies.
- Evaluate the credentials, experience, and methodology of potential expert witnesses.
- Review landmark cases that have significantly influenced mental health law and discuss their impact on current legal standards and practices.

Impact Statement: By achieving these learning objectives, participants will gain a comprehensive understanding of the interplay between mental health and legal systems, particularly the role and authority of the *DSM* in court. They will be equipped with the knowledge to critically evaluate and challenge forensic limitations, alternative diagnostic options, and the legal versus medical definitions of disorders. Through case examples and practical strategies, attendees will enhance their ability to select and prepare expert witnesses, ensuring robust and credible testimonies. This training will empower legal professionals to effectively navigate the complexities of forensic mental health evaluations, ultimately improving the quality and fairness of judicial outcomes.

Target Audience: Jurisprudence, Psychiatry & Behavioral Science

Knowledge Level Required: Basic

Chair:
Corina Freitas, MD
Freitas and Associates LLC
Alexandria, VA

Co-Chair:
Donna Coleman, JD
Office of the Public Defender
Mental Health Division
Towson, MD

W7 *DSM* Demystified: Medical Disorders in the Courtroom

Program:

8:30 am – 8:35 am	**Welcome and Introductions** *Corina Freitas, MD*
8:35 am – 9:00 am	**Overview of Different Mental Health Experts and Their Differences** *Corina Freitas, MD*
9:00 am – 9:15 pm	**Forensic Mental Health Professional Ethics Guidelines** *Corina Freitas, MD*
9:15 am – 10:00 am	**History of Classification of Mental llness, the *DSM* With Its Forensic Application Caution and Beyond** *Corina Freitas, MD*
10:00 am – 10:15 am	**BREAK**
10:15 am – 11:00 am	**What is a Mental Disorder in Forensic Mental Health?—Where Medicine Meets the Law** *Corina Freitas, MD; Donna Coleman, JD*
11:00 am – 12:00 pm	**Review of Mental Health Landmark Cases and Legal Standards** *Donna Coleman, JD*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 3:00 pm	**Mini Mock Trial on Sanity** *Donna Coleman, JD*
3:00 pm – 5:00 pm	**Mini Mock Trial on Competemce** *Donna Coleman, JD*
5:00 pm – 6:00 pm	**Q&A and Mini Mock Trial Debrief** *Corina Freitas, MD; Donna Coleman, JD*

WORKSHOPS

Pre-Registration Required—$275

W8 Forensic Postmortem Radiology and Medicolegal Death Investigations

Monday, February 17, 2025 **8:30 pm – 4:45 pm** **CE Hours: 5.75**

Program Description: Forensic postmortem radiology is an essential element of a comprehensive medicolegal death investigation. State-of-the-art techniques and procedures will be discussed through case presentations and interactive interpretations of radiology images.

Educational Objectives: After attending this workshop, attendees will: (1) appreciate the evolution of forensic imaging: (2) develop an understanding the fundamentals of Postmortem Computed Tomography (PMCT), including interpretation; (3) gain insights regarding the applications of Postmortem Computed Tomography (PMCT), with a particular focus on its role during the opioid epidemic; (4) identify unique considerations for pediatric forensic imaging, and (5) discuss current advances, collaboration, and potential resources available to interested practitioners.

Impact Statement: This presentation will impact the forensic science community by providing attendees with expertise on best practices, interpretation of radiology imaging, and incorporation of forensic postmortem radiology into medicolegal death investigations.

Target Audience: Anthropology, Forensic Nursing Science, General, Jurisprudence, Odontology, Pathology/Biology

Knowledge Level: Basic

Chair:
Summer J. Decker, PhD
University of Southern California
Keck School of Medicine
Los Angeles, CA

Co-Chair:
Edward Mazuchowski, MD, PhD
HNL Lab Medicine
Breiningsville, PA

Presenters:
Natalie L. Adolphi, PhD
University of New Mexico
Albuquerque, NM

Jamie M. Elifritz, MD
Forensic Radiology Group
Albuquerque, NM

Howard T. Harcke, MD
Thomas Jefferson University
Wilmington, DE

Heather S. Jarrell, MD
Office of the Medical Investigator
Albuquerque, NM

Michael J. Thali
University of Zurich
Zurich, Switzerland

Program:

8:30 am – 8:45 am	**Introductions and Overview and Historical Perspective** *Edward L. Mazuchowski, MD, PhD; Summer J. Decker, PhD*
8:45 am – 9:15 am	**Natural Disease, Postmortem Changes, and Artifacts** *Jamie Elifritz, MD*
9:15 am – 9:45 am	**Traumatic Injuries** *Edward L. Mazuchowski, MD, PhD*
9:45 am – 10:15 am	**Incorporating Forensic Imaging Into to Day-to-Day Practice in a Medical Examiner Office During the Opioid Crisis** *Heather Jarrell, MD*
10:15 am – 10:30 am	**BREAK**

W8 Forensic Postmortem Radiology and Medicolegal Death Investigations

Program cont.

10:30 am – 11:00 am **Assessment of Medical Intervention and Testimony**
Edward L. Mazuchowski, MD, PhD

11:00 am – 11:30 am **Pediatric Forensic Radiology**
Howard T. Harcke, MD

11:30 am – 12:00 pm **Current State of Forensic Radiology in Medicolegal Jurisdictions**
Natalie Adophi, MS, PhD

12:00 pm – 1:00 pm **BREAK**

1:00 pm – 1:30 pm **Postmortem Imaging: International Perspective**
Michael Thali, MD

1:30 pm – 2:00 pm **Visualization and Court Presentation**
Summer Decker, PhD

2:00 pm – 2:30 pm **Emerging Technologies in Forensic Imaging**
Summer Decker, PhD

2:30 pm – 2:45 pm **BREAK**

2:45 pm – 4:15 pm **Interactive Cases**
All Presenters

4:15 pm – 4:45 pm **Panel Discussion With Audience Participation**
All Presenters

Pre-Registration Required—$275

W9 Statistical Thinking for Forensic Science: From Probability to Black Box Studies to Likelihood Ratios

Monday, February 17, 2025 **8:30 am – 4:30 pm** **CE Hours: 5.75**

Program Description: This workshop provides an introduction to key concepts in probability and statistics by linking them to key topics that are currently impacting the forensic science community. The target audience is anyone (e.g., practitioners, lawyers, judges, educators, and stakeholders) with a desire to better understand ongoing conversations about validation studies, error rates, inconclusive findings, likelihood ratios, and general concepts in statistics and probability.

Educational Objectives: The workshop is intended to review basic concepts from probability and statistical inference and demonstrate their relevance in the current discussions regarding the assessment and interpretation of impression, pattern, and trace evidence. Participants will:

- Become familiar with the language and key concepts of probability, including the role of populations and sample, laws of probability, dependence/independence of events, conditional probability and Bayes' rule, and the likelihood ratio.
- Become familiar with the language and key concepts of statistical inference, including the role of data collection, measurement, error rates, reliability, and validity.
- Understand issues associated with the design, execution, and interpretation of black box studies.
- Understand statistical hypothesis testing and its relevance for the two-stage approach for analyzing forensic evidence.
- Understand the likelihood ratio/Bayes factor-approach to assessing forensic evidence along with its strengths and weaknesses.

Impact Statement: Understanding the applications of statistics by the forensic science community will assist practitioners, attorneys, and jurists in evaluating evidence and opinions. The workshop is intended to leave participants in a position to better understand and engage in ongoing discussions (in the Organization of Scientific Area Committees [OSAC] and other places) about appropriate approaches to assessing forensic evidence and reporting forensic conclusions.

Target Audience: All Sections

Knowledge Level Required: Basic

Chair:
Michael J. Salyards, PhD
CSAFE
Tucson, AZ

Co-Chair:
Linton Mohammed, PhD
Forensic Science Consultants, Inc.
Poway, CA

Presenter:
Hal S. Stern, PhD
University of California, Irvine
Irvine, CA

Program:

8:30 am – 10:00 am	**Introduction and Probability Concepts** *Michael J. Salyards, PhD; Hal S. Stern, PhD*
10:00 am – 10:30 am	**BREAK**
10:30 am – 12:00 pm	**Forensic Science Results, Opinions, and Interpretations/Statistical Methods and the Two-Stage Approach to Forensic Inference** *Michael J. Salyards, PhD; Hal S. Stern, PhD*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 2:30 pm	**Validation Studies** *Michael J. Salyards, PhD; Hal S. Stern, PhD*
2:30 pm – 3:00 pm	**BREAK**
3:00 pm – 4:30 pm	**The Likelihood Ratio in Forensic Science** *Michael J. Salyards, PhD; Hal S. Stern, PhD*

WORKSHOPS

Pre-Registration Required—$150

W10 Alcohol Calculations and Expert Testimony: How ANSI/ASB BPR 122 and 037 Can Be Applied in Forensic Toxicology Cases

Monday, February 17, 2025 **8:30 am – 12:00 pm** **CE Hours: 3.0**

Program Description: Forensic toxicologists are frequently asked to perform calculations related to alcohol in a wide variety of situations. ANSI/ASB BPR 122 Best Practice Recommendation for Performing Alcohol Calculations in Forensic Toxicology, First Edition, 2024, outlines a scientific approach to improve the quality and consistency of this type of work. Those calculations can then serve as the basis for expert opinion in matters related to motor vehicle investigations, drug-facilitated crimes, workplace injury inquiries, and other criminal and civil cases. Performing the calculations in a standardized manner can also assist experts in meeting the recommendations of ANSI/ASB BPR 037 Guidelines for Opinions and Testimony in Forensic Toxicology, First Edition, 2019.

This workshop will review the alcohol calculation best practices and expert opinion guidelines, then demonstrate how the calculations can be applied to a variety of real-world case scenarios. Experts will also share how those calculations are then presented in court as part of their expert opinion testimony.

Educational Objectives: Attendees will be able to use the alcohol calculation guidelines in a wide variety of forensic case types. They will learn how different toxicologists apply those calculations to expert opinion testimony.

Impact Statement: This workshop will impact the forensic toxicology and criminal justice community by educating stakeholders in how the principles of American National Standards Institute/Academy Standards Board Best Practice Recommendation (ANSI/ASB BPR) 122 and ANSI/ASB BPR 037 can be applied to a variety of forensic case types involving alcohol calculations.

Target Audience: Jurisprudence, Toxicology

Knowledge Level Required: Intermediate

Chair:
Jennifer F. Limoges, MS
New York State Police
Forensic Investigation Center
Albany, NY

Co-Chair:
Laura Liddicoat, BA
Liddicoat Consulting
Fitchburg, WI

Presenters:
Patrick M. Harding, BS
Robert F. Borkenstein Courses
Madison, WI

Chris Heartsill, BSc
SOFT/NHTSA
Farmers Branch, TX

Marc A. LeBeau, PhD
LeBeau Forensic Toxicology Consulting, LLC
Fairfax, VA

Karen Wittman, JD
ABA Judicial Outreach Liaison
Municipal Court
Kansas City, KS

W10 Alcohol Calculations and Expert Testimony: How ANSI/ASB BPR 122 and 037 Can Be Applied in Forensic Toxicology Cases

Program:

8:30 am – 8:35 am	**Opening and Introductions** *Jennifer F. Limoges, MS; Laura Liddicoat, BA*
8:35 am – 8:50 am	**BAC Calculations in the Courtroom** *Karen Wittman, JD*
8:50 am – 9:20 am	**ANSI/ASB BPR 122 and BPR 037 Overview** *Jennifer F. Limoges, MS*
9:20 am – 9:40 am	**Case 1: Dram Shop** *Patrick M. Harding, BS*
9:40 am – 10:00 am	**Case 2: Workplace Injury** *Chris Heartsill, BSc*
10:00 am – 10:30 am	**BREAK**
10:30 am – 10:50 am	**Case 3: FMVA** *Jennifer F. Limoges, MS*
10:50 am – 11:10 am	**Case 4: DFC** *Marc A. LeBeau, PhD*
11:10 am – 11:30 am	**Case 5: Hospital Serum Civil Case** *Laura Liddicoat, BA*
11:30 am – 12:00 pm	**Panel Discussion** *All Presenters*

WORKSHOPS

Pre-Registration Required—$150

W11 Sequencing 101

Monday, February 17, 2025 **8:30 am – 12:00 pm** **CE Hours: 3.5**

Learning Overview: What is a library? If it is whole genome sequencing, why don't I get the whole genome? This workshop is designed to be a crash course in all things sequencing. Existing commercial and custom panels for autosomal Short Tandem Repeat (STR), X-STR, Y-STR, mitochondrial, and Single Nucleotide Polymorphism (SNP) testing will be discussed. Additionally, the differences between targeted sequencing, shotgun sequencing, amplicon versus ligation-based libraries, and additional sequencing methods will be compared. Whether or not bioinformatics is required based on the sequencing method will be explored as well as the types of bioinformatic processes that may be employed, including imputation. With any new technology comes the introduction of this procedure in the courtroom as well as the inevitable court challenges. Successfully presented expert witness testimony will be previewed as well as a look at ongoing court challenges. Finally, cases where sequencing has been utilized will be highlighted. The presenters of this workshop will span industry experts, a bioinformatician, and active casework users of sequencing technologies.

Educational Objectives: The goal of this workshop is for attendees to walk away with a better baseline knowledge of sequencing and to provide a foundation for informed decision-making for those considering deploying sequencing in their laboratory.

Impact Statement: Sequencing can be intimidating for those that are used to the existing DNA technologies that have been available over the past several decades. This workshop will broaden that knowledge.

Target Audience: Criminalistics, Digital & Multimedia Sciences, General, Jurisprudence, Pathology/Biology

Knowledge Level: Basic

Chair:
Rachel H. Oefelein, MSc
DNA Labs international
Deerfield Beach, FL

Co-Chair:
Marybeth Sciarretta, MS
DNA Labs international
Deerfield Beach, FL

Presenters:
Laurence Devesse, PhD
Qiagen
Zurich, Switzerland

Kevin Lord
Astrea
Austin, TX

Mandi S. Van Buren, MS
DNA Labs International
Deerfield Beach, FL

Program:

8:30 am – 8:45 am	**Welcome/Introductions** *Rachel H. Oefelein, MSc*
8:45 am – 9:15 am	**What is Sequencing?** *Laurence Devesse, PhD*
9:15 am – 9:45 am	**Sequencing for STRs, mtDNA, and More** *Marybeth Sciarretta, MS*
9:45 am – 10:15 am	**Sequencing for FIGG** *Patrick M. Harding, BS*
10:15 am – 10:30 am	**BREAK**
10:30 am – 11:00 am	**Sequencing in the Courtroom** *Mandi S. Van Buren, MS*
11:00 am – 11:30 am	**Bioinformatics** *Kevin Lord*
11:30 am – 12:00 pm	**Casework Successes** *Rachel H. Oefelein, MSc*

Pre-Registration Required—$150

W12 Can Human Remains Detection Canine Teams Detect Residual Odor? Results of Odor Recognition Tests and Chemical Analysis

Monday, February 17, 2025 **1:00 pm – 4:30 pm** **CE Hours: 3.5**

Program Description: Dogs have keen olfactory senses and are deployed for a number of forensic purposes in criminal investigations. HRD canines (a.k.a. cadaver dogs) are trained to detect the odor of human remains, which is comprised of Volatile Organic Compounds (VOCs) that emanate from a deceased body. Despite their widespread use, the reliability of HRD canines is complicated and understudied.

Here, residual odor refers to the odor from a deceased human that remains after it is removed from its resting place, including transient places or objects a body touched. Little is known about deceased residual odor except that its VOCs degrade over time. However, canine alerts are being treated as scientifically valid indicators that an intact decedent was present at one time, even when no physical or corroborating (e.g., chemical) evidence exists, and without regard for the level of training, certification, or proficiency of the canine.

A study of 35 HRD canine teams (handler and dog) tested on residual odor from both deceased and living individuals provides the data and results presented in this workshop. The presenters will describe the development of a standardized, double-blind ORT for canine teams and discuss the accuracy of the canine teams in detecting deceased human residual odor. The presenters will explain the chemical characterization of the VOCs from the odor samples used in the ORTs. Finally, the presenters will utilize select video and audio recordings of the canine team participants from the ORT to contextualize the results and discuss implications of the study.

Educational Objectives: Residual odor is an odor that persists after the target is removed. This workshop addresses canine detection of residual odor of humans, both deceased and alive. After attending this workshop, attendees will understand: (1) if Human Remains Detection (HRD) canine teams reliably detect residual odor of human remains; (2) if these canines differentiate between residual odors of deceased human remains and live human scent; (3) if analytical chemistry methods detect and differentiate residual odor of living and deceased individuals; and (4) how the integrated results of chemistry and canine behavior analysis help us understand if and how residual odor training can be improved.

Impact Statement: The legal threshold for admitting canine evidence relies on the experience of the handler and their description of the canine's training, neither of which provide the errors associated with the technique required by standard rules of evidence. This workshop will assist attorneys and judges in assessing the probative value of canine alerts that may be detection of residual odor and thus considered evidence by providing results of a coupled canine-analytical chemistry analysis of intact decedent residual odor study. In addition, the standardized Odor Recognition Test (ORT) design will establish guidelines for canine training and testing to improve Human Remains Detection (HRD) certification efforts.

Target Audience: Anthropology, Criminalistics, General, Jurisprudence, Pathology/Biology, Psychiatry & Behavioral Science, Toxicology

Knowledge Level: Basic

Chair:
Dawnie W. Steadman, PhD
University of Tennessee
Knoxville, TN

Co-Chair:
Mary E. Cablk, PhD
University of Tennessee Knoxville
Reno, NV

Presenters:
Shawn R. Campagna, PhD
University of Tennessee
Knoxville, TN

Mary Davis, MSc
University of Tennessee
Knoxville, TN

James C. Ha, PhD
University of Tennessee
Knoxville, TN

W12 Can Human Remains Detection Canine Teams Detect Residual Odor? Results of Odor Recognition Tests and Chemical Analysis

Program:

1:00 pm – 1:10 pm	**Welcome and Introductions** *Dawnie W. Steadman, PhD*
1:10 pm – 1:30 pm	**Human Remains Detection Dogs (HRD), Residual Odor, and the Courts: The Need for Scientific Evaluation** *Dawnie W. Steadman, PhD*
1:30 pm – 2:30 pm	**Designing and Deploying the Odor Recognition Test (ORT)** *Dawnie W. Steadman, PhD; Mary E. Cablk, PhD; Mary Davis, MSc; James C. Ha, PhD*
2:30 pm – 2:40 pm	**BREAK**
2:40 pm – 3:10 pm	**Chemical Analysis of Residual Odor Samples** *Shawn R. Campagna, PhD*
3:10 pm – 4:00 pm	**Accuracy of HRD to Detect Residual Odors** *James C. Ha, PhD; Mary E. Cablk, PhD; Dawnie W. Steadman, PhD*
4:00 pm – 4:30 pm	**Discussion and Questions** *All Presenters*

WORKSHOPS

Pre-Registration Required—$275

W13 The Body as the Crime Scene: Traces, Signs, and Scientific Methods

Tuesday, February 18, 2025 **8:30 am – 5:00 pm** **CE Hours: 7.25**

Program Description: This workshop highlights the multidisciplinary approach to forensic investigations, drawing attention to the factors that connect forensic scientists, regardless of discipline or specialization. After learning fundamentals common to forensic science as a whole, attendees will delve into knowledge specific to disciplines (criminalistics, nursing, pathology, toxicology, and scene investigation). Each discipline will focus on the observation, detection, and interpretation of traces to aid in understanding complex events. With a focus on sexual and gender-based violence, attendees will apply the knowledge gained from this workshop interactively via a case study that requires insight from and collaboration across various disciplines.

Educational Objectives: This workshop addresses the multidisciplinary approach to forensic investigations, drawing attention to the factors that connect forensic scientists, regardless of discipline or specialization. Specifically, forensic scientists rely on imagination, curiosity, observation, and reasoning in an effort to detect and assign meaning to traces in order to understand events of interest. After attending this workshop, attendees will: (1) understand what connects forensic scientists at our core, notably the scientific approach to problem-solving through observation, reasoning, and the detection and evaluation of traces; (2) consider the types of traces encountered across several disciplines (e.g., AAFS sections, including Criminalistics, Forensic Nursing Science, Pathology/Biology, Toxicology, General, and others); (3) apply what they have learned by considering traces in context and comparing and contrasting discipline-specific approaches to assign meaning to traces of significance; and (4) understand that the Sydney Declaration was developed with the goal of promoting a shared understanding of traces across forensic science.

Impact Statement: This presentation will impact the forensic science community by fostering the understanding that scientific problem-solving in forensic science extends beyond one's specific-area discipline and should be the foundation on which forensic science endeavors are built.

Target Audience: Criminalistics, Forensic Nursing Science, General, Pathology/Biology, Toxicology

Knowledge Level: Intermediate

Chair:
Michelle D. Miranda, PhD
Farmingdale State College, SUNY
Farmingdale, NY

Co-Chair:
Claude Roux, PhD
University of Technology Sydney
Sydney, Australia

Presenters:
Patrick Buzzini, PhD
Sam Houston State University
Huntsville, TX

Yanko G. Kolev, MD, PhD
Medical University - Pleven/District Hospital MBAL
Gabrovo, Bulgaria

Antonel Olckers, PhD
African Academy of Forensic Sciences (AFSA) & DNAbiotec
Pretoria, South Africa

Patricia M. Speck, DNSc
Hoover, AL

Jessica Volz, DNP
Adventist HealthCare
Shady Grove Medical Center
Rockville, MD

W13 The Body as the Crime Scene: Traces, Signs, and Scientific Methods

Program:

8:30 am – 9:00 am	**Introduction and Workshop Overview** *All Presenters*
9:00 am – 10:00 am	**Signs, Symptoms, Clues** *Patrick Buzzini, PhD; Michelle D. Miranda, PhD*
10:00 am – 11:00 am	**Traces and the Sydney Declaration** *Claude Roux, PhD*
11:00 am – 12:00 pm	**Criminalistics: Traces and Sexual and Gender-Based Violence** *Antonel Olckers, PhD*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 2:00 pm	**Forensic Nursing: Traces and Sexual and Gender-Based Violence** *Jessica Volz, DNP; Patricia M. Speck, DNSc*
2:00 pm – 3:00 pm	**Forensic Pathology: Traces and Sexual and Gender-Based Violence.** *Yanko G. Kolev, MD, PhD*
3:00 pm – 4:00 pm	**Forensic Toxicology: Traces and Sexual and Gender-Based Violence** *TBD*
4:00 pm – 5:00 pm	**Interactive Study and Closing Remarks** *All Presenters*

Pre-Registration Required—$275

W14 The Longest Journey Starts With a Single Step: Evaluating Biological Results Given Activity-Level Propositions—The Problem, the Theory, the Solution, and Strategies for Implementation

Tuesday, February 18, 2025 **8:30 am – 5:30 pm** **CE Hours: 7.25**

Program Description: It is clear that the court is interested in "how-the-DNA-got-there" questions. However, answering hypothetical activity-level questions with "it's possible" is not a scientifically justifiable, useful, nor recommended practice. The refusal answer of "I can't answer questions related to how DNA got there" is perhaps even more problematic. This workshop will engage participants in how to prepare and answer activity-level questions with answers that: (1) are not misleading, and therefore minimize the risk of a wrongful conviction; (2) are based on a sound, logical framework; and (3) follow international guidelines. A combination of lectures, demonstrations, and hands-on group activities will be used to show how DNA results may be evaluated with regard to activity-level propositions as well as how to communicate this information. This workshop will cover Case Assessment and Interpretation, existing guidelines, probabilities, likelihood ratios, likelihood ratio equations given activity level propositions, Bayesian networks and sensitivity analyses. In addition, this workshop will focus on how to assign probabilities and likelihood ratios using scientific, peer-reviewed publications. Since case-relevant publications do not always exist, we will also explore how to assign probabilities and likelihood ratios in the presence of limited information. This workshop will cover challenges in answering commonly phrased questions at court and communicating the value of the evidence. Finally, strategies to help with implementation via a series of achievable goals will be presented to equip and empower experts to give answers to these questions of importance to the court.

Educational Objectives: After attending this workshop, attendees will have a better appreciation of how to evaluate DNA results given activity level propositions. They will practice how to correctly formulate activity-level propositions, assign likelihood ratios for biological results given activity-level propositions, apply the Case Assessment and Interpretation (CAI) framework, and see how to use a probabilistic model (e.g., a Bayesian network). With this knowledge, attendees will be able to start to better address hypothetical questions commonly asked in court by recognizing poorly worded questions and providing scientifically correct answers to these questions.

Impact Statement: This presentation will impact the forensic science community by providing guidance on how to answer activity-level questions on biological results in a way that is useful to the court based on a sound logical framework and following international guidelines.

Target Audience: Criminalistics, General, Jurisprudence

Knowledge Level: Intermediate

Chair:
Tim Kalafut, PhD
Sam Houston State University
Huntsville, TX

Co-Chair:
Sheila Willis, DSc
Leverhulme Research for Forensic Science
Dublin, Ireland

Presenter:
Simone Gittelson, PhD
DC Department of Forensic Sciences and
The George Washington University
Washington, DC

W14 The Longest Journey Starts With a Single Step: Evaluating Biological Results Given Activity-Level Propositions—The Problem, the Theory, the Solution, and Strategies for Implementation

Program:

8:30 am – 9:00 am	**Opening Remarks** *Sheila Willis, DSc; Tim Kalafut, PhD*
9:00 am – 10:00 am	**Do Experts Have Expert Knowledge?** *Tim Kalafut, PhD*
10:00 am – 10:30 am	**Evaluation of Forensic Results and Formulating Activity-Level Propositions** *Simone Gittelson, PhD*
10:30 am – 10:45 am	**BREAK**
10:45 am – 11:00 am	**What Is a Probability and How to Report It** *Simone Gittelson, PhD*
11:00 am – 11:40 am	**But Juries Don't Understand the Likelihood Ratio** *Tim Kalafut, PhD*
11:40 am – 12:00 pm	**Bayesian Networks** *Simone Gittelson, PhD*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 1:15 pm	**Case Assessment and Interpretation** *Simone Gittelson, PhD; Tim Kalafut, PhD*
1:15 pm – 2:30 pm	**Mock Case Exercise: Part 1** *Sheila Willis, DSc; Tim Kalafut, PhD; Simone Gittelson, PhD*
2:30 pm – 2:45 pm	**BREAK**
2:45 pm – 3:45 pm	**Mock Case Exercise: Part 2** *Sheila Willis, DSc; Tim Kalafut, PhD; Simone Gittelson, PhD*
3:45 pm – 4:00 pm	**Activity-Level Likelihood Ratios and Sensitivity Analyses** *Simone Gittelson, PhD*
4:00 pm – 4:15 pm	**Testifying in Court** *Tim Kalafut, PhD*
4:15 pm – 5:00 pm	**A Possible Way Forward** *Sheila Willis, DSc*
5:00 pm – 5:30 pm	**Questions and Answers/Closing Remarks** *Sheila Willis, DSc; Tim Kalafut, PhD; Simone Gittelson, PhD*

Pre-Registration Required—$275

W15 Artificial Intelligence (AI) in Forensic Education: The Good, the Great, and the Truth

Tuesday, February 18, 2025 **8:30 am – 4:45 pm** **CE Hours: 6.25**

Program Description: This workshop offers a comprehensive exploration of AI's role in forensic education. It begins with an introduction to the ethical considerations of AI use in academia, highlighting the intersection of AI and plagiarism. The session then delves into the application of AI systems in higher education, including an overview of the HiPerGator supercomputer. Attendees will learn how students can leverage AI for exam preparation, utilizing AI-powered platforms, chatbots, virtual tutors, and flashcard apps. The workshop also addresses the application of AI in solving complex societal issues, specifically the Missing and Murdered Indigenous Women crisis. Ethical considerations of AI use within forensic education are discussed, with a focus on privacy, bias, transparency, and academic integrity. The workshop concludes with a hands-on session on mastering AI prompt generation, equipping attendees with the skills to create engaging, adaptive, and industry-relevant learning experiences for forensic science students. This workshop promises a deep dive into the transformative potential of AI in forensic education.

Educational Objectives: This presentation aims to examine and apply the use of AI in forensic science education, create learning opportunities for students using AI tools, and evaluate the ethics and challenges of using of AI in education.

Impact Statement: This workshop will have a profound impact on the forensic science community by highlighting the transformative potential of AI in education. The workshop targets all people in the forensic science community, especially educators, as the use of AI enters our disciplines. It will provide insights into the ethical implications of AI, explore the application of supercomputers, demonstrate how students can leverage AI for efficient exam preparation, and address complex issues of victimization. The workshop will delve into the ethical considerations of AI use within forensic education, discussing concerns such as privacy, bias, transparency, and academic integrity. The workshop will equip attendees with the skills to craft precise, context-rich prompts for AI-powered tools, facilitating the creation of engaging, adaptive, and industry-relevant learning experiences for forensic science students. This workshop promises to be a game-changer in harnessing the power of AI for the advancement of forensic education.

Target Audience: All Sections

Knowledge Level: Basic

Chair:
Gina Londino-Smolar, EdD
IU Indianapolis
Indianapolis, IN

Co-Chair:
Kelly M. Elkins, PhD
Towson University
Towson, MD

Presenters:
Theresa M. DeAngelo, MSFS
Maryland State Police
Forensic Sciences Division
Pikesville, MD

Amber L. Fortney, MS
University of Central Oklahoma
Perry, OK

Meagan Raddatz, MS
University of Central Oklahoma
Perry, OK

Claire E. Shepard, MS
LA Delta Community College
Monroe, LA

Ying Zhang, MS
University of Florida
Gainesville, FL

W15 Artificial Intelligence (AI) in Forensic Education: The Good, the Great, and the Truth

Program:

8:30 am – 8:45 am	**Welcome** *Kelly M. Elkins, PhD*
8:45 am – 9:30 am	**Introduction—College Policy, Academic Integrity, Ethics** *Kelly M. Elkins, PhD*
9:30 am – 10:15 am	**The Application of AI Systems in Higher Education** *Ying Zhang, MS*
10:15am – 10:30 am	**BREAK**
10:30 am – 11:15 am	**Student Use of AI for Preparing for Exams** *Claire E. Shepard, MS*
11:15 am – 12:00 pm	**Artificial Intelligence Applications in Missing and Murdered Indigenous Women Victimization Prevention and Cold Case Resolution** *Amber L. Fortney, MS; Meagan Raddatz, MS*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 1:45 pm	**Ethical Considerations for AI Use Within Forensic Education** *Theresa M. DeAngelo, MSFS*
1:45 pm – 2:30 pm	**Question and Answer Session** *All Presenters*
2:30 pm – 2:45 pm	**BREAK**
2:45 pm – 3:30 pm	**Crafting the Future: Mastering AI Prompt Generation for Enhanced Forensic Education** *Gina Londino-Smolar, EdD*
3:30 pm – 4:30 pm	**Hands-On Evaluation on Utilizing Various AI Tools for Educational Purposes** *All Presenters*
4:30 pm – 4:45 pm	**Closing Remarks** *Gina Londino-Smolar, EdD*

Pre-Registration Required—$275

W16 How to Be a Long-Term Unidentified and Missing Persons Investigator: The Investigators' Toolkit

Tuesday, February 18, 2025 **8:30 am – 6:00 pm** **CE Hours: 7.5**

Program Description: This workshop was designed to assist investigators from law enforcement agencies and medical examiners/coroners in investigating their long-term unidentified human remains cases as well as long-term missing persons cases. Representatives from the Center for Forensic Science Advancement and Application at RTI International, National Center for Missing and Exploited Children (NCMEC), the DNA Doe Project, the Federal Bureau of Investigation (FBI), and a cold case detective from Virginia will discuss how their agencies can assist and provide support to those investigating unidentified human remains and long-term missing persons cases.

A presentation on forensic intelligence databases will outline the utility of remote, multidisciplinary investigations across jurisdictions. The Program Manager for the Forensic Services Unit at NCMEC will share resources and case examples on how NCMEC can assist and support juvenile investigations for both unidentified human remains and missing persons investigations. The Bureau of Justice Assistance (BJA) will discuss federal resources and grant opportunities for those investigating missing and unidentified persons cases.

The second block includes presentations that are more hands-on. The executive director from the DNA Doe Project will discuss Forensic Investigation Genetic Genealogy and the resources that the DNA Doe Project can provide. The FBI's Major Incident Program Manager will give an overview on the Latent Print Unit in the FBI and their support services, as well as a chemical demo on how to retrieve fingerprints on degraded human remains. The last presentation is from a local cold case detective who will present their case of an unidentified human remains case from start to finish.

The workshop will conclude with a discussion panel of the above speakers and discussion and assessment of attendees' current investigations, if applicable.

Educational Objectives: During this presentation, attendees will receive information and training on various resources used to investigate long-term unidentified human remains cases, as well as long-term missing persons cases. Attendees will learn how juvenile cases differ from adult unidentified human remains and missing persons cases. Information will be shared on best practices for investigation and will cover a case from start to finish.

After attending the workshop, attendees will: (1) have a better understanding of how to investigate unidentified human remains and long-term missing persons cases; (2) know how to start an unidentified human remains and/or long-term missing persons investigation; (3) understand the resources and support agencies available; (4) be able to determine the best resources that can be utilized for their own cold cases; (5) be able to discuss their own cases and investigations and receive real-time support from the speakers on how best to move their investigations forward.

Impact Statement: The workshop will impact the forensic science community by providing a toolkit for investigators to use during unidentified human remains and missing persons investigations. While there are some agencies who have a dedicated cold-case unit who is responsible for long-term unidentified human remains cases and long-term missing persons cases, the reality is that most agencies across the nation are too small, do not have the budget, and/or do not have the manpower to have a dedicated unit. This workshop will provide attendees with information how to begin a cold unidentified human remains case or missing persons case, and how to keep the cases active. It will also provide attendees with a knowledge base on investigations and a point of contact for resources on cold cases nationwide.

Target Audience: Criminalistics, General

Knowledge Level: Basic

W16 How to Be a Long-Term Unidentified and Missing Persons Investigator: The Investigators' Toolkit

Chair:
Lara Newell, MA
Virginia Office of the
Chief Medical Examiner
Richmond, VA

Co-Chair:
Katharine C. Pope, MA
RTI International
Fruitland, MD

Presenters:
Hannah Barcus, MS
Bureau of Justice Assistance
Washington, DC

Mark A. Bush, BAS
Loudoun County Sheriff's Office
Leesburg, VA

Bryan T. Johnson, MSFS
FBI
Quantico, VA

Jennifer Randolph, MSc
DNA Doe Project
Hanover, DE

Nancy Rissi, BS
Riverside County Sheriff's Department
Rierside, CA

Carol Schweitzer, MA
National Center for Missing & Exploited
Children
Alexandria, VA

Program:

8:30 am – 9:00 am	**Workshop Introduction and Intro to VA OCME/LTUC** *Lara Newell, MA*
9:00 am – 10:00 am	**Multidisciplinary Cold Case investigations: On the Use and Utility of Forensic Intelligence Databases** *Katharine C. Pope, MA*
10:00 am – 12:00 pm	**NCMEC Resources for Long-Term Missing and Unidentified Juvenile Cases Using Case Examples** *Carol Schweitzer, MA*
12:00 pm – 12:30 pm	**Resources for Working Missing and Unidentified Persons Cases** *Hannah Barcus, MS*
12:30 pm – 1:30 pm	**BREAK**
1:30 pm – 2:45 pm	**FIGG** *Jennifer Randolph, MSc*
2:45 pm – 4:00 pm	**Latents and Chemical Demonstration** *Bryan T. Johnson, MSFS*
4:00 pm – 5:30 pm	**Reconstructing a Homicide** *Mark A. Bush, BAS*
5:30 pm – 6:00 pm	**Questions and Answers Panel** *All Presenters*

Pre-Registration Required—$275

W17 Practical Neuropathology for Coroners and Medical Examiners: Basic Concepts and Advanced Principles

Tuesday, February 18, 2025 **8:30 am – 5:00 pm** **CE Hours: 7.0**

Program Description: Assessing Central Nervous System (CNS) trauma is critical in neuropathology and forensic pathology and encompasses closed- or open-head injuries, multiple types of forms of parenchymal brain injury, and secondary complications such as edema and increased intracranial pressure. Establishing a link between trauma and death is crucial for determining the cause and manner of death.

Child abuse, particularly abusive head trauma, is a complex and vital focus in forensic neuropathology. A comprehensive workup is essential to document the findings and determine their relevance in terms of evidentiary significance and to rule out potential confounders to pediatric head trauma and child abuse.

CNS disorders such as epilepsy may present significant challenges when associated with sudden and unexplained death (Sudden Unexplained Death in Epilepsy [SUDEP]), as they often lack morphological indicators. Other natural disease processes, such as undiagnosed brain tumors, aneurysms, infections, neurodegenerative diseases, and cerebrovascular accidents, can further complicate forensic assessments and may have public health implications.

Different brain pathologies necessitate varied approaches, including detailed external examinations, precise sampling for microscopic analysis, and specialized dissection techniques tailored to highlight specific findings.

This workshop will explore fundamental and advanced aspects of brain pathology in forensic autopsies, including but not limited to CNS anatomy, head trauma, neurovascular diseases, infections, specialized autopsy dissection techniques, and microscopic examination of rare or uncommon conditions. Attendees will participate in didactic sessions, case studies, step-by-step dissection guides, and evidence-based discussions led by forensic and neuropathologists, facilitating interactive learning and skill enhancement.

Educational objectives: After attending this workshop, participants will have an enhanced knowledge base of neuropathology as seen in a busy forensic pathology office. Emphasis will be placed on natural diseases, trauma, microscopic sampling and examination, and pediatric non-accidental head trauma. Attendees will develop skills necessary for comprehensive brain assessments at autopsy and techniques to address both common and unusual pathologies. They will be exposed to various specimens and techniques through didactic presentations, and case-based discussions.

Impact Statement: This workshop will emphasize the multifaceted nature of brain pathology in the context of forensic autopsy. Didactic lectures and practical instruction using detailed anatomical images will be provided to enhance autopsy performance and competency, with an additional focus on the workup and evaluation of pediatric non-accidental head injury.

Target Audience: General, Jurisprudence, Pathology/Biology

Knowledge Level: Basic

Chair:
Lorenzo Gitto, MD
Cook County Medical Examiner's Office
Chicago, IL

Co-Chair:
Ponni Arunkumar, MBBS
Cook County Medical Examiner's Office
Chicago, IL

Presenters:
Jared Ahrendsen, MD, PhD
Northwestern University
Chicago, IL

Anfisa Baiandurova, MD
West Tennessee Regional Forensic Center
Memphis, TN

Rudolph J. Castellani, MD
Northwestern University
Feinberg School of Medicine
Chicago, IL

Samantha N. Champion, MD
Cook County Medical Examiner
Chicago, IL

Michelle A. Jorden, MD
Santa Clara County
Medical Examiner/Coroner

W17 Practical Neuropathology for Coroners and Medical Examiners: Basic Concepts and Advanced Principles

Program:

8:30 am – 8:45 am	**introduction** *Lorenzo Gitto, MD; Ponni Arunkumar, MBBS*
8:45 am – 9:00 am	**Neuropathology and the Coroner** *Ponni Arunkumar, MBBS*
9:00 am – 9:45 am	**Introduction to Forensic Neuropathology, CNS Anatomy, and Histology** *Samantha N. Champion, MD*
9:45 am – 10:15 am	**Cerebrovascular Disease** *Anfisa Baiandurova, MD*
10:15 am – 10:30 am	**BREAK**
10:30 am – 11:00 am	**Uncommon and Interesting Central Nervous System Tumors/Lesions** *Michelle A. Jorden, MD*
11:00 am – 11:30 am	**Neurodegenerative Disease Interpretation** *Rudolph J. Castellani, MD*
11:30 am – 12:00 pm	**Infections of the Central Nervous System** *Lorenzo Gitto, MD*
12:00 pm – 1:00 pm	**BREAK**
1:00 pm – 2:00 pm	**An Evidence-Based Review of Pediatric Abusive Head Trauma** *Rudolph J. Castellani, MD; Jared Ahrendsen, MD, PhD*
2:00 pm – 2:30 pm	**Adult Blunt Head Trauma** *Samantha N. Champion, MD*
2:30 pm – 3:00 pm	**Is Modern Chronic Traumatic Encephalopathy Appropriate to Death Certification?** *Rudolph J. Castellani, MD*
3:00 pm – 3:15 pm	**BREAK**
3:15 pm – 3:45 pm	**Seizures** *Samantha N. Champion, MD*
3:45 pm – 4:15 pm	**Special Autopsy Dissection Techniques** *Lorenzo Gitto, MD*
4:15 pm – 4:45 pm	**Brain Dissection and Cervical Spine Dissection in Head Trauma** *Jared Ahrendsen, MD, PhD*
4:45 pm – 5:00 pm	**Discussion and Questions** *All Presenters*

Pre-Registration Required—$150

W18 A New Frontier—Federal Agencies Paving a Way for Forensic Drug Analysis With AI

Tuesday, February 18, 2025 **8:00 am – 12:00 pm** **CE Hours: 3.25**

Program Description: Federal agencies around the world are embracing the new frontier of machine learning and advanced technology and considering how to AI within the current systems. This workshop will provide insight into various examples of how federal agencies are applying machine learning capabilities and other technological advances to forensic science and drug analysis. The National Institute of Standards and Technology (NIST) researchers will be discussing their efforts in creating a catalog of AI-enabled tools currently being used by forensic science service providers and researchers for forensic science applications, to include available or near-market tools. Other examples include Drug Enforcement Administration's (DEA's) implementation of state-of-the-art automation for sample preparation related to screening and quantitative analysis. Using advanced robotics, samples are prepared for general screening of controlled substances and quantitative analysis. The Canada Border Services Agency will present on the transformative capabilities of existing software in conjunction with the portable mass spectrometers for narcotics detection at the Canadian Border. Participants will gain insights into the sophisticated software algorithm, which significantly enhances confidence in direct inject Mass Spectrometry (MS) spectral matching, providing rapid and precise results.

In addition, attendees will participate in an interactive exercise in which they will identify areas in seized drug processes where AI-enabled tools have the potential to be transformative (e.g., evidence analysis, quality control, reducing the likelihood and consequence of error and cognitive bias, and research activities. The workshop will finish with information on the progress toward establishing a road map for the responsible development, testing, evaluation, and adoption of trustworthy machine-learning and AI systems in forensic science.

Educational Objectives: After attending this workshop, attendees will: (1) be able to better understand how federal agencies in the United States and internationally are using machine learning tools and other technological advances in seized drug analysis; (2) be able to evaluate the challenges with robotics and algorithms to improve laboratory analytical capabilities and seized drug workflow strategies; and (3) be able to explain how federal agencies are addressing the new frontier of machine-learning and artificial intelligence in support of forensic science investigations.

Impact Statement: This workshop will benefit the forensic science community by highlighting how federal agencies are considering the benefits, risks, and limitations that machine learning capabilities and technological advances have brought to forensic science seized drug analysis, such as collaborations on investigations, epidemiology, drug intelligence, and canine training, and operations. It will also highlight how embracing these opportunities can strengthen the efficiency of laboratory operations, utility of the results, and timeliness of testing.

Target Audience: Criminalistics, General

Knowledge Level: Basic

Chair:
Agnes D. Winokur, PhD
Drug Enforcement Administration
Washington, DC

Co-Chair:
Kimberly Westberry, PhD
USACIL
Forest Park, GA

Presenters:
Sandra Ferreira, MSc
Canada Border Service Agency
Ottowa, Ontario, Canada

Scott R. Oulton, BS
Drug Enforcement Administration
Arlington, VA

Henry Swofford, PhD
National Institute of Standards and Technology
Gaithersburg, MD

Melissa Taytlor, BA
National Institute of Standards and Technology
Gaithersburg, MD

W18 A New Frontier—Federal Agencies Paving a Way for Forensic Drug Analysis With AI

Program:

8:30 am – 8:45 am	**Introduction** *Kimberly Westberry, PhD*
8:45 am – 9:30 am	**New Frontier—Landscape of Artificial Intelligence-Enabled Tools** *Melissa Taylor, BA; Henry Swofford, PhD*
9:30 am – 10:15 am	**Empowering Innovation: How Federal Agencies Harness Novel Technology for Advancing Forensic Science** *Sandra Ferreira, MSc*
10:15 am – 10:30 am	**BREAK**
10:30 am – 11:00 am	**Exploring Algorithms and Predictive Models** *Agnes D. Winokur, PhD*
11:00 am – 11:30 am	**The Use of Advanced Technological Automation for Seized Drug Analysis** *Scott R. Oulton, BS*
11:30 am – 12:15 pm	**Developing a Roadmap for the Adoption of AI Systems** *Melissa Taylor, BA; Henry Swofford, PhD*
12:15 pm – 12:30 pm	**Questions and Answers** *All Presenters*

WORKSHOPS

Pre-Registration Required—$150

W19 Unmasking the Evidence: How Defense Experts Prevented Wrongful Convictions

Tuesday, February 18, 2025 **8:30 am – 12:30 pm** **CE Hours: 3.5**

Program Description: The program will highlight the challenges faced by legal professionals who may lack the scientific background needed to assess forensic evidence accurately. It emphasizes the critical role that defense experts play in preventing wrongful convictions by scrutinizing evidence, reports, testimony, and the actions of forensic analysts.

Anjali Ranadive and Tiffany Roy, both attorneys and forensic scientists with significant experience, aim to shed light on systemic issues within the legal system through real case examples. They will provide insights into various problems such as evidence mishandling, credibility of testing procedures, misleading language in reports, and biases in case theories. By bringing attention to these issues, they will emphasize the importance of having competent experts for the defense to challenge flawed evidence, interpretations, and statistical analyses that could sway court decisions unjustly.

The workshop underscores the notion that without the input of knowledge of experts on the defense side, there is a risk of overlooking crucial opportunities to question the validity of evidence presented by the prosecution. This can ultimately impact the fairness of legal outcomes and the dispensation of justice. By advocating for a more balanced and informed approach to evaluate forensic evidence in court, the speakers aim to promote a greater sense of integrity and equity within the criminal justice system

Educational Objectives:

1. Understanding the adversarial nature of the legal system and its implications for forensic evidence;
2. Recognizing the challenges faced by attorneys and judges in evaluating scientific evidence without a background in science.
3. Exploring the impact of prestigious institutions or agencies on perceptions of evidence credibility.
4. Analyzing the role of language in forensic reports and testimony, including potential inaccuracies and biases.
5. Enhancing skills in scrutinizing evidence collection, chain-of-custody procedures, and testing methodologies.
6. Developing awareness of confirmation bias and the dangers of tunnel vision in legal proceedings.
7. Recognizing the importance of competent expert testimony in challenging misleading evidence presentations.
8. Examining real-life cases to illustrate systemic issues in handling evidence and presenting cases in court.
9. Enhancing critical thinking skills in evaluating laboratory procedures, interpretation methods, and statistical analyses.
10. Promoting ethical practices in legal and forensic professions to ensure the pursuit of justice.

Impact Statement: The training program aims to empower legal professionals working in the criminal justice field with the knowledge and skills necessary to navigate the complexities of forensic evidence. By shedding light on systemic issues, promoting critical thinking, and advocating for ethical practices in evidence presentation, this program seeks to enhance the pursuit of justice in the legal system. Participants will be equipped to challenge misleading evidence, recognize biases in language, and ultimately contribute to a fairer and more transparent judicial process. Through real-case examples and expert guidance, this program strives to make a lasting impact on how forensic evidence is handled, ensuring that the quest for truth and justice remains paramount in legal proceedings.

Target Audience: All Sections

Knowledge Level: Intermediate

Chair:
Anjali Ranadive, JD
SciLawForensics, Ltd
Phoenix, AZ

Co-Chair:
Tiffany A. Roy, MSFS
ForensicAid, LLC
West Palm Beach, FL

W19 Unmasking the Evidence: How Defense Experts Prevented Wrongful Convictions

Program:

8:30 am – 8:45 am	**Introductions** *Anjali Ranadive, JD; Tiffany A. Roy, MSFS*
8:45 am – 9:30 am	**Decapitation in the Dakotas** *Anjali Ranadive, JD*
9:30 am – 10:15 am	***MI v Grondin*** *Tiffany A. Roy, MSFS*
10:15 am – 10:30 am	**BREAK**
10:30 am – 11:15 am	***AR v Dean*** *Anjali Ranadive, JD*
11:15 am – 12:00 pm	***FL v Resiles*** *Tiffany A. Roy, MSFS*
12:00 pm – 12:30 pm	**Questions and Answers** *Anjali Ranadive, JD; Tiffany A. Roy, MSFS*

WORKSHOPS

Pre-Registration Required—$150

W20 Signed by Hand or by Machine?

Tuesday, February 18, 2025 **8:30 am – 12:00 pm** **CE Hours: 3.0**

Program Description: This workshop will introduce FDEs to new types of machine-generated signatures. There will be a significant hands-on session where attendees will examine and compare original handwritten signatures and original machine-generated signatures. There will be information given as to how the signatures were produced. Discriminating features of the signature types will be discussed by the attendees.

Educational Objectives: This workshop will introduce attendees to new methods of creating machine-generated signatures. Features of these types of signatures in comparison with handwritten signatures will be discussed and demonstrated.

Impact Statement: This workshop will provide Forensic Document Examiners (FDEs) with information on how to deal with the examinations of signatures that are possibly machine-generated. The examiners' knowledge should enhance the quality and reliability of opinions given as to signature authenticity.

Target Audience: Criminalistics, Engineering & Applied Sciences, General, Jurisprudence, Questioned Documents

Knowledge Level: Intermediate

Chair:
Linton Mohammed, PhD
Forensic Science Consultants, Inc.
Poway, CA

Presenter:
Jonathan Heckeroth, MSc
Zurich Forensic Science Institute
Zurich, Switzerland

Co-Chair:
Zain Bhaloo, MSc
Canada Border Services Agency
Ottowa, Ontario, Canada

Program:

8:30 am – 8:45 am	**Welcome/Introductions** *Linton Mohammed, PhD*
8:45 am – 10:00 am	**Hands-On Session** *Jonathan Heckeroth, MSc*
10:00 am – 10:20 am	**BREAK**
10:20 am – 11:00 am	**Hands-On Session** *Jonathan Heckeroth, MSc*
11:00 am – 11:30 am	**Machine-Generated Signature Production** *Jonathan Heckeroth, MSc*
11:30 am – 12:00 pm	**Group Discussion** *Linton Mohammed, PhD; Jonathan Heckeroth, MSc*

WORKSHOPS

Pre-Registration Required—$150

W21 All Rise 2.0: Navigating the Judicial Process as an Expert Witness

Tuesday, February 18, 2025 **8:30 am – 12:00 pm** **CE Hours: 3.75**

Program Description: Forensic scientists are trained in the techniques, theory, history, and standards associated with their particular discipline. Often lacking, however, is training in the application of those skills to the courtroom setting and, in particular, the presentation of expert testimony. A forensic expert's ability to effectively communicate in a courtroom setting is vital if that expert is going to make meaningful contributions to the justice system. This workshop seeks to improve courtroom communication skills by providing a combination of lectures and hands-on learning that will introduce the basic foundations of the United States court system, the roles of the participants, the types of pre-trial and trial processes that occur, and the opportunity for attendees to practice testifying in a true-to-life courtroom environment with case-based scenarios.

Educational Objectives: After attending this workshop, attendees will be well-versed in the decorum, procedures, expectations, and environment of a modern United States courtroom through active participation in courtroom proceedings.

Impact Statement: This presentation will impact the forensic science community by offering real-world experience in expert testimony in an environment conducive to productive learning without the stress of an actual trial.

Target Audience: All Sections

Knowledge Level: Basic

Chair:
Laura C Fulginiti, PhD
MCOME
Phoenix, AZ

Co-Chair:
Daniel W. Martin, JD
State of Arizona
Phoenix, AZ

Presenters:
Katelyn L. Bolhofner, PhD
Arizona State University
Phoenix, AZ

Betty Layne DesPortes, JD
Benjamin & DesPortes PC
Richmond, VA

Kristen Hartnett-McCann, PhD
CT Office of the Chief Medical Examiner
Farmington, CT

Gary C. McDonald, Jr., JD
Dallas County Criminal District
Attorney's Office
Dallas, TX

Andrew C. Seidel, PhD
King County Medical Examiner's Office
Seattle, WA

Program:

8:30 am – 8:45 am	**Welcome/Introduction** *Daniel W. Martin, JD; Laura C Fulginiti, PhD*
8:45 am – 9:00 am	**Courtroom Procedure and Protocol** *Daniel W. Martin, JD*
9:00 am – 9:45 am	**What to Expect as an Expert Providing Testimony in Judicial Proceedings** *Laura C Fulginiti, PhD*
9:45 am – 10:00 am	**BREAK**
10:00 am – 11:40 am	**Courtroom Scenarios #1 Through #5** *All Presenters*
11:40 am – 12:00 pm	**Courtroom Scenarios #6 and Closing Remarks** *All Presenters*

Pre-Registration Required—$150

W22 Chasing the Dragon: Navigating Death Investigations in the Era of Novel Psychoactive Substances

Tuesday, February 18, 2025 **8:30 am – 12:00 pm** **CE Hours: 3.25**

Program Description: This half-day workshop is a collaboration between the AAFS ad-hoc Opioid and Emerging Drugs Committee and the Society of Forensic Toxicologists (SOFT) NPS Committee. From the scene of a suspected overdose to the final determination of cause and manner of death, this workshop will demonstrate how information from a range of forensic scientists can be applied to a death investigation and subsequently further the understanding of NPS for both forensic practitioners and the public.

There are hundreds of NPS on the market today with a wide range of psychoactive effects; however, most of these substances have unknown pharmacological properties (e.g., potency, metabolism, toxicity), complicating the interpretation of their impact on public health and safety. In addition, keeping up with the drug market becomes a challenge, and forensic practitioners and researchers are left chasing information on NPS that quickly becomes outdated due to the volatility of the drug supply. Whether it is crime scene investigation, pathological findings, pharmacological and toxicological interpretations, or chemical analysis, when trying to understand NPS, the work of one forensic discipline is regularly influenced by that of another. By working together, forensic scientists can increase their chances of providing timely information that can aid in drug-related death investigation, updating drug trends, and maintaining public policy and drug prevention outreach in the community.

Educational Objectives: Upon completion of this workshop, the participant should be able to: (1) interpret key differences between the Novel Psychoactive Substance (NPS) classes and how they impact cause and manner of death; (2) discuss the difficulties encountered in investigating NPS in the context of forensic toxicology, seized drug analysis, death scene investigation, toxicological interpretation, and accurate certification of cause and manner of death and; (3) appreciate the importance of disseminating timely information regarding emerging NPS trends and the impact on public health and harm reduction.

Impact Statement: These presentations will impact the forensic science community by emphasizing the importance of collaboration and dissemination of relevant and accurate information across forensic science disciplines regarding the identification and interpretation of NPS. Additionally, these presentations will increase understanding of the different classes of NPS, how they are marketed and often mislabeled, types of products to look for on the scene, and the role these drugs play in death investigation and certification.

Target Audience: Pathology/Biology, Toxicology

Knowledge Level: Intermediate

Chair:
Elisa N. Shoff, MS
Miami-Dade
Medical Examiner Department
Miami, FL

Co-Chair:
Mary E. Zaney, BSc
Miami-Dade Medical Examiner
Miami, FL

Presenters:
Kayla N. Ellefsen, PhD
Travis County Medical Examiner
Austin, TX

David Fintan Garavan, PhD, MD
District 10 ME Office
Winter Haven, FL

Alex J. Krotulski, PhD
Center for Forensic Science Research and Education
Horsham, PA

Joshua Z. Seither, PhD
Armed Forces Medical Examiner System
Division of Forensic Toxicology
Dover, DE

Chip Walls, BS
Tox Lab
Miami, FL

Erin Worrell, BSc
Franklin County Center of Forensic Science
Office of the Coroner
Columbus, OH

W22 Chasing the Dragon: Navigating Death Investigations in the Era of Novel Psychoactive Substances

Program:

8:30 am – 8:35 am	**Welcome** *Elisa N. Shoff, MS; Mary E. Zaney, BSc*
8:35 am – 8:55 am	**NPS Stimulants** *Elisa N. Shoff, MS*
8:55 am – 9:15 am	**NPS Benzodiazepines** *Kayla N. Ellefsen, PhD*
9:15 am – 9:35 am	**Off the Grid** *Chip Walls, BS*
9:35 am – 10:05 am	**NPS Opioids, Illicit Fentanyl, and Xylazine** *Alex J. Krotulski, PhD*
10:05 am – 10:15 am	**BREAK**
10:15 am – 10:35 am	**NPS on the Crime Scene** *Erin Worrell, BSc*
10:35 am – 10:55 am	**Mislabeled Products** *Joshua Z. Seither, PhD*
10:55 am – 11:15 am	**Postmortem Cases Involving Counterfeit Pills** *Mary E. Zaney, BSc*
11:15 am – 11:45 am	**Certifying Cause and Manner of Death in Cases With NPS** *David Fintan Garavan, PhD, MD*
11:45 am – 12:00 pm	**Questions and Answers** *All Presenters*

Pre-Registration Required—$150

W23 A Skeletal Atlas of Elder Abuse: Beta Testing a Digital Diagnostic and Educational Tool

Tuesday, February 18, 2025 **1:00 pm – 4:30 pm** **CE Hours: 4.0**

Program Description: Increasing rates of elder abuse in the United States over the past few decades have produced an urgent need for improved diagnostic criteria to better design intervention procedures, to implement recognition criteria, and to achieve justice for victims. Physical abuse of elders represents the most severe manifestation of this trend. Yet physical abuse is difficult to prove and may be masked by attribution of injury to medication or accident. In this workshop, attendees will learn how aging impacts skeletal trauma incidence and patterning. The presenters will provide an overview of differences in the skeletal patterns of injury between accidental falls and cases of abuse/neglect uncovered in our NIJ-funded research, as well as the impact of bone density loss on these patterns. Attendees will be introduced to the first complete iteration of the Skeletal Atlas of Elder Abuse — A Digital Tool for Diagnosis and Education. The presenters will discuss the development of the online platform, its aims and future direction, and will request attendee feedback through the beta testing of the site. Participants will have the opportunity to hear from the developers of the machine learning and AI models driving the diagnostics of the site as well as from the software development team responsible for the creation of the atlas and its many interactive features. This workshop probes the opportunities (and challenges) associated with the development of such a tool, asking attendees for participation, suggestions, direct interaction, and user experience measures.

Educational Objectives: After attending this workshop, attendees should be able to: (1) describe methods used to characterize/assess skeletal fracture patterns in elderly individuals and the ways in which aging affects fracture and recovery; (2) understand there are different patterns of trauma associated with abuse/neglect and with accidental falls, (3) understand how to navigate the presented digital atlas of elder abuse, both for educational and diagnostic purposes; and (4) participate in beta testing the atlas and contribute usability data toward its final construction.

Impact Statement: Ten percent of adults aged 65+ will experience some form of abuse annually. Physical abuse and caregiver neglect account for most cases, yet they remain difficult to prove. Skeletal expressions of abuse offer key indications of inflicted and untreated injuries but are masked by assignation to accidental falls. Funded by the National Institute of Justice (NIJ), our research aims to produce a standard for the diagnosis of elder abuse in the skeletal system. This presentation will impact the forensic science community by offering the first iteration of a digital tool for diagnosis and education and for collaboration and learning so that we may improve our understanding of fractures and their contexts in elderly individuals.

Target Audience: Anthropology, Criminalistics, Digital & Multimedia Sciences, Forensic Nursing Science, General, Pathology/Biology

Knowledge Level: Basic

Chair:
Katelyn L. Bolhofner, PhD
Arizona State University
Phoenix, AZ

Co-Chair:
Laura C Fulginiti, PhD
MCOME
Phoenix, AZ

Presenters:
Jane E. Buikstra, PhD
Arizona State University
Phoenix, AZ

Kevin A. Gary, PhD
Arizona State University
Phoenix, AZ

Jacob A. Harris, PhD
Arizona State University
Phoenix, AZ

W23 A Skeletal Atlas of Elder Abuse: Beta Testing a Digital Diagnostic and Educational Tool

Program:

1:00 pm – 1:30 pm	**Introduction and Background** *Katelyn L. Bolhofner, PhD*
1:30 pm – 2:00 pm	**The Aging Skeleton** *Jane E. Buikstra, PhD*
2:00 pm – 2:30 pm	**Probability Modeling and Skeletal Trauma** *Jacob A. Harris, PhD*
2:30 pm – 2:45 pm	**BREAK**
2:45 pm – 3:30 pm	**A Digital Atlas of Skeletal Trauma—An introduction** *Kevin A. Gary, PhD*
3:30 pm – 4:15 pm	**Beta Testing and Usability of the Digital Atlas** *Kevin A. Gary, PhD; Jacob A. Harris, PhD; Katelyn L. Bolhofner, PhD*
4:15 pm – 4:30 pm	**Wrap-Up and Implications for the Forensic Community** *Laura C Fulginiti, PhD*

Pre-Registration Required—$150

W24 ANSI/ASB Standard 175—*Standard for Interpreting, Comparing, and Reporting DNA Test Results Associated With Failed Controls and Contamination Events*: Understanding, Implementation, and Legal Issues

Tuesday, February 18, 2025 **1:00 pm – 5:00 pm** **CE Hours: 3.5**

Program Description: Incidents of contamination of controls and evidence in laboratories conducting Polymerase Chain Reaction (PCR) -based Short Tandem Repeat (STR) testing have been increasingly detected as the sensitivity of the assays has improved over the past decade through improved technological advances and with the implementation of elimination databases to detect the DNA profiles of laboratory staff and other individuals involved in the collection and handling of evidence, along with the use of advanced software for evaluating data. Positive control failure may occur when the DNA is not added correctly or may be due to a technology failure.

Historically, when these events occurred, re-testing was conducted on a portion of the remaining evidence, and the new test results were reported. However, when the evidence and DNA extract have been consumed, re-testing is not an option. It is also not always prudent to consume more evidence with re-testing. Situations where this may be relevant and how this pertains to the requirements in the Standard for Interpreting, Comparing, and Reporting DNA Test Results Associated with Failed Controls and Contamination Events will be discussed. This Standard has recently been published as an ANSI/ASB Standard but has been listed as a Proposed Standard on the OSAC Registry (OSAC 2020-S-00040) and has been available for implementation in DNA testing laboratories for several years.

This workshop may be beneficial to DNA analysts/technical leaders/supervisors, QA/QC managers, trainers, and laboratory directors overseeing any type of testing where controls may fail or contamination can occur and to attorneys and judges encountering DNA tests results from these situations.

Educational Objectives: Attendees at this workshop will learn about each of the requirements in the newly published Standard in relationship to requirements in other standards (e.g., Federal Bureau of Investigation Quality Assurance Standards (FBI QAS), International Organization for Standardization (ISO) 17025, American National Standards Institute/Academy Standards Board (ANSI/ASB) published, Organization of Scientific Area Committees (OSAC) Registry) while gaining insights for their implementation. Approaches to consider for evaluating, decision-making, and reporting data without re-testing will be presented along with hands-on problems and through interactive discussions. In addition, the attendees will learn about the legal necessity for implementing this standard when the DNA results are exculpatory to avoid contributing to a Brady violation.

Impact Statement: This presentation will impact the forensic science community by providing laboratory personnel, attorneys, and judges critical information regarding the responsibility of evaluating DNA data when a control has failed or a contamination event has been detected, especially when the DNA results may be exculpatory for an individual. The specific requirements in this Standard for: (1) the laboratory protocols for evaluating, interpreting and comparing data associated with failed controls and contamination events; (2) assessment of the risks of re-testing vs. not re-testing; (3) documentation; and (4) the reporting of the event, and the associated data and conclusions will be discussed along with considerations for successful implementation in the laboratory. Additional discussions will include the effective communication of the data, conclusions, and events in the criminal justice system through conversations, trainings, and testimony.

Target Audience: Criminalistics, Jurisprudence

Knowledge Level: Basic

W24 ANSI/ASB Standard 175—*Standard for Interpreting, Comparing, and Reporting DNA Test Results Associated With Failed Controls and Contamination Events*: Understanding, Implementation, and Legal Issues

Chair:
Charlotte Word, PhD
Consultant
North Chesterfield, VA

Co-Chair:
Virginia Barron, JD
Hennepin County Public Defender
Birkholz Law
Westbrook, MN

Presenter:
Tabitha Bandy, MS
BODE Technology
Old Hickory, KY

Program:

1:00 pm – 1:15 pm	**Introduction** *Charlotte Word, PhD*
1:15 pm – 1:30 pm	**Legal Issues—Evidence Retention vs. Consumption, *Brady*** *Virginia Barron, JD*
1:30 pm – 2:45 pm	**Standards 175—History, Requirements, Implementation, and Related Standards** *Tabitha Bandy, MS; Charlotte Word, PhD*
2:45 pm – 3:00 pm	**BREAK**
3:00 pm – 3:30 pm	**Standard 175—Requirements, Implementation and Related Standards (cont.)** *Tabitha Bandy, MS; Charlotte Word, PhD*
3:30 pm – 3:45 pm	**Presentation to Attorneys and Testimony** *Tabitha Bandy, MS; Virginia Barron, JD; Charlotte Word, PhD*
3:45 pm – 4:50 pm	**Problem Sets and Discussion** *Tabitha Bandy, MS; Virginia Barron, JD; Charlotte Word, PhD*
4:50 pm – 5:00 pm	**Discussion and Wrap-Up** *Tabitha Bandy, MS; Virginia Barron, JD; Charlotte Word, PhD*

Pre-Registration Required—$150

W25 Death of an "Expert" Witness: Discrediting Document Examiners Who Violate Acknowledged Standards or Binding Laboratory Policies or Who Express Handwriting Opinions With Low Levels of Certitude

Tuesday, February 18, 2025 **1:00 pm – 5:00 pm** **CE Hours: 3.5**

Program Description: A distinguished faculty comprising two highly credentialed forensic document examiners, and a recently retired appellate court judge will provide attendees with a clear understanding of the problems facing document examiners who violate acknowledged industry standards or binding laboratory policies and the reliability concerns associated with handwriting opinions expressed with a low level of certitude. Attendees will be provided with actual case histories illustrating how handwriting opinions expressed as "indications" or "probable" are challenged and discredited. Attendees will also learn about the reliability issues gatekeepers must address when deciding whether or not to admit handwriting opinions expressed with a low level of certitude.

Educational Objectives: After attending this workshop, the attendees will have a better understanding of how lawyers can discredit an expert witness who failed to adhere to an acknowledged industry standard or binding laboratory policy. Attendees will also learn why handwriting opinions expressed with low levels of certitude such as "indications" or "probable" can easily be impeached and discredited and why it would be better if such opinions were excluded by gatekeepers.

Impact Statement: This presentation will impact the forensic science community by providing document examiners and forensic scientists in various forensic pattern-matching disciplines with a clear understanding of the basic unreliability of expert opinions expressed with a low level of certitude.

Target Audience: Criminalistics, General, Jurisprudence, Psychiatry & Behavioral Science, Questioned Documents

Knowledge Level: Basic

Chair:
Andrew Sulner, JD
Forensic Document Examinations LLC/Sulner Law Offices
New York, NY

Co-Chair:
Linton Mohammed, PhD
Forensic Science Consultants, Inc.
Poway, CA

Presenter:
Roderick T. Kennedy, (ret.), JD
New Mexico Court of Appeals
Los Ranchos, NM

W25 Death of an "Expert" Witness: Discrediting Document Examiners Who Violate Acknowledged Standards or Binding Laboratory Policies or Who Express Handwriting Opinions With Low Levels of Certitude

Program:

1:00 pm – 1:15 pm	**Welcome and Introduction to a Novel Twist in Questioned Document Litigation** *Andrew Sulner, JD*
1:15 pm – 1:45 pm	**A Slam Dunk Case of Genuine Signatures Contested by an Unfounded Probable Forgery Opinion Offered by a Self-Trained Pseudo Expert** *Linton Mohammed, PhD*
1:45 pm – 2:45 pm	**The Novel Twist That Resulted in Discrediting a Proffered Expert's Unfounded Probable Forgery Opinion at the Deposition Stage of a California Case: Employing Special Trial Counsel Who Is Also a Board-Certified Forensic Document Examiner** *Andrew Sulner, JD*
2:45 pm – 3:00 pm	**BREAK**
3:00 pm – 3:30 pm	**The General Unreliability of Opinions of Forgery Expressed With Low Levels of Certitude Such as "Indications" or "Probable"** *Andrew Sulner, JD*
3:30 pm – 4:00 pm	**"Low Level" Expressions of Certitude, Both in Reports and Trial Testimony, Should Trigger Skepticism in Gatekeepers** *Roderick T. Kennedy, (ret.), JD*
4:00 pm – 5:00 pm	**Panel Discussion/Questions and Answers** *All Presenters*

Pre-Registration Required—$150

W26 Expanding the Forensic Professional's Toolbox: New Technological Resources for the Evaluation of Evidence

Tuesday, February 18, 2025 **1:00 pm – 5:00 pm** **CE Hours: 3.75**

Program Description: Forensic practice changes at a pace that varies by discipline. Sophisticated instrumentation and computational tools have been used by forensic DNA examiners for decades, but introduction of new methods has been slower in pattern comparison disciplines, probably because comparing images is complex. Yet, examiners in these disciplines are facing frequent challenges when relying on expert opinion alone. Research groups, including CSAFE, have, in the past decade, tried to address the lack of data-based methods for the forensic analysis of patterns. These groups have demonstrated that it is possible to quantify similarity between two images, even when one is degraded. While several new methods have been proposed in the scholarly literature, the gap between research and practice has not been breached, except by a few private companies that develop proprietary tools. To encourage adoption of new methodology, CSAFE researchers have created tools that enable forensic practitioners to implement quantitative methods for the evaluation of firearm, footwear, and handwriting evidence. During the workshop, participants will learn about and use three applications that are (or soon will be) ready for testing on real case work. These applications are all in the public domain and can be used at no cost. Participants will be asked to bring their own laptop and will get access to software and example data before the meeting. In addition to hands-on learning, the workshop will include lecture-style presentations to ensure that users of the applications have a reasonable understanding of the science and data that underpin the apps.

Educational Objectives: Individuals who participate in the workshop will learn about new computational tools developed by the Center for Statistics and Applications in Forensic Evidence (CSAFE) researchers in collaboration with the National Institute of Standards and Technology (NIST) scientists. The tools are designed to answer forensic questions of interest in several pattern comparison disciplines and enable practitioners to provide a probabilistic assessment of the evidence. At least in the near future, the new resources are meant to be used alongside traditional examination methods and serve to either confirm categorical conclusions or call attention to potential issues with those conclusions.

Impact Statement: Imaging, computational, and other tools are already used by forensic practitioners to analyze some types of evidence (e.g., DNA), but their introduction has been slower in the pattern comparison disciplines. Once they are more extensively tested and validated, the tools developed by CSAFE will empower practitioners to carry out quantitative analysis and interpretation of evidence and reinforce reporting and testimony with data-based results. The tools we will introduce at the workshop are free and placed in the public domain to maximize access and transparency.

Target Audience: Criminalistics, Engineering & Applied Sciences, General, Jurisprudence, Questioned Documents

Chair:
Alicia L. Carriquiry, PhD
Iowa State University
Ames, IA

Co-Chair:
Michael J. Salyards, PhD
CSAFE
Tucson, AZ

Presenters:
Heike Hofmann, PhD
University of Nebraska-Lincoln
Lincoln, NE

Steven Lund, PhD
National Institute of Standards and Technology
Gaithersburg, MD

W26 Expanding the Forensic Professional's Toolbox: New Technological Resources for the Evaluation of Evidence

Program:

1:00 pm –	2:00 pm	**BulletR: An Application for the Comparison of Bullets** *Heike Hofmann, PhD*
2:00 pm –	2:15 pm	**Questions and Answers** *Michael J. Salyards, PhD*
2:15 pm –	3:15 pm	**ShoeComp and ShoeAnalyzr: Applications to Align and Compare Footwear Impressions** *Steven Lund, PhD; Alicia L. Carriquiry, PhD*
3:15 pm –	3:30 pm	**Questions and Answers** *Michael J. Salyards, PhD*
3:30 pm –	3:45 pm	**BREAK**
3:45 pm –	4:45 pm	**Handwriter: An Application for the Evaluation of Handwritten Evidence** *Alicia L. Carriquiry, PhD*
4:45 pm –	5:00 pm	**Questions and Answers** *Michael J. Salyards, PhD*

Pre-Registration Required—$150

W27 Mind Games and Machines: Navigating Cognitive Biases in Forensic Technologies

Tuesday, February 18, 2025 **1:00 pm – 5:00 pm** **CE Hours: 3.25**

Program Description: Explore the critical intersection of cognitive bias and forensic technology in this engaging and interactive presentation. We'll start by illustrating cognitive biases through everyday life examples, helping you recognize these common mental shortcuts and their impact on our daily decisions.

Cognitive biases, while often beneficial for quick decision-making, can introduce significant errors, especially in high-stakes environments like forensic science. We'll review a range of biases — such as the halo effect, confirmation bias, and anchoring bias — and examine their effects on various stakeholders, including forensic professionals, law enforcement, jurors, and the public.

Next, we'll dive into the world of forensic technology, specifically exploring the fundamentals of AI and machine learning. We'll clarify what these technologies are, how they have evolved in recent decades, address misconceptions about their capabilities, and discuss challenges associated with their misuse.

Interactive segments will include case studies from past high-profile forensic cases, where we'll identify and analyze biases at play. This hands-on approach will help you see how biases can influence forensic outcomes and public perception.

Experts will present strategies to counteract cognitive biases related to forensic technology, offering practical insights into improving accuracy and fairness. We'll conclude with a Q&A session using live polls to engage with audience thoughts on the implications of AI in forensic science and beyond.

Join us to gain a deeper understanding of how cognitive biases interact with forensic technology and discover actionable strategies to enhance justice and accuracy in forensic practices.

Educational Objectives: After attending this workshop, participants will be able to:

- Describe Cognitive Biases: Participants will be able to recognize various cognitive biases, such as confirmation bias and anchoring bias, and understand how these biases influence decision-making processes within forensic science and related fields.
- Analyze the Impact of Technology on Biases: Participants will gain insights into how forensic technologies like Artificial Intelligence (AI) and machine learning interact with and potentially exacerbate cognitive biases. They will learn to evaluate the strengths and limitations of these technologies in mitigating or amplifying biases in forensic investigations.
- Explain Strategies to Mitigate Bias: Participants will acquire practical strategies and best practices for addressing and reducing cognitive biases in forensic settings. This includes applying lessons learned from case studies and expert presentations to improve decision-making accuracy and fairness in forensic technology applications.

Impact Statement: This workshop will enable participants to effectively navigate cognitive biases within forensic technologies, offering strategies to enhance the accuracy and fairness of technological applications. By understanding the interplay between human biases and tech innovations, attendees will be better equipped to leverage technology while mitigating its potential pitfalls.

Target Audience: Criminalistics, Digital & Multimedia Sciences, Engineering & Applied Sciences, Forensic Nursing Science, General, Jurisprudence, Psychiatry & Behavioral Science, Questioned Documents

Knowledge Level: Basic

WORKSHOPS

W27 Mind Games and Machines: Navigating Cognitive Biases in Forensic Technologies

Chair:
Michelle Patch, PhD
Johns Hopkins University
School of Nursing
Reisterstown, MD

Co-Chair:
Joyce P. Williams, PhD
Stevenson University
Randallstown, MD

Presenters:
Victor G. Petreca, PhD, DNP
Boston College/MA DMH
Chester Hill, MA

Tamar Rodney, PhD
Johns Hopkins University
School of Nursing
Baltimore, MD

Program:

1:00 pm – 1:05 pm	**Kickoff: Setting the Stage for Bias and Technology (Welcome/Introductions)** *Michelle Patch, PhD*
1:05 pm – 1:55 pm	**Mindset Matters: An Introduction to Cognitive Bias** *Tamar Rodney, PhD*
1:55 pm – 2:00 pm	**Quick Stretch: Bridging to the Next Insight** *Joyce P. Williams, PhD*
2:00 pm – 2:50 pm	**Tech Talk: Navigating Forensic Innovations (Overview of Forensic-Related Technologies)** *Michael J. Salyards, PhD*
2:50 pm – 3:05 pm	**Refuel and Reset: Preparing for Bias Exploration** *Michelle Patch, PhD*
3:05 pm – 3:55 pm	**Bias Unveiled: Analyzing Real-World Cases** *Tamar Rodney, PhD; Michelle Patch, PhD*
3:55 pm – 4:00 pm	**Stretch and Refresh: Ready for Bias Solutions** *Joyce P. Williams, PhD*
4:00 pm – 4:45 pm	**Bias Busters: Strategies for Mitigating Technology-Related Bias** *Victor G. Petreca, PhD, DNP; Joyce P. Williams, PhD*
4:45 pm – 5:00 pm	**Wrap-Up: Insights and Actionable Takeawayss** *All Presenters*

NATIONAL INSTITUTE OF JUSTICE

Forensic Science Research and Development Symposium

The National Institute of Justice (NIJ) Forensic Science Research and Development (R&D) Symposium is an open meeting delivered through NIJ's Forensic Technology Center of Excellence (FTCOE) where attendees can learn about NIJ-funded research across a variety of forensic science areas. You can register to attend the Symposium in person or virtually; however, American Academy of Forensic Sciences (AAFS) conference registration is not necessary to attend. Feel free to stop by to listen to specific presentations and view posters or stay all day and learn about the diverse NIJ forensic science R&D portfolio.

More details and registration information can be found here:
https://forensiccoe.org/event-2025-research-development-symposium/

Tentative Agenda—Tuesday, February 18, 2025

The podium presentations will take place from 8:30 am EST to 5:00 pm EST at the Baltimore Convention Center. A Q&A session for each presenter will directly follow their presentation. Please note that all times are listed in Eastern Standard Time (EST.

8:30 am – 8:40 am	**Welcome and Opening Remarks** *Lucas Zarwell, Office of Investigative and Forensic Sciences, National Institute of Justice*
	Session I – Trace Evidence/Fire Investigation/Physics and Pattern *Moderated by NIJ Program Manager, Gregory Dutton*
8:40 am – 9:05 am	**Assessment of the Added Value of New Quantitative Methodologies for the Analysis of Surface Soils in Forensic Soil Comparisons** *Kelly Meiklejohn, North Carolina State University*
9:05 am – 9:30 am	**The Influence of Soils and Chlorinated and Non-Chlorinated Agitated Water on Surface-Enhanced Raman Spectroscopic Analysis of Artificial Dyes on Hair** *Dmitry Kurouski, Texas A&M University*
9:30 am – 9:55 am	**Experimental Study of Heat Transfer and Fire Damage Patterns on Walls for Fire Model Validation** *Matthew DiDomizio, Fire Safety Research Institute*
9:55 am – 10:20 am	**Evaluation of the Occurrence and Associative Value of Non-Identifiable Fingermarks on Unfired Ammunition in Handguns for Evidence Supporting Proof of Criminal Possession, Use, and Intent** *David Stoney, Stoney Forensic, Inc.*
10:20 am – 10:35 am	**BREAK**
	Session II – Forensic Anthropology and Forensic Pathology *Moderated by NIJ Program Manager, Rachel Wendt*
10:35 am – 11:00 am	**Optimizing Bruise Detection in Forensic Imaging: A Comparative Analysis of Object Detection Models** *Mehrdad Ghyabi, George Mason University*
11:00 am – 11:25 am	**Using Artificial Intelligence: Deep Learning for Human Decomposition Staging** *Audris Mockus, University of Tennessee, Knoxville*
11:25 am – 11:50 am	**Deep Learning Empowers Fine-Grained Population Affinity Estimation with Craniometric Data** *Xiaoming Liu, University of South Florida*
11:50 am – 12:15 pm	**Is Decedent Residual Odor Detectable by Human Remains Detection (HRD) Canines and Analytical Chemistry?** *Dawnie Steadman, University of Tennessee, Knoxville*
12:15 pm – 1:25 pm	**LUNCH BREAK – On Your Own**

Session III – Seized Drugs and Toxicology
Moderated by NIJ Program Manager, Megan Chambers

1:25 pm – 1:50 pm **Identifying High-Quality Aptamers for Drug Detection**
Alexandra Bryant, North Carolina State University

1:50 pm – 2:15 pm **Caught Green-Handed: The Detection of Potential Cannabis-Use Biomarkers in Fingerprint Residues Using Mass Spectrometry**
Rabi A. Musah, Louisiana State University

2:15 pm – 2:40 pm **Chromatographic Interferences That Can Inflate the Levels of Δ9-THC in Cannabis Samples**
Walter B. Wilson, National Institute of Standards and Technology

2:40 pm – 3:05 pm **Evaluation of a Quantitative Analysis Method for Tetrahydrocannabinol Isomers in Biological Matrices**
Rebecca Wagner, Virginia Department of Forensic Science

3:05 pm – 3:20 pm **BREAK**

Session IV – Forensic Biology/DNA
Moderated by NIJ Program Manager, Tiffany Layne

3:20 pm – 3:45 pm **Trace DNA in Activity-Level Propositions**
Ashley Hall, University of California, Davis and Ray Wickenheiser, Ray Wickenheiser Forensic Consulting

3:45 pm – 4:10 pm **A Comparison of Small-Amplicon Mitogenome Enrichment Methods for Massively Parallel Sequencing of Low- and High-Quality Sample Types**
Courtney Cavagnino, Armed Forces DNA Identification Laboratory

4:10 pm – 4:35 pm **Fragmentomics of Hair DNA**
Samuel Sacco, University of California, Santa Cruz

4:35 pm – 5:00 pm **Adaptive Sampling for the Simultaneous Analysis of STRs, SNPs, and mtDNA in Human Remains Identification**
Katherine E. McBroom-Henson, University of North Texas Health Science Center at Fort Worth

Poster Session

The poster presentations will be from 5:00 p.m. EST to 6:30 p.m. EST in Meeting Rooms 307/308 at the Baltimore Convention Center. Self-guided tours will begin at 12:00 p.m. EST, and the meeting room doors will remain open until 7:00 p.m. EST. Posters indicated with an asterisk (*) will be available virtually only. More details and information can be found here:

https://forensiccoe.org/event-2025-research-development-symposium/ Poster Presentations

Quantitative Matching of Forensic Evidence Fragments of Metals, Ceramics and Plastics Using Fracture Surface Topography and Statistical Learning
Ashraf Bastawros, Iowa State University

Application of Particle-Correlated Raman Spectroscopy (PCRS) for the Forensic Examination of Soils
Brooke W. Kammrath, University of New Haven and Henry C. Lee Institute of Forensic Science

Using Ultrasonic Pulse Velocity to Assess Fire Damage in Drywall
Maria Binte Mannan, University of Maryland

Advancing the Understanding of 3D Imaging for Firearms Identification*
Melissa Nally, Houston Forensic Science Center

Assessing the Reliability of Fire Pattern Indicators in Wildland Fire Investigations: A Field Study*
Raphael Ogabi, Worcester Polytechnic Institute

Analysis of Oil-Based Ignitable Liquid Residues on Wood and Fabric Debris by GC-MS and DART-MS
Mengliang Zhang, Ohio University

Interoperability of Firearm Toolmark 3D Topography Measurements
Xiaoyu Alan Zheng, National Institute of Standards and Technology

Improving and Evaluating Computed Tomography and Magnetic Resonance Imaging in the Investigation of Fatalities Involving Suspected Head Trauma
Natalie Adolphi, New Mexico Office of the Medical Investigator

Skeletal Trauma in Forensic Anthropology: Improving the Accuracy of Trauma Analysis and Expert Testimony
Amanda Agnew, The Ohio State University

Pre-Grouping of Commingled Human Skeletal Remains by Elemental Analysis
Matthieu Baudelet and Kristen Livingston, University of Central Florida

Initial Assessments of Relic DNA Removal from Host- and Environmentally Sourced Microbiome Evidence
Zachary Burcham and Emily Cantrell, University of Tennessee, Knoxville

Eggs-ploring the Volatiles Profiles of L. sericata Eggs for Postmortem Interval Determination
Alexa Figueroa, Louisiana State University

Improving Identification of Unknown American Indians and Hispanic/Latinx Americans
Kelly Kamnikar, The University of New Mexico

Exploring the Potential of Amino Acid δ2H Analysis as a Forensic Tool to Identify Region of Origin
Christy J. Mancuso, The University of New Mexico

GIS Application for Building a Nationally Representative Forensic Taphonomy Database
Katherine Weisensee, Clemson University

What a Trip! Investigating the Stability of Psilocybin and Psilocin Infused within Complex Edible Matrices
Benedetta Garosi, Louisiana State University

Detecting Fentanyl Analogs in Counterfeit Pharmaceuticals by Surface-Enhanced Raman Spectrometry
Bruce McCord, Florida International University

Chiral Separation and Quantification of Methamphetamine in Whole Blood
William Naviaux, University of Wisconsin–Madison

Multimodal Raman Spectroscopy and Mass Spectrometry Analysis of Synthetic Drugs in Blood Plasma Utilizing Nanoparticle-Decorated Porous Substrates
Rajesh Sardar, Indiana University Indianapolis

Potency Testing of Synthetic THC Isomer-Infused Edibles Using Ultra-High-Performance Liquid Chromatography Diode Array Detector with Optional Electrospray Ionization Time-of-Flight Mass Spectrometry
Liguo Song, Western Illinois University

Enhancing Field Detection of Fentanyl: A Novel Pre-Concentrator for Ion Mobility Spectrometry Using Silicon Nanowires*
Galpayage Dona Thouli Lochana Jayawardana, Florida International University

Navigating the Unknown: A Comparative Analysis of Targeted and Non-Targeted Approaches for Detecting New Psychoactive Substances in Human Matrices
Akshita Verma, Florida International University

Rapid Response to Novel Psychoactive Substances (NPS) Identified in U.S. Recreational Drug Markets
Sara Walton and Alex Krotulski, The Center for Forensic Science Research & Education

Transfer, Persistence and DNA Source Attribution of Trace Biological Material in Digital Penetration Assault Cases
Erin Hanson, University of Central Florida

Recovery of Multiple Analytes from Biological Samples for Forensic Application
Arati Iyengar, West Virginia University

Applications of the Genital Microbiome in Detecting Sexual Contact
Andrea Ramirez Torres, Florida International University

Assessment of Promega's PowerSeq 46GY Through Testing of the Standard and the Micro Flow Cells
Elisa Wurmbach, New York City Office of Chief Medical Examiner

NIJ Drop-In Session
Forensic Science Operational Needs Assessment: Tell Us What YOU Need!

Wednesday, February 19, 2025 **11:00 am – 1:00 pm** **BCC 301**

Pursuant to the March 2024 Joint Explanatory Statement for the Commerce, Science, Justice, and Related Agencies Appropriations Act, the National Institute of Justice, in collaboration with its Forensic Technology Center of Excellence (FTCOE), is working towards an operational needs assessment on projected workload, backlog, personnel, workforce, resources, necessary turnaround times for law enforcement officers and officers of the court, and equipment needs of forensic science providers and forensic medical service providers. This upcoming report will be subsequent to the 2019 Report to Congress: Needs Assessment of Forensic Laboratories and Medical Examiner/Coroner Offices.

To provide a comprehensive and meaningful needs assessment, we need input across the forensic community to understand challenges forensic science service providers encounter in their daily operations—as well as promising practices to overcome these challenges. In addition to scientists and laboratory leadership, perspectives from researchers, students, private sector, legal/judicial, and law enforcement, which all rely on the operational performance of forensic science, are warmly welcomed. This is intended to be a drop-in session during a two-hour opportunity where we will provide opportunities to review insights and themes captured, discuss key topics, and provide direct input. Please consider making time between your sessions to collectively improve our understanding of forensic science operational challenges and drive towards an improved future!

If possible, please indicate your interest to participate at the following 3-question link (note you are welcome to attend without completing this as well): https://app.smartsheet.com/b/form/fd25152412a04d719482f5e73302c099).

ANTHROPOLOGY

Thursday

Poster Session

11:30 am – 1:00 pm	**A1**	**Epi and Histo: Partners in Improving Age-At-Death Estimation** *Victoria M Dominguez, PhD*; Sara C. Zapico, PhD**
11:30 am – 1:00 pm	**A2**	**Age Estimation Through Osteon Histomorphometry: An Analysis of Autopsy Samples** *Enrica Macorano, MD*; Raffaella Minella, MS; Giada Sciâdi Steiger, MS; Francesco Introna, MD, PhD*
11:30 am – 1:00 pm	**A4**	**Age Estimation of Young Adults in the Italian Population: An Application of Schmeling's Method Using Conventional Radiography** *Giorgio De Donno, MD*; Gianfrancesco Di Nunno, MD; Alessandra Petruzzellis, MD; Stefania Galizia, MD; Gianluca Gravili, MD; Gianluca Gravili, MD; Lucrezia Ardito, MD; Amato Antonio Stabile Ianora, PhD; Arnaldo Scardapane, PhD; Antonio De Donno, PhD*
11:30 am – 1:00 pm	**A5**	**Estimating Age-at-Death in Adults Using the Calce Method** *Gloria Eddy, BA**
11:30 am – 1:00 pm	**A6**	**Exploring the Role of Early Life Stress in the Accuracy of Age-at-Death Estimation Among Adults** *Caroline Znachko, MA*; Taylor Walkup, MA; Derek Boyd, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A7**	**A Validation Study of Bergs' Method for Aging the Pubic Symphysis** *Amanda Schultz, BA*; Erin Kimmerle, PhD*
11:30 am – 1:00 pm	**A8**	**Age Estimation of the Pubic Symphysis From 3D-Printed Proxies** *Rhys Williams, PhD*; Phoebe Baker, MS; Rebecca Strong, PhD*
11:30 am – 1:00 pm	**A9**	**Observer Confidence Versus Accuracy: Analysis of 3D-Printed Pubic Symphyses** *Rhys Williams, PhD*; Phoebe Baker, MS; Rebecca Strong, PhD*
11:30 am – 1:00 pm	**A10**	**Sex Estimation Using Metrics of the Innominate: A Validation of the DSP2 Method** *Alexandra Klales, PhD*; Kate Lesciotto, PhD*
11:30 am – 1:00 pm	**A11**	**The Effect of Mental Eminence Trait Scores on Sex Estimation Accuracy Rates Using MorphoPASSE** *Kate Lesciotto, PhD*; Arikka Carroll; Alexandra Klales, PhD*
11:30 am – 1:00 pm	**A12**	**An Assessment of MorphoPASSE Software for Undergraduate Forensic Anthropology Education: Integrating Sex Estimation Technology Into the Classroom** *Elauna Hicks, BS*; Shannon Hodge, PhD*
11:30 am – 1:00 pm	**A13**	**Assigned-Sex-at-Birth Estimation Using a 3D-Printed Replica of the Os Coxa: A Case Study of a Transgender Woman Who Used Gender-Affirming Hormone Therapy During Life** *Taylor M. Flaherty, MCS*; Jennifer Byrnes, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A14**	**A Geometric Morphometric Examination of Possible Patterns of Sexual Trait Expression Across Five Skeletal Elements** *Kaleigh Best, PhD**

*Presenting Author

ANTHROPOLOGY

11:30 am – 1:00 pm	**A15**	**A Test of the (hu)MANid Analytical Program** *Jordan Karsten, PhD*; Christina Nicholas, PhD; Hayley Hintz, BS*
11:30 am – 1:00 pm	**A16**	**A Test of the (hu)MANid Program on Edentulous Mandibles** *Natalie Wise, MA*; Erin Kimmerle, PhD; Gregory Berg, PhD*
11:30 am – 1:00 pm	**A17**	**Evaluating a Greek-Cypriot Sample in FORDISC 3.1** *Shivani Sanger, MS*; Joe Hefner, PhD; Xenia-Paula Kyriakou, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A18**	**Introducing FoRDent: A New Tool for Estimating Population Affinity From Dental Morphology** *Heather Edgar, PhD*; Joe Hefner, PhD; Ron Richardson, MS*
11:30 am – 1:00 pm	**A19**	**Digital Archives: An Investigation of Skeletal (In)completeness Using IRIS** *Hailey Scacciaferro, BS*; Savanna Agilar, MS; Micki Besse, MS; Heather Walsh-Haney, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A20**	**Assessing the Applicability of Subadult Stature Estimation Methods for Japanese Subadults** *Amariah Trevino, BS*; Elaine Chu, PhD*
11:30 am – 1:00 pm	**A21**	**CT Scan-Based Cranial Anthropometry for Stature Estimation: A Comparative Analysis Between Base of Skull and Front of Skull Parameters in a South Indian Population** *Siddhartha Das, MD*; Kirthika Ravi, MD; Dr Ambika Patra, MD; Deepak Barathi, MD; Harichandrakumar Kottyen Thazhath, PhD*
11:30 am – 1:00 pm	**A22**	**How Many Vertebrae Should Be Present to Estimate the Height of the Total Vertebral Column With Accuracy?** *Yangseung Jeong, PhD*; Hyunwoo Jung, PhD*
11:30 am – 1:00 pm	**A23**	**The Correlation of the Dimensions of Hands and Feet With Height in an Indigenous Population of the Tribal District of Himachal Pradesh, India** *Yatiraj Singi, MD*; Dipen Dabhi, MD*
11:30 am – 1:00 pm	**A24**	**The Effects of Tibial Nutrient Foramen Location on Biological Profile Construction** *Olivia Messenger, BA*; Krista Latham, PhD; Stephen Nawrocki, PhD*
11:30 am – 1:00 pm	**A25**	**A Glimpse Through the Veil of Lost Identities: Identification Practices and Outcomes in Greece** *Despoina Flouri, MD*; Sophia Mavroudas, PhD; Christina Karydi, MCS; Antonios Papadomanolakis, MD, PhD; Elena Kranioti, MD, PhD*
11:30 am – 1:00 pm	**A26**	**Applying Postmortem Fingerprinting Into Disaster Victim Identification in Maverick County, Texas** *Victoria Swenson, PhD*; Bryan Johnson, MSFS; Courtney Siegert, PhD; Chloe McDaneld, MA; Ivanna Robledo, MA; Molly Kaplan, MA; Molly Scott; Christopher McMillan; Veronica Flores-Guillen, BS; Kate Spradley, PhD*
11:30 am – 1:00 pm	**A27**	**Unveiling the Role of Tattoos as Ink Trails in Forensic Anthropological Identifications: Exemplified From a Survey of a Northwest Indian Population** *Jagmahender Singh Sehrawat, PhD*; Shubham Thakur, MS; Tamanna Kumari*
11:30 am – 1:00 pm	**A28**	**Using Images of the Ear for Postmortem Human Identification** *Jane Harris, PhD*; Aiden Gilbert*

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11:30 am – 1:00 pm	**A29**	**An Intersectional Approach to Developing a Prediction Model for Adult Missing Persons Off a Major United States Corridor in Idaho Using Novel Computational Techniques and Multidisciplinary Data** *Kirsten Mink, PhD*; Donna Delparte, PhD; Miles Rhoads, BS; Kyle Paulekas, MS*
11:30 am – 1:00 pm	**A30**	**Enhancing Forensic Human Identification in Emergencies and Disasters: Leveraging Technology for Improved Efficiency, Cost Reduction, and Ethical Practices** *Megan Bassendale, MS**
11:30 am – 1:00 pm	**A31**	**Understanding the Role of CODIS and Familial DNA in Positive Human Identification for the Louisiana Repository for Unidentified and Missing Persons** *Anthony Lanfranchi, MS*; Teresa Wilson, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A32**	**WITHDRAWN**
11:30 am – 1:00 pm	**A33**	**Vertebral Bone Density Variations in Scoliotic vs. Non-Scoliotic Juveniles and Their Implications for Schmorl's Node Development: A CT-Based Analysis Using the New Mexico Decedent Image Database** *Ellen Shakeshaft, MS*; Matteo Borrini, PhD; Constantine Eliopoulos, PhD*
11:30 am – 1:00 pm	**A34**	**Vertebral Variation in Forensic Anthropology Casework** *Andrew Seidel, PhD*; Kiana Miller, BS*
11:30 am – 1:00 pm	**A35**	**The Ontogenetic Development of the Glabella and Its Association With Maturation of the Humeral Proximal Epiphysis in Accurate Subadult Sex Estimation** *Stephanie Cole, PhD*; Marin Pilloud, PhD; Kyra Stull, PhD*
11:30 am – 1:00 pm	**A36**	**Intra-Observer and Inter-Device Error in Osteometric Data** *Maggie Klemm, MA*; Dakota Taylor, MA; William Belcher, PhD*
11:30 am – 1:00 pm	**A37**	**Morphological Patterns of Corresponding Atlanto-Occipital Joint Surfaces: Potential Applications for Sorting Commingled Human Remains** *Janet Finlayson, PhD**
11:30 am – 1:00 pm	**A38**	**Two Instances of Unusual Non-Human Remains Encountered in Routine Medicolegal Significance Casework** *Nicholas Passalacqua, PhD*; MariaTeresa Tersigni-Tarrant, PhD*
11:30 am – 1:00 pm	**A39**	**An Analysis of Non-Human Skeletal Remains in the Digital Age: An Examination of Temporal Trends (2014–2024) and Taxonomic Diversity in Northern California** *Kendall Gehring, BS*; Keilani Adams, BA; Jazmin Borrayo, BA; Samantha Robinson, BS; Amber Plemons, PhD; Colleen Milligan, PhD; Ashley Kendell, PhD*

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Thursday—Session I

Isotope Analysis and Chemical Considerations in Forensic Anthropology

Moderator: Kirsten Verostick, PhD — Co-Moderator: Courtney Siegert, MA

8:15 am – 8:30 am	**A40**	**A Multi-Isotope Approach for Reconstructing Residence Patterns of Massacre Victims of the Indian Uprising in Ajnala, Amritsar, India** *Jagmahender Singh Sehrawat, PhD*; Eric Bartelink, PhD*
8:30 am – 8:45 am	**A41**	**A Stable Foundation for the Use of Tooth Enamel Oxygen Isotopes in Human Identification** *Gabriel Bowen, PhD*; Chris Stantis, PhD; Kirsten Verostick, PhD; Stephannie Covarrubias, MPH; Lesley Chesson, MS*
8:45 am – 9:00 am	**A42**	**Intra-Individual Isotopic Variation Within Teeth: Refining Forensic Applications Using Isotopes** *Kirsten Verostick, PhD*; Chris Stantis, PhD; Gabriel Bowen, PhD*
9:00 am – 9:15 am	**A43**	**The Impact of Chemical Maceration on δ13C, δ15N, and δ18O Values in Bone Collagen and Bioapatite** *Julianne Sarancha, MS*; Gwyneth Gordon, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
9:15 am – 9:30 am	**A44**	**The Role of Cadaver Decomposition Islands on Soil Chemistry During Carrion Decomposition: Eco-Forensic Implications in a Southern Nigerian Ecosystem** *Darlington Onyejike, PhD*; Oghenefego Adheke, PhD; Loveday Oghenemavwe, PhD; Bassey Udom, PhD; Josiah Hart, PhD*
9:30 am – 9:45 am	**A45**	**Reassessing Forensic Significance With Radiocarbon Dating at the Oklahoma Office of the Chief Medical Examiner: A Cautionary Tale** *Sara Getz, PhD*; Carlos Zambrano, PhD; Angela Berg, MA*
9:45 am – 10:00 am		**BREAK**

Behavior and Culture in Forensic Anthropology

Moderator: Stephanie Hartley, MA — Co-Moderator: Elise Adams, MA

10:00 am – 10:15 am	**A46**	**The Biocultural Dynamics of Postcranial Skeletal Variation: A Focus on Ontogeny, Socioeconomic Status, and Population History** *Micayla Spiros, PhD** *(FSF Emerging Forensic Scientist Award Oral Presentation)*
10:15 am – 10:30 am	**A47**	**Antemortem Tooth Loss as a Biomarker of Structural Vulnerability in a New Mexico Forensic Sample** *Allysha Winburn, PhD**
10:30 am – 10:45 am	**A48**	**Mapping Oahu's Cold Cases: Evaluating the Role of Structural Barriers in Missing and Unidentified Cases Through Geospatial Analysis** *Ariel Gruenthal-Rankin, PhD*; Kalia Lalley, BA; Nikita Sookla, BA; Kirsten Vacca, PhD*
10:45 am – 11:00 am	**A49**	**The Impact of Substance Misuse Behaviors on Skeletal Physiology and Premature Skeletal Senescence in an Autopsy Population** *Christine Pink, PhD*; Prentiss Jones, PhD*

11:00 am – 11:15 am	**A50**	**Establishing a Skeletal Atlas of Elder Abuse: A Bayesian Examination of the Complex Relationships Between Age, Sex, and the Probability of Abuse or Accident as Related to Skeletal Trauma** *Jacob Harris, PhD*; Kaitlyn Fulp, MA; Jane Buikstra, PhD; Laura Fulginiti, PhD; Katelyn Bolhofner, PhD; Katelyn Bolhofner, PhD*
11:15 am – 11:30 am	**A51**	**The "Missing Migrant": Schrodinger's Cat of Legal Status and Applicable Frameworks** *Skylar Joseph, MS**
11:30 am – 1:00 pm		**BREAK**

Anthropology Special Symposium: Exploring the Black Box: Methodological Applications of AI in Forensic Anthropology

Moderator: Rachael Carew, PhD — Co-Moderator: Donovan Adams, PhD

1:00 pm – 1:15 pm	**A52**	**A Brief Introduction to Artificial Intelligence in Forensic Anthropology: Core Concepts and Ideas** *Thomas A. Delgado, MA*; Taylor Flaherty, MS; Samantha Blatt, PhD*
1:15 pm – 1:30 pm	**A53**	**3D Biological Profile: The Application of 3D (STL) Models of Skeletal Remains to Assist With Human Identification** *Madeline Robles, PhD*; Sherry Nakhaeizadeh, PhD; Carolyn Rando, PhD; Ruth Morgan, DPhil*
1:30 pm – 1:45 pm	**A54**	**Using Artificial Intelligence to Automate Human Stage of Decay Identification** *Anna-Maria Nau, PhD*; Phillip Ditto, MA*; Dawnie Steadman, PhD; Audris Mockus, PhD*
1:45 pm – 2:00 pm	**A55**	**Forensic Comparative Radiography Using Transformer-Based Neural Networks and Large Language Models** *Carolyn Isaac, PhD*; Redwan Sony, MS; Alexis VanBaarle, MS; Joe Hefner, PhD; Todd Fenton, PhD; Todd Fenton, PhD*
2:00 pm – 2:15 pm	**A56**	**Applying Machine Learning Methods to Age Estimation in Forensic Anthropology—From Glass Box to Black Box** *Martin Lo, PhD*; Enrico Mariconti, PhD; Sherry Nakhaeizadeh, PhD; Ruth Morgan, DPhil*
2:15 pm – 2:30 pm	**A57**	**The Potential Applications and Uses of Neural Radiance Fields (NeRF) and Gaussian Splats: Artificial Intelligence in Forensic Anthropology** *Katharine Kolpan, PhD*; Jeffrey Vadala, PhD*
2:30 pm – 2:45 pm	**A58**	**Machine Learning and Artificial Intelligence in Forensic Anthropology: Ethical Considerations, Challenges, and Future Applications** *Sherry Nakhaeizadeh, PhD*; Micayla Spiros, PhD**
2:45 pm – 3:15 pm		**Discussion and Q&A**
3:15 pm – 3:30 pm		**BREAK**

Refining Methods in Taphonomy and Trauma

Moderator: A. Skylar Joseph, MS — Co-Moderator: Morgan Ferrell, PhD

3:30 pm – 3:45 pm	**A59**	**Fracture Characteristics of Human Ribs Vary With Intracortical Porosity** *Mary Cole, PhD*; Angela Harden, PhD; Yun-Seok Kang, PhD; Amanda Agnew, PhD*
3:45 pm – 4:00 pm	**A60**	**The Application of Forensic Fractography to Thermally Altered Bone** *Cortney Hulse, PhD*; Rylan Tegtmeyer Hawke, PhD; Mariyam Isa, PhD; Kristen Grow, MA; Alexander Christensen, PhD*
4:00 pm – 4:15 pm	**A61**	**Differential DNA Preservation in Soft and Osseous Tissues After Fire Exposure** *Arielle Sperber, BA**
4:15 pm – 4:30 pm	**A62**	**Re-Evaluating Temperature Data in Human Tissues Exposed to Fire** *Ashley Kendell, PhD*; Beth Shook, PhD; Arielle Sperber, BA; Shelby Saut, BA; David Silveira, MS*
4:30 pm – 4:45 pm	**A63**	**Locating Clandestine Burial Grounds: A Forensic Approach** *Erin Kimmerle, PhD**
4:45 pm – 5:00 pm	**A64**	**Photogrammetric Documentation of the Changing Surface Morphology of Buried Human Remains** *Mary Davis, MS*; Mason Jones, BA*
5:00 pm – 5:15 pm	**A65**	**Cellular Degradation and Migration in Bone as a Tool to Investigate the Postmortem Interval and Skeletal Break Timing** *Ashley Smith, MS**

Thursday – Session II

Technologies of Reconstruction and Identification

Moderator: Amy Michael, PhD — Co-Moderator: Cheyenne Collins, MA

8:30 am – 8:45 am	**A66**	**3D-CT-Based Estimation of Facial Soft Tissue Thickness in the Punjabi Population for Craniofacial Reconstruction** *Akhilesh Pathak, MD*; Chandrakala Gadige, MBBS*
8:45 am – 9:00 am	**A67**	**WITHDRAWN**
9:00 am – 9:15 am	**A68**	**Adapting Facial Approximations to a Modern Audience: The Use of Augmented Reality Filters and Profile Apps** *Matteo Borrini, PhD**
9:15 am – 9:30 am		**BREAK**

Case Studies and Lessons in Identification

Moderator: Maria Tersigni-Tarrant, PhD — Co-Moderator: Eliana Gutierrez, MA

9:15 am – 9:30 am	**A69**	**Comparative Identification in 3D: What Virtual Anthropology Can Do for You** *Stephanie Melillo, PhD*; Samantha Buck, BS; Jessica Cronin, BA; Stephen Hostetler, BA, BS; Brailey Moeder, BS; Rhiannon Toy; Chenoa Woods; Nicole Wray, BA*

9:45 am – 10:00 am	**A70**	**Forensic Investigative Genetic Genealogy: A New Opportunity to Resolved Unidentified Cases** *Bruce Anderson, PhD*; Jennifer Vollner, PhD; Caitlin Vogelsberg, PhD*
10:00 am – 10:15 am	**A71**	**The Sugar Land 95: A Forensic Genetic Genealogical Approach to Restoring Individual Identity** *Samantha Hofland, MA*; Meradeth Snow, PhD; Catrina Banks Whitley, PhD; Helen Graham, EdD; Abigail Fisher, MS; Felicia Sparozic, PhD*
10:15 am – 10:30 am	**A72**	**The Wounds Time Does Not Heal: A Case of Historical Pitfalls and the Present-Day Identification of a United States Marine From World War II** *Rylan Tegtmeyer Hawke, PhD*; Cullen Black, MS*
10:30 am – 10:45 am	**A73**	**The Use of Antemortem Trauma in Identifications at the Defense POW/MIA Accounting Agency** *Sam Coberly, PhD**
10:45 am – 11:00 am	**A74**	**Integrating Forensic Archaeology and Historic Battlefield Protocols at Historic Conflict-Related Aircraft Crashscapes: A World War II B-17 Case Study** *Andrea Palmiotto, PhD*; William Chadwick, PhD; Allysha Winburn, PhD; Parker Chadwick, BS; Robert Ingraham, MS*
11:00 am – 11:15 am	**A75**	**An Anthropological Response to Mass Disaster: Lessons Learned From the October 7th Attack** *Michal Peer, MASc*; Tal Simmons, PhD*

Friday

Poster Session

11:30 am – 1:00 pm	**A76**	**Ethical Considerations of Cadaver Dog Training, Certification, and Field Use** *Victoria Eacott, BA**
11:30 am – 1:00 pm	**A77**	**Examining Contributing Factors to Natural Human Mummification at FOREST in Cullowhee, North Carolina** *Alex Vacca*; Kaleigh Best, PhD; Rebecca George, PhD; Leilah Melerine, BS*
11:30 am – 1:00 pm	**A78**	**First Donor of the Forensic Science Research and Training Laboratory (FSRTL): Exploring Unique Geographic Variation in Human Decomposition in the Mid-Atlantic Region** *Nickolyn Jackson, BA*; Molly Kilcarr, BS*; An-Di Yim, PhD; Emily Rancourt, MSFS*
11:30 am – 1:00 pm	**A79**	**Understanding Human Decomposition in the Great White North: A Review of REST[ES]'s First Five Years and Future Directions** *Elisabeth Cuerrier-Richer, MS*; Noémie Bitschnau, MScFS; Hugues Leblond, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A80**	**Opening the Black Box: Explainability Tools in Postmortem Interval Estimation** *Katherine Weisensee, PhD*; Madeline Atwell, PhD; Carl Ehrett, PhD; Madeline Babcock; Brianna Cherry*
11:30 am – 1:00 pm	**A81**	**A Postmortem Interval Estimation Method for Surface Depositions: A Template Applied in Southeastern Louisiana** *Sophia Reck, MA**
11:30 am – 1:00 pm	**A82**	**Examining the Effects of Two Freshwater Environments on Decomposition and the Associated Microbial Communities** *Leah Bell, BS*; Jane Harris, PhD*

*Presenting Author

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11:30 am – 1:00 pm	**A83**	**Differences in Tissue Consumption by Maggots** *Emma Giacomello, MA*; Michelle Hamilton, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A84**	**A Homogenous Diet in a Diverse City: Understanding Isotopic Dietary Variation and Its Forensic Implications in San Francisco, California** *Taylor Lambrigger, MA*; Alina Tichinin, MA*
11:30 am – 1:00 pm	**A85**	**On FIRM(S) Footing?: A Review of the Use and Reporting of Stable Isotopic Analysis in Forensic Anthropological Dissertations** *Alina Tichinin, MA*; Taylor Lambrigger, MA*
11:30 am – 1:00 pm	**A86**	**The Implications of Quantitative Spectral Analysis of Human Cremains in the Texas State Donated Skeletal Collection (TXST-DSC)** *Anna Maier, MS*; Hailey Collord-Stalder, MA**
11:30 am – 1:00 pm	**A87**	**The Development of a Matrix-Matched Reference Material for Quantitative Elemental Analysis of Bone** *Kristen Livingston, BS*; Amanda Williams; Juliana Baez; Matthieu Baudelet, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A88**	**An Examination of Volatile Organic Compounds Associated With Human Decomposition Byproducts in Soil** *Jane Harris, PhD*; Savannah Struble, MS; Philip Yangyuoru, PhD*
11:30 am – 1:00 pm	**A89**	**Assessing the Micro- and Macroscopic Changes of Chemically Altered Bone** *Shelby Feirstein, MS*; Sara C. Zapico, PhD; Luis Cabo, MS; Joe Adserias-Garriga, PhD*
11:30 am – 1:00 pm	**A90**	**Bullet Grazing: Using Laser-Induced Breakdown Spectroscopy to Analyze Metallic Staining on Skeletal Remains** *Morghan Hogg, MS*; Micki Besse, MS; Savanna Agilar, MS; Heather Walsh-Haney, PhD; Kevin Davies, PhD*
11:30 am – 1:00 pm	**A91**	**An Analysis of Color Changes in Thermally Altered Bones Using Spectrophotometery** *Chelsey Juarez, PhD*; Nicole Saenz, MS; Elayne Pope, PhD; Alison Galloway, PhD*
11:30 am – 1:00 pm	**A92**	**The Statistical Relationship of Breakaway Spurs and Notches With Saw Class Characteristics in Experimental Dismemberments** *Brigham McKay, BS; Stephanie Cole, PhD*; Meghan Gast, BS; Heather Garvin, PhD*
11:30 am – 1:00 pm	**A93**	**Damage to the Thorax From CPR and Vulture Scavenging: A Case Presentation From the University of South Florida Donated Skeletal Collection** *Tuesday Frasier, MS*; Erin Kimmerle, PhD*
11:30 am – 1:00 pm	**A94**	**Squirrels in the Desert: Regional Scavenging Patterns** *Alexander Smith, BA**
11:30 am – 1:00 pm	**A95**	**Recovery Rates of Teeth From Outdoor Surface Contexts in Louisiana** *Ginesse Listi, PhD**
11:30 am – 1:00 pm	**A96**	**Assessing the Effectiveness of Alternative Light Sources in the Search for Skeletal Remains** *Olivia Thompson, BS*; James Russell, BFA; Stephen Stockman, MPA; Jenise Swall, PhD; Tal Simmons, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*

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11:30 am – 1:00 pm	**A97**	**Standard Operating Procedures for Forensic Anthropology at Accredited United States Laboratories: A Preliminary Assessment** *Marion Davidson, MS*; Allysha Winburn, PhD; Jeff Kukucka, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A98**	**An Evaluation of the Forensic Anthropology DEIB Peer Engagement Program** *Erin Waxenbaum, PhD*; Jaymelee Kim, PhD; Jesse Goliath, PhD; Rebecca George, PhD; Helen Litavec, PhD*
11:30 am – 1:00 pm	**A99**	**The American Academy of Forensic Sciences Ad Hoc Committee on Vicarious Trauma** *Katharine Pope, MA*; Brian Gestring, MS*; Krista Latham, PhD; Uzoma Okafor, PhD; Kathryn Seigfried-Spellar, PhD; Joseph Remy, JD*
11:30 am – 1:00 pm	**A100**	**The Development of a New Pedagogy: The Professional Diploma in Forensic Archaeology at the National Forensic Science University, Gandhinagar, Gujarat, India** *Gargi Jani, MS*; William Belcher, PhD**
11:30 am – 1:00 pm	**A101**	**Applying Multidisciplinary Methods to Forensic Casework in North** *Carolina Nicole Long, MSCJ*; Devin Williams, MA; Ann Ross, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A102**	**To Scan or to Slice: A Holistic Investigation of One of Florida's Oldest Unsolved Murders** *Olivia Loveridge, BS*; Micki Besse, MS; Savanna Agilar, MS; Heather Walsh-Haney, PhD; Russell Vega, MD*
11:30 am – 1:00 pm	**A103**	**Three-Dimensional Research on Ancient Skeletons of South Korea With Computed Tomography** *Dong-Ho Kim, PhD*; Ji-Hyun Lee, BA; Dae-Kyoon Park, MD, PhD; Yi-Suk Kim, MD, PhD; Sang-Seob Lee, PhD*
11:30 am – 1:00 pm	**A104**	**Demographic Timelines: Postmortem Data and Structural Violence in the Southeastern United States** *Elise Adams, MA*; Jesse Goliath, PhD*
11:30 am – 1:00 pm	**A105**	**Demographic Trends in Resolution of Adult Skeletal Cases in the National Missing and Unidentified Persons System From 2020 to 2024** *Valerie Sgheiza, PhD**
11:30 am – 1:00 pm	**A106**	**Comparing Antemortem Trauma Prevalence and Reporting Frequency in Unidentified Migrants Compared to a Non-Migrant Sample: A Pilot Study for Identification Purposes** *Victoria Soto, MA*; Kate Spradley, PhD*
11:30 am – 1:00 pm	**A107**	**Gendered Language Use in Forensic Science Publications (2003–2023)** *Samantha McCrane, PhD*; Ella Tartsa; Amy Michael, PhD*
11:30 am – 1:00 pm	**A108**	**Technology You Can Stand On: Skeletal Changes in Human Remains With Lower Extremity Orthopedic Prostheses** *Savanna Agilar, MS*; Micki Besse, MS; Heather Walsh-Haney, PhD*
11:30 am – 1:00 pm	**A109**	**Evaluating Cortical Bone Structural Variation in Association With Activity Level** *Shelby Garza, MA** *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A110**	**WITHDRAWN**

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11:30 am – 1:00 pm	**A111**	**A Preliminary Comparison of Fracture Characteristics Between Fleshed and Defleshed Human Tibiae** *Angela Harden, PhD*; Christopher Goden, MA; Yun-Seok Kang, PhD; Kyra Stull, PhD; Amanda Agnew, PhD*
11:30 am – 1:00 pm	**A112**	**A Preliminary Evaluation of Reliability in Long Bone Fracture Classification Methods Among Observers** *Christopher Goden, MA*; Amanda Agnew, PhD; Emma Brzezinski, MA; Julia McGinley; Angela Harden, PhD*
11:30 am – 1:00 pm	**A113**	**Investigating Differences in Methodological Approaches to Scoring Fracture Angle, Outline, and Surface** *Carter Unger, MA*; Mariyam Isa, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A114**	**Taphonomic Change in Fracture Characteristics of Porcine Long Bones in the Sonoran Desert During the Summer** *Kaitlyn Fulp, MA*; Emelia Jensen, BS; Sophia Sedlacek, BS; Katelyn Bolhofner, PhD*
11:30 am – 1:00 pm	**A115**	**Distribution Patterns of Trauma by Event Type: Examining the Differences Between Trauma Distributions of Decedents in Different Traumatic Events** *Petra Banks, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A116**	**Is It All the Fault of a Fist? Forensic Reconstruction in a Case of "Imperfect" Skull Fractures** *Enrica Macorano, MD*; Giovanni De Gabriele, MD; Alessandro Cristalli, MD; Angela Colucci, MD; Sara Di Trani, MD; Francesco Introna, MD, PhD*
11:30 am – 1:00 pm	**A117**	**Characterizing Entrance Wounds From Gunshot Trauma in Tubular Bones: Comparing Handgun and Rifle Ammunition** *Alexandra Semma Tamayo, MS*; Laure Spake, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**A118**	**Exploring Inter-Observer Agreement in Assessments of Projectile Defects** *Mariyam Isa, PhD*; Delaney Edwards, MA; Jordyn Knysz, BA; Alexander Curry, BA*
11:30 am – 1:00 pm	**A119**	**The Validation of 3D Photogrammetry Models to Document Cranial Trauma** *Samantha LaVake, BS*; Carolyn Isaac, PhD*
11:30 am – 1:00 pm	**A120**	**Enhancing Forensic Investigations: Leveraging Transfer Learning for Cut Mark Classification on Skeletal Remains** *Giada Steiger, MS*; Ricardo Chavez Garcia, PhD; Matteo Borrini, PhD*
11:30 am – 1:00 pm	**A121**	**Cutting Edge Comparisons: Analyzing Saw Kerf Variables in Bones Versus Casts** *Alexis VanBaarle, MS*; Heather Garvin, PhD*
11:30 am – 1:00 pm	**A122**	**Testing Bias in Cut Mark Analysis: An Exploratory Study** *Karin Dominko, MS*; Giada Steiger, MS; Matteo Borrini, PhD*

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Friday

Biological Profile Part I: Population Affinity and Craniometrics

Moderator: Katharine Kolpan, PhD — Co-Moderator: Alex Denning, MSc

8:00 am – 8:15 am	**A123**	**Assessing Cranial Macromorphoscopic Traits Used in the Forensic Estimation of Population Affinity** *Savannah Holcombe, MS*; Joe Hefner, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
8:15 am – 8:30 am	**A124**	**Exploring Cranial Macromorphoscopic Variation in a Modern American Indian Sample From New Mexico** *Kelly Kamnikar, PhD*; Nicollette Appel, MS; Micayla Spiros, PhD; Hannah Cantrell, BS; Heather Edgar, PhD*
8:30 am – 8:45 am	**A125**	**Patterns of Covariation in Cranial Metric and Macromorphoscopic Variables** *Briana New, MA*; Kyra Stull, PhD; Joe Hefner, PhD; Kate Spradley, PhD; Leah Auchter, MA; Elaine Chu, PhD; Louise Corron, PhD; Matthew Go, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
8:45 am – 9:00 am	**A126**	**Exploring Population Affinity Analysis for Forensic Anthropology Casework in Latin America** *Kelly Kamnikar, PhD*; Daniel Jimenez Gaytan, MS; Amber Plemons, PhD; Joe Hefner, PhD*
9:00 am – 9:15 am	**A127**	**AI-Assisted Technological Advancements for the Collection of Cranial Landmark Data and Interlandmark Distances From Medical Imaging Software** *Nicollette Appel, MS*; Kelly Kamnikar, PhD; Kate Spradley, PhD; Heather Edgar, PhD*
9:15 am – 9:30 am		**BREAK**

Biological Profile Part II: Sex, Age, and Stature

Moderator: Kaleigh Best, PhD — Co-Moderator: Chastidy Gilbert, BA

9:30 am – 9:45 am	**A128**	**An Evaluation of the Accuracy and Reliability of MorphoPASSE for Skeletal Sex Estimation Using the University of Tennessee Donated Collection** *Derek Boyd, PhD*; Kylie Williamson, PhD; Steven Lautzenheiser, PhD; Emma Pullias, BA; Devin Adcox, MA*
9:45 am – 10:00 am	**A129**	**The Application of Decision Trees and Random Forest Modeling for Combining Morphological and Metric Variables of the Skull for Osteological Sex Estimation** *Morgan Ferrell, PhD*; John Schultz, PhD; Donovan Adams, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
10:00 am – 10:15 am	**A130**	**The Application of Non-Metric Sex Estimation Methods to Virtual 3D Cranial Models** *Marion Davidson, MS*; Conner Welty, MS; Sherry Nakhaeizadeh, PhD; Ruth Morgan, DPhil* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
10:15 am – 10:30 am	**A131**	**Evaluating Subadult Age Estimation Methods From Long Bones Using a Contemporary Japanese Sample** *Elaine Chu, PhD*; Amariah Treviño, BS*

10:30 am – 10:45 am	**A132**	**Variables Impacting the Application of Radiographic Age Estimation by Pulp/Tooth Ratios** *Cirillo Laura, PhD*; Katie Skorpinski, PhD*
10:45 am – 11:00 am	**A133**	**A Multifactorial Method of Age Estimation in the Living From Computed Tomography (CT) Scans** *Frankie Dunn, MS*; Lyle Konigsberg, PhD*
11:00 am – 11:15 am	**A134**	**Applying Deep Learning Methods to Adult Age Estimation of Pelvic Joints** *Krista Bennett, MA** *(FSF Emerging Forensic Scientist Award Oral Presentation)*
11:15 am – 11:30 am	**A135**	**A Comparison of Regression Analysis and Mathematical Methods for Stature Estimation From Upper Limb Anthropometric Measurements in the Modern South Indian Population** *Ambika Patra, MD*; Shashank Singh, MD*
11:30 am – 1:00 pm		**BREAK**

Internal Standards and External Perceptions of Forensic Anthropology

Moderator: Alice Gooding, PhD — Co-Moderator: Caroline Znachko, MA

1:00 pm – 1:15 pm	**A136**	**Forensic Anthropology in China: History and Current Status** *Qun Zhang, PhD**
1:15 pm – 1:30 pm	**A137**	**The Progress in Standards Development in Forensic Anthropology: Updates From the OSAC and ASB** *Julie Fleischman, PhD*; Eric Bartelink, PhD*
1:30 pm – 1:45 pm	**A138**	**The Roaring 20s: A 20-Year Review of a Forensic Anthropologist's Casework That Spans Pre-and Post-ABFA Certification** *Micki Besse, MS*; Savanna Agilar, MS; Heather Walsh-Haney, PhD*
1:45 pm – 2:00 pm	**A139**	**WITHDRAWN**
2:00 pm – 2:15 pm	**A140**	**Community Experiences of Forensic Anthropological Work in Human Rights Settings: A Case Study of El Mozote** *Biannet Perez, MA*; Laure Spake, PhD*
2:15 pm – 2:30 pm	**A141**	**Rated or Ratioed? Using Open-Source Software to Investigate Public Perception of Human Taphonomy Facilities on Social Media Platforms** *Anna Williams, PhD*; Xenia-Paula Kyriakou, PhD; Kelda Stagg, MS; Martin Bateman, PhD*
2:30 pm – 2:45 pm	**A142**	**An Exploratory Study of Human Skeleton Sales on E-Commerce Platforms and Social Media** *Kaitlyn Glavee, BA*; Krista Latham, PhD*
2:45 pm – 3:00 pm		**BREAK**

ANTHROPOLOGY

Technology in Forensic Anthropological Research and Training

Moderator: Donna Boyd, PhD

Co-Moderator: Anthony Lanfranchi, MS

3:00 pm – 3:15 pm	**A143**	**Expanding the Forensic Anthropology Database for Assessing Methods Accuracy (FADAMA): Standardizing Case Management Systems, Real-Time Reliability Metrics, and Promoting Training Accessibility** *Cris Hughes, PhD*; Chelsey Juarez, PhD; An-Di Yim, PhD; Runzhao Hu; Matthew Berry, MS; Fangyu Zhou, MDes; Jackson Vaughan, BS*
3:15 pm – 3:30 pm	**A144**	**Advancements in the Accessibility of AI and Large Language Models (LLM) Tools Can Assist in the Development of State-of-the-Art Models in Forensic Sciences: Examples From Forensic Anthropology** *Jerković Ivan, PhD*; Željana Bašić, PhD; Ivana Kružić, PhD*
3:30 pm – 3:45 pm	**A145**	**Establishing a Protocol for Machine Learning Applications in Forensic Anthropology** *Eman Faisal, MS*; Tracy Rogers, PhD*
3:45 pm – 4:00 pm	**A146**	**Testing the Effectiveness of Virtual Reality Training in Teaching Mass Fatality Response** *Jade De La Paz, PhD*; Charlotte King, PhD; Ivett Kővári, PhD*
4:00 pm – 4:15 pm		**BREAK**

Considerations for Research With Human Remains and Their Proxies

Moderator: Elias Kontanis, PhD

Co-Moderator: Carter Unger, MA

4:15 pm – 4:30 pm	**A147**	**Investigating Sample Bias in United States-Based Documented Skeletal Collections** *Rhian Dunn, MS** *(FSF Emerging Forensic Scientist Award Oral Presentation)*
4:30 pm – 4:45 pm	**A148**	**Biomechanical Testing of Non-Human Analogs Used in Skeletal Trauma Research** *Lillian Antonelli, MA**
4:45 pm – 5:00 pm	**A149**	**Proposing Sustainable and Cruelty-Free Proxies for Bones in Cut Marks Analysis** *Matteo Borrini, PhD*; Beth Lawrence-Skitch, MS; Giada Steiger, MS*
5:00 pm – 5:15 pm	**A150**	**Ethics Around the Creation and Use of 3D-Printed Human Remains in Crime Reconstruction: Toward the Ethical Use of Technology in Forensic Anthropology** *Rachael Carew, PhD*; Ruth Morgan, DPhil; James French, PhD*
5:15 pm – 5:30 pm	**A151**	**A Water-Cooled Probe Thermocouple System for Accurate Temperature Measurements in Human Donors During Forensic Fire-Death Scenarios** *David Silveira, MS*; Arielle Sperber, BA; Ashley Kendell, PhD; Beth Shook, PhD*

CRIMINALISTICS

Wednesday

Poster Session

11:30 am – 1:00 pm	**B1**	**Revisiting Guidance on Sampling of Populations for Highly Polymorphic Forensic Loci** *Sanne Aalbers, PhD*; Katherine Gettings, PhD*
11:30 am – 1:00 pm	**B2**	**Assessing the Added Value of Non-Human DNA Analysis for Forensic Soil Analysis** *Kelly Meiklejohn, PhD*; Melissa Scheible, MFS; Tiffany Layne, PhD; Teresa Tiedge, PhD; Jack Hietpas, PhD; Jodi Webb, MS; Libby Stern, PhD*
11:30 am – 1:00 pm	**B3**	**A Small-Scale Ancestry Informative DIP-STR Marker Set for Biogeographic Ancestry Inference in United States Populations** *Lauren Hoopes, MSFS; Nicole DeWald; Diana Hall, PhD; Daniele Podini, PhD; Fabio Oldoni, PhD**
11:30 am – 1:00 pm	**B4**	**WITHDRAWN**
11:30 am – 1:00 pm	**B5**	**Assessing the Viability of DNA Yields From Taphonomically Altered Bone and Teeth** *Shelby Feirstein, MS*; Maria Castagnola, MA; Mayaas Hassan, BA; Alixs Pujols, BS; Sara C. Zapico, PhD; Luis Cabo, MS; Joe Adserias-Garriga, PhD*
11:30 am – 1:00 pm	**B6**	**It's Common Cents—How to Spend a Million Dollars in Five Months!** *Julie Ferragut, BS**
11:30 am – 1:00 pm	**B7**	**The Molecular Diversity of 23 Y-STR Genetic Markers in an Endogamous Ramgharia Population of Punjab, India** *Amandeep Kaur Bhambara, PhD*; Shivkant Sharma, PhD*; Vivek Sahajpal, PhD*
11:30 am – 1:00 pm	**B8**	**A Comprehensive Drug Analysis of Vaporizer Products From Pennsylvania High Schools** *Alexis Quinter, MASc*; Joshua DeBord, PhD; Alex Krotulski, PhD; Barry Logan, PhD; Max Denn, MS*
11:30 am – 1:00 pm	**B9**	**Field Testing of Drug-Incorporated Edible Jellies Using Portable Raman-Based Analyzers and Colorimetric Tests** *Abid Naseer, MS*; Tahir Jamshaid, MPhil; Muhammad Usman, MS; Laraib Batool, PharmD; Muhammad Saqib Kabir Khan, MS*
11:30 am – 1:00 pm	**B10**	**Source Attribution of Fentanyl Via Metals Analysis** *Edward Bentil, PhD*; Marie Taylor, BSFS; Brian Eckenrode, PhD*
11:30 am – 1:00 pm	**B11**	**WITHDRAWN**
11:30 am – 1:00 pm	**B12**	**A Simple DNA Extraction Method and a Rapid PCR-Based Assay for Detecting Ricinus Communis L. DNA Co-Extracted With Ricin** *Renato Paranaiba, PhD**
11:30 am – 1:00 pm	**B13**	**A Rapid Method for Identifying Source Species of Body Fluids: Implications for Wildlife Investigations** *Kate Jones*; Christopher Ehrhardt, PhD*

CRIMINALISTICS

11:30 am – 1:00 pm	**B14**	**The Mysterious Case of a Fatal Accident During Skydiving: A Fracture of the Pelvis From Parachute Opening Shock (POS)?** *Naomi Iacoponi, MD*; Julia Lazzari, MD; Carla Occhipinti, MD; Giacomo Visi, MD; Matteo Leoni, MD; Alessandra Cicchini, MD; Giorgio Chiandussi, PEng; Roberto Testi, MD; Marco Di Paolo, MD*
11:30 am – 1:00 pm	**B15**	**A 3D-Printed Object Topography Analysis and the Viability for Forensic Examination** *Cooper Blair, BS*; Eric Law, PhD*
11:30 am – 1:00 pm	**B16**	**WITHDRAWN**
11:30 am – 1:00 pm	**B17**	**A Characterization of Decomposing Human and Animal Tissue in a Micro-Scale Biotope Through Simulated Rainwater Extraction** *Nicholas Iyde, BSFS*; Edward Bentil, PhD; Brian Eckenrode, PhD; Ivory Krise, MSFS; Nana Kennedy, MSFS*
11:30 am – 1:00 pm	**B18**	**Analyzing the Case of a Fatal Shooting on a Movie Set** *Peter Diaczuk, PhD*; Lexy Dejesus, BA*
11:30 am – 1:00 pm	**B19**	**WITHDRAWN**
11:30 am – 1:00 pm	**B20**	**Forensic Intelligence Derived From Crime Scene Evidence Using Text Embeddings** *Vinicius Lima, MEng*; Umit Karabiyik, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B21**	**Deep Ultraviolet Raman Spectroscopy for the Forensic Analysis of Oral Fluids** *Mohamed Amin, PhD*; Fatima Matroodi, PhD; Entesar Al-Hetlani, PhD; Barbara Rossi, PhD; Igor Lednev, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B22**	**The Distribution of Retroreflective Glass Beads in Soil Samples** *Shirly Montero, PhD**
11:30 am – 1:00 pm	**B23**	**Forensic Profiling of Cigarette Paper Using ATR/FTIR Spectroscopy and Machine Learning/Algorithms** *Vishal Sharma, PhD*; Akanksha Sharma, MS*
11:30 am – 1:00 pm	**B24**	**Low-Field and Benchtop NMR in the Forensic Science: Challenges and Opportunities** *Caroline D´Oca, PhD*; Kahlil Salome, PhD; Anelize Bahniuk, PhD; Marcio Fernandes, PhD*
11:30 am – 1:00 pm	**B25**	**Cracking the Case: Toward the Development of Mass Spectral Analysis of Blow Fly Eggs for Postmortem Interval Determination** *Alexa Figueroa, BS*; Jennifer Rosati, PhD; Rabi Musah, PhD*
11:30 am – 1:00 pm	**B26**	**The Contamination of Training Aid Substrates** *Fernando Zaldivar Eyre, BS**
11:30 am – 1:00 pm	**B27**	**A Rapid Hand-Held Detector for Drugs and Explosives and Their Signature VOCs Using Novel Nano-Porous Molecularly Imprinted Polymer Sensors** *Kenneth Furton, PhD*; Abuzar Kabir, PhD; Patrick Roman, PhD*
11:30 am – 1:00 pm	**B28**	**Exploring Alternative Solvents for Dichloromethane as an Extraction Solvent of Sexual Lubricant Components Using Gas Chromatography/Mass Spectrometry** *Safiya Best, MScFS*; Ashley Gamache; Candice Bridge, PhD*

CRIMINALISTICS

Thursday

Poster Session

11:30 am – 1:00 pm	**B29**	**Time-Since-Deposition Signatures for the Analysis of Canine Body Fluids** *Alysia Townsley*; Christopher Ehrhardt, PhD*
11:30 am – 1:00 pm	**B30**	**Implementing Y-Screen Protocols as a Tool for Sexual Assault Forensic Examination Kit Backlog Reduction** *Lake Prescott, MSFS**
11:30 am – 1:00 pm	**B31**	**The Use of Quantitation Values to Infer the Possible Presence of Spermatozoa** *Ashley Luther, MS*; Kate DeHeer, MPS; Joanna Johnson, MS*
11:30 am – 1:00 pm	**B32**	**Seminal Fluid Identification in Different Semen Sample Types** *Gabriela Roca, PhD*; Mercedes Aler; Maria Castagnola, MA; Scarlet Neilson, MSFS; Francisco Medina Paz, PhD; Maik Schlieper; Nora Ronan-Milz; Polina Khalizov; Elizabeth Brusacoram, BS; Maria Isabella Negretti, BS; Amy Brodeur, MFS; Mirna Ghemrawi, PhD*
11:30 am – 1:00 pm	**B33**	**Increased DNA Quantification Sensitivity: An Evaluation of Investigator Quantiplex Pro FLX** *Julia Wang, MS*; Ya-Chih Cheng, PhD; Joshua Boster, BS; Rachel Houston, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B34**	**A Novel Method for the Identification of Source Tissue in Biological Mixtures** *Gabrielle Wolfe*; Nicole Dailey, MS; Christopher Ehrhardt, PhD*
11:30 am – 1:00 pm	**B35**	**QIAxcel vs. qPCR: Evaluating Versatility for Forensic DNA Screening** *Susana Garcia, BS*; Natalia Czado, MSFS; Damani Johnson, BS; Cesar Cantu, BS; Sheree Hughes, PhD; Rachel Houston, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B36**	**The Simultaneous Recovery of DNA, RNA, and Protein From Biological Samples for Forensic Applications Using a Novel Method** *Jacob Hetzke, BS*; Coral Smith, MS; Brian Davis, PhD; Michael Rishel, PhD; Chrystal Chadwick, BS; John Nelson, PhD; Arati Iyengar, PhD*
11:30 am – 1:00 pm	**B37**	**An In-Depth Look at DNA Casework on Fired Cartridge Casings Extracted Using a Modified Swabbing and Extraction Technique** *Jennifer Belna, BS*; Rhonda Carter, BS*
11:30 am – 1:00 pm	**B38**	**Streamlining Forensic Workflows: Field Test Results of Forensic Samples Using the HID NIMBUS Presto QNA System** *Kayli Carrillo, BS*; Sheree Hughes, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B39**	**The Simultaneous Determination of Time-Since-Deposition and Source Tissue for Forensic Biological Samples** *Caitlin Lydon, BS*; Christopher Ehrhardt, PhD; Catherine Connon, PhD; Susan Greenspoon, PhD*
11:30 am – 1:00 pm	**B40**	**Modified Extraction Protocols for Nuclear DNA Extraction From Human Hair Shafts** *Holly Zhao, BS*; Vinalon Mones, BS; Elaine Lewis, PhD; Glenn Fahrig, MS; Gregory Peiffer, PhD; Rebecca Sloman, MFS; Katherine Hargett, MFS; Todd Bille, MS; Daniele Podini, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*

CRIMINALISTICS

11:30 am – 1:00 pm	**B41**	**Direct to DNA: Revolutionizing Forensic Analysis by Streamlining the Process** *Darcy Machado, MSFS*; Francesca Spatola, MS**
11:30 am – 1:00 pm	**B42**	**Rapid DNA—Friend or Foe? Comparing Rapid DNA Analysis With Conventional Methodologies for Sexual Assault and Identification Cases** *Tania Dominguez González, BS*; Jenny Acevedo González, PhD*
11:30 am – 1:00 pm	**B43**	**The Impact of Various Substrates and Deposition Time on Bacteria Associated With Saliva Samples and Its Implication on the Accuracy of a Bacterial Signature- Based Body Fluid Identification Method** *Olisdey Galano Cruz, BS*; Sarah Seashols-Williams, PhD; Paul Brooks, PhD; Baneshwar Singh, PhD; Denise Wohlfahrt, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B44**	**Enhancing Success Rates in Sexual Assault Investigations With the SpermX Differential Extraction System** *Huma Nasir, MS*; Amanda Walker, MS; Kelsy Lowther, MS*
11:30 am – 1:00 pm	**B45**	**Expanding On-Site Crime Scene Reconstruction Capabilities by Uncovering Microscopic Clues Using Mobile Laser-Induced Breakdown Spectroscopy (LIBS)** *Leah Thomas, BS*; Roger Jefferys, MS; Luis Arroyo, PhD; Tatiana Trejos, PhD*
11:30 am – 1:00 pm	**B46**	**Analysis of Inorganic Oxidizing Salts in Intact and Chemically Reacted Consumer Fireworks Using Microscopical and Spectroscopic Approaches** *Sydney Hampton, BS*; Cassidy Callaway, MS; Jared Estevanes, PhD; Patrick Buzzini, PhD; Geraldine Monjardez, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B47**	**An Artificial Intelligence-Based Detection of Ignitable Liquid Residues in Fire Debris Using a Deep Convolutional Neural Network** *Ting-Yu Huang, PhD*; Jorn Yu, PhD*
11:30 am – 1:00 pm	**B48**	**The Detection of Organic Explosive Residues From Outdoor Explosions Using Confocal Raman Microscopy** *Nicholas Jernigan, BS*; Jared Estevanes, PhD; Geraldine Monjardez, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B49**	**The Application of a Hand-Held Raman Spectrometer for the Classification of Synthetic- and Petroleum-Based Hydrocarbon Fluids** *Javier Hodges, BS*; Kailee Marchand, BS; Jorn Yu, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B50**	**The Impact of Glass Vial Type in Measuring Raman Spectrum of Liquid Hydrocarbon Samples** *Kailee Marchand, BS*; Javier Hodges, BS; Jorn Yu, PhD*
11:30 am – 1:00 pm	**B51**	**The Detection of Bio-Based Lighter Fluid and Biodiesel Residues on Wood and Fabric Debris** *Mengliang Zhang, PhD**
11:30 am – 1:00 pm	**B52**	**Real Bullets, Plastic Guns: Evaluating the Strength of 3D-Printed Gun Parts** *Maria Mayol, BA*; Peter Diaczuk, PhD*
11:30 am – 1:00 pm	**B53**	**WITHDRAWN**

CRIMINALISTICS

11:30 am – 1:00 pm	**B54**	**The Characterization and Discrimination of Soil by Major Elemental Analysis Using Laser-Induced Breakdown Spectroscopy: A Case Study of Nirasaki in Central Japan** *Kento Kumisaka, MD*; Ritsuko Sugita, PhD*
11:30 am – 1:00 pm	**B55**	**An Investigation Into Chromatographic Methods for the Preservation, Stability, and Analysis of Organic Gunshot Residue** *Addio Fiordigigli, BS*; Kourtney Dalzell, MS; Thomas Ledergerber, BS; Tatiana Trejos, PhD; Luis Arroyo, PhD*
11:30 am – 1:00 pm	**B56**	**A Study of Casing Markings of Semi-Automatic Firearms Modified With a Glock® Switch** *Nicole Sachman, BS*; Lawrence Quarino, PhD; Carol Ritter, MS; Peter Diaczuk, PhD*
11:30 am – 1:00 pm	**B57**	**One-Step Non-Contact Sampling and Analysis of Trace Chemical Residues Using an Electrostatic Wand and Paper Spray Mass Spectrometry** *Kimberly Edmunds*; La'Nyah Nance; Kenyon Evans-Nguyen, PhD*
11:30 am – 1:00 pm	**B58**	**A Quantitative Assessment of the Stability of New AR-Style Rifle Breech Face Characteristics** *Teagan Trent*; Eric Law, PhD*
11:30 am – 1:00 pm	**B59**	**A Modified Procedure for Extracting Primer Gunshot Residue From Scanning Electron Microscopy Carbon Stubs and Trace Analysis Utilizing the Graphite Furnace-Atomic Absorption Spectrometry Technique** *Khalid Feras, MS**
11:30 am – 1:00 pm	**B60**	**Outpacing the Law: NPS—A Global Threat Challenging Forensic Analysis** *Tahir Jamshaid, MPhil*; Khalid Feras, MS*; Umair Ilkram Dar; Memoona Ishtiaq, PhD*
11:30 am – 1:00 pm	**B61**	**The Enhancement of Latent Fingerprints Using Waste Biomass-Derived Biocompatible Fluorescent Graphene Nanosheets** *Kajol Bhati, PhD*; Divya Tripathy, PhD*
11:30 am – 1:00 pm	**B62**	**An Assessment of the Permeability of VOCs Between Containers Housing Detection Canine Training Aids** *Kayla Hogan, BA*; Lauryn DeGreeff, PhD; Kenneth Furton, PhD*
11:30 am – 1:00 pm	**B63**	**The Prevalence of GSR on Ammunition Packaging** *Brittany Claassen, MS*; Kailyn Thomas; Jason Schroeder, MS* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B64**	**Advancing Trace Evidence Identification Through ATR/FTIR Spectroscopy and Machine Learning for Textile Fibers Analysis** *Vishal Sharma, PhD*; Akanksha Sharma, MS*
11:30 am – 1:00 pm	**B65**	**Addressing Challenges in Mineral Identification by Raman Spectroscopy** *Jasmine Kaur, MFS*; Drew Kuroda, BS; Joshua Christensen; Marisia Fikiet, PhD; Peter De Forest, DCrim; Brooke Kammrath, PhD*
11:30 am – 1:00 pm	**B66**	**The Characterization of Residues Left by the Impact of Different Types of Firearm-Propelled Projectiles** *Jesus Velho, PhD*; Aline Bruni, PhD; Michele Dos Santos, MD, PhD; Milena Souza, MD*

CRIMINALISTICS

Thursday—Session I

Collection and Extraction

Moderator: Amy Brodeur, MFS — Co-Moderator: Ashley Morgan, PhD

8:00 am – 8:30 am	**B67**	**Standards Development Activities in Human Forensic Biology** *Jillian Conte, PhD*; Charlotte Word, PhD; Jarrah Kennedy, MSFS*
8:30 am – 8:45 am	**B68**	**An Evaluation of Semen Extraction Efficiency and Recovery After Washing From Reusable Period Underwear** *Caitlyn Spencer, BS*; Sarah Seashols-Williams, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
8:45 am – 9:00 am	**B69**	**Swab Technology Is Advancing: Are We Putting Research Evidence Into Action?** *Jillian Conte, PhD*; Tracey Johnson, MSFS*
9:00 am – 9:15 am	**B70**	**A Quantitative Assessment of Extraction Efficiencies Obtained From Various Methods and Sample Types** *Lauren Mullen, MFS*; Erica Romsos, MFS; Peter Vallone, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
9:15 am – 9:30 am	**B71**	**Innovative Lab-on-a-Disc Technology for Rapid Differential DNA Extraction in Forensic Science** *Beomseok Lee, PhD*; Kyusang Lee, PhD; Beomhee Ahn; Hanna Kim, BS; Hwanghee Ryu, MS; Myunghee Jang, BS; Yoon-Kyoung Cho, PhD*
9:30 am – 9:45 am	**B72**	**A New DNA Collection Tool Kit: Bringing Versatility and Flexibility to Analysts** *Jamie Fredericks, PhD*; Eric Wooldridge, MS*
9:45 am – 10:15 am	**B73**	**Differential Extractions—Defining the Problem** *Robin Cotton, PhD*; Ashley Lara, MS; Anna Berberoglu, MS; Xiaoyu Zhang, MS*
10:15 am – 10:30 am		**BREAK**

Criminalistics Gone Wild

Moderator: Tiffany Rodriguez, MS — Co-Moderator: C. Ken Williams, MS, JD

10:30 am – 11:30 am	**B74**	**Criminalistics Gone Wild (in the Courtroom)—Human Factors, Activity Level, and Probability, Oh My!** ***Interactive Panel Discussion** *Agnes Winokur, PhD*; Tiffany Rodriguez, MS*; Claude Roux, PhD, FRSN*; Christopher Palenik, PhD*; Joseph Remy*; Tim Kalafut, PhD**
11:30 am – 1:00 pm		**BREAK**

CRIMINALISTICS

Biomarkers, Body Fluids, and Y-STRs

Moderator: Robin Cotton, PhD — Co-Moderator: Kelly Elkins, PhD

1:00 pm – 1:15 pm	**B75**	**A Proteomic Analysis of Semen for Human Identification and Body Fluid Classification** *Zachary Goecker, PhD*; Zheng Zhang, MD; Erica Romsos, MFS; Meghan Burke, PhD; Glendon Parker, PhD; Stephen Stein, PhD; William Wallace, PhD; Peter Vallone, PhD*
1:15 pm – 1:30 pm	**B76**	**An Advanced Nucleic Acid Lateral Flow Assay for Rapid and Sensitive Identification of Human Vaginal Fluid Using Molecular Beacon Technology** *Nidhi Subhashini, PhD**
1:30 pm – 1:45 pm	**B77**	**Integrating Genetic and Epigenetic Sequencing for Forensic Application in a Single Workflow** *Mirna Ghemrawi, PhD*; Lindsay Kotchey, MSFS*
1:45 pm – 2:00 pm	**B78**	**WITHDRAWN**
2:00 pm – 2:15 pm	**B79**	**The Identification and Optimization of MicroRNA Biomarkers for Accurate Body Weight Prediction in Forensic Samples** *Kimberly Lettner, BS*; Xiaomeng Yang, MS; Sarah Seashols-Williams, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
2:15 pm – 2:30 pm	**B80**	**Dead or Alive? Biomarker Identification for Postmortem Blood Detection** *Sara C. Zapico, PhD*; Amy Brodeur, MFS; Tai-Hua Tsai, MS; Gulnaz Javan, PhD; Christian Stadler, PhD; Gabriela Roca, PhD*
2:30 pm – 2:45 pm	**B81**	**The Design and Development of Novel Single Multiplex System Incorporating 26 Rapidly Mutating Y-STRs: 26 RM Yplex** *Rashed Alghafri, PhD**
2:45 pm – 3:00 pm	**B82**	**The Recovery of Probative aSTR and Y-STR Profiles From Single or a Few Micromanipulated Sperm Cells** *Morgan Peters, MS*; Kaitlin Huffman, PhD; John Ballantyne, PhD; Erin Hanson, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
3:00 pm – 3:15 pm		**BREAK**

FIGG and UHR

Moderator: Lori Seman, MS — Co-Moderator: Janine Kishbaugh, MS

3:15 pm – 3:45 pm	**B83**	**The Humanitarian DNA Database (HDD): An Update** *Michael Coble, PhD*; Melody Josserand, MS; Erika Ziemak, MS*
3:45 pm – 4:15 pm	**B84**	**When You Come to a Fork in the Road, Recognize It: Mapping the FIGG Decision-Making Landscape** *Colleen Fitzpatrick, PhD*; Valerie Mattimore Fuller, PhD*
4:15 pm – 4:35 pm	**B85**	**Building Branches: Navigating Practical and Ethical Considerations for the Responsible Use of Forensic Investigative Genetic Genealogy (FIGG)** *Claire Glynn, PhD**

4:35 pm – 4:55 pm	**B86**	**Down the Rabbit Hole—Now Up a Tree: Solving Cold Cases Using Forensic Investigative Genetic Genealogy at the New York City Office of Chief Medical Examiner and the Queens District Attorney's Office** *Lisa Mertz, MS*; Karen Ross, JD**
4:55 pm – 5:15 pm	**B87**	**The Development of Artificial Single Nucleotide Polymorphism (SNP) Data for Investigative Genetic Genealogy (IGG) Research and Training: A Preliminary Study** *Jessica Whitney, MS*; Keith Morris, PhD; Aldo Romero, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
5:15 pm – 5:35 pm	**B88**	**The Coldest Cold Case in Croatia: The Body in the Chest Freezer** *Tina Smoljanović, BASc*; Hrvoje Senješ, MAS; Jerković Ivan, PhD*

Thursday – Session II

SWGMAT Update and Fentanyl

Moderator: Glen Jackson, PhD — Co-Moderator: Mariah Carson, MSFS

8:00 am – 8:20 am	**B89**	**A 2025 Update From the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG)** *Jaclyn Iera, PhD**
8:20 am – 8:40 am	**B90**	**Reference-Free Identification of Fentanyl Analogs** *Tom Metz, PhD*; Katherine Schultz, MS; Adam Hollerbach, PhD; Christopher Harrilal, PhD; Dylan Ross, PhD; Danielle Ciesielski, PhD; Yehia Ibrahim, PhD; Simone Raugei, PhD; Bobbie-Jo Webb-Robertson, PhD; Robert Ewing, PhD*
8:40 am – 9:00 am	**B91**	**Using Chemical Profiling and Chemometrics for Predictive Fentanyl Geographic Associations** *Agnes Winokur, PhD**
9:00 am – 9:20 am	**B92**	**Profiling Fentanyl in a Local Drug Market and Characterizing Variability Through Quantitative Chemical Analysis** *Joshua DeBord, PhD*; Alexis Quinter, MASc; Max Denn, MS; Barry Logan, PhD; Alex Krotulski, PhD*
9:20 am – 9:40 am	**B93**	**Longitudinal Insights Into the United States' Illicit Fentanyl Supply From the Characterization of Counterfeit Fentanyl Tablets** *Barry Logan, PhD*; Sarah Shuda, MS; Mia Borrelli, MS; M.J. Menendez, JD; Thom Browne, MA; Amanda Mohr, MS*
9:40 am – 9:55 am		**BREAK**

Drug Chemistry Instrumental Analysis

Moderator: Liguo Song, PhD — Co-Moderator: Abdallah Malik Naanaa, MS

9:55 am – 10:10 am	**B94**	**The Optimization of Soft Ionization by Chemical Reaction in Transfer Coupled to a Time-of-Flight Mass Spectrometer for Rapid Seized Drug Screening** *Joanna Eldon-Edington, BASc*; Elizabeth L. Robinson, MSc; Edward Sisco, PhD; Thomas P. Forbes, PhD; Ira Lurie, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*

10:10 am – 10:30 am	**B95**	**The Development of an Analytical Scheme for the Identification of Nitazene Compounds** *Sarah Caceres, MS*; Russel Ford, PhD*; Sherri Tupik, BS**
10:30 am – 10:45 am	**B96**	**Novel Approaches to Increase Specificity for Difficult Isomeric Separations With Ultra-High Performance Liquid Chromatography (UHPLC) for the Analysis of Seized Drugs** *Jerimiah Seba, BS*; Ira Lurie, PhD*
10:45 am – 11:00 am	**B97**	**Determining the Utility of Gas Chromatography/Derivative Vacuum Ultraviolet Spectroscopy for Seized Drug Analysis Through a Comparison to Gas Chromatography/ Mass Spectrometry Capabilities** *Alexa Mehlman, BS*; Ira Lurie, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
11:00 am – 11:15 am	**B98**	**Chemometrics as a Tool for Transformation: Addressing the Limitations of Gas Chromatography/Infrared Spectroscopy for Synthetic Cathinone Analysis** *Jennifer Bonetti, PhD*; Ruben Kranenburg, PhD; Stephen Hokanson, BS; Matthew Pothier, MS; Saer Samanipour, DSc; Arian van Asten, PhD*
11:15 am – 11:30 am	**B99**	**An Additional Analysis of Drug Test Strips by Mass Spectrometry for Rapid Comprehensive Drug Checking** *Meghan Appley, PhD*; Edward Sisco, PhD*
11:30 am – 1:00 pm		**BREAK**

Detector Dogs

Moderator: A. Bakarr Kanu, PhD, MRSC Co-Moderator: Mikaela Romanelli, MS

1:00 pm – 1:20 pm	**B100**	**WITHDRAWN**
1:20 pm – 1:40 pm	**B101**	**WITHDRAWN**
1:40 pm – 2:00 pm	**B102**	**WITHDRAWN**
2:00 pm – 2:20 pm	**B103**	**The Evolution of VOC Profiles During Early Human and Animal Decomposition in Application for Canine Detection** *Fantasia Whaley, MSFS*; Valerie Albizu, BS; Joel Fuentes Carrasco, BS; Emily Millan, BS; Jordi Cruz, PhD; Lauryn DeGreeff, PhD*
2:20 pm – 2:40 pm	**B104**	**Assessing the Accuracy and Reliability of Canine Explosives Detection Using OSAC Training and Certification Standards** *Adele Quigley-McBride, PhD*; Haylie Browning, BS*; Lauryn DeGreeff, PhD; Paola A. Prada-Tiedemann, PhD*
2:40 pm – 3:00 pm	**B105**	**Developing a Universal Smokeless Powder Training Aid** *Rushali Dargan, PhD*; Lauryn DeGreeff, PhD*
3:00 pm – 3:20 pm		**BREAK**

Firearm and Toolmark Examinations

Moderator: Jack Hietpas, PhD — Co-Moderator: Zoë Krohn

3:20 pm – 3:40 pm	**B106**	**OSAC/ASB Standards Development Activities in Firearm and Toolmark Examination** *Xiaoyu Zheng, MS*; Robert Sanger**
3:40 pm – 4:00 pm	**B107**	**A Quantitative Topography Comparison of Toolmarks Made by Tongue-and- Groove Pliers** *Eunah Joo, MS*; Thomas Renegar, AA; Johannes Soons, PhD; Michael Stocker, BS; Robert Thompson, MFS; Xiaoyu Zheng, MS*
4:00 pm – 4:20 pm	**B108**	**The Interoperability of 3D Firearm Toolmark Measurements** *Xiaoyu Zheng, MS*; Johannes Soons, PhD; James Yen, PhD*
4:20 pm – 4:40 pm	**B109**	**The Generation and Interpretation of the Similarity Score Distribution for Matched and Non-Matched Bullets and Cartridge Cases** *Neal Schrode, BS**
4:40 pm – 5:00 pm	**B110**	**Quantitative Assessment of Barrel Wear From Solid Copper Bullets** *Natali Hassett, MS*; Eric Law, PhD*
5:00 pm – 5:20 pm	**B111**	**A Quantitative Determination of Muzzle-to-Target Distance in Shooting Cases** *Taqiyah Chernesky, MScFS*; Sophie Knier, MFS; Stephanie Walcott, MScFS; Emanuele Alves, PhD*
5:20 pm – 5:40 pm	**B112**	**Close Non-Matches and Database Searches: How Often Can We Expect to See a True Match Among the K Highest Correlations?** *Blanca Parker, BA*; Heike Hofmann, PhD; Alicia Carriquiry, PhD*

Thursday – Session III

Challenging Samples From Human Remains

Moderator: Sheree Hughes, PhD

8:30 am – 9:00 am	**B113**	**Deep Ocean Recovery and DNA Identification of Human Remains From the Titan Submersible** *Nancy Stokes, MSFS*; Taylor Dickerson, MSFS; John Walsh, MD; Timothy McMahon, PhD*
9:00 am – 9:15 am	**B114**	**An Evaluation of DNA Recovery From Chemically Treated Human Remains** *Jennifer Snedeker, BS*; Rachel Houston, PhD; Sheree Hughes, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
9:15 am – 9:30 am	**B115**	**The Use of Mitochondrial DNA to Provide Ancestry of Skeletal Remains Discovered in the East Marshall Street Well (EMSW)** *Martin MacStudy, BS*; Filipa Simao, PhD; Baneshwar Singh, PhD; Tal Simmons, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
9:30 am – 9:45 am	**B116**	**An Optimized Demineralization Method Using Bone Slices for Improved DNA Recovery of 19th-Century Human Skeletal Remains** *Ciara Rhodes, BS*; Reilly Price, MS; Celeste Willetts, BS; Tal Simmons, PhD; Sarah Seashols-Williams, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*

9:45 am – 10:00 am	**B117**	**Biparental and Uniparental Ancestry of the Unidentified Human Remains From the East Marshall Street Well** *Christopher Twene, MS*; Filipa Simao, PhD; Baneshwar Singh, PhD; Tal Simmons, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
10:00 am – 10:15 am		**BREAK**

Forensic Investigations, NIST Libraries, and Source Identification

Moderator: Geraldine Monjardez, PhD Co-Moderator: Beth Saucier Goodspeed, MS

10:15 am – 10:30 am	**B118**	**Non-Destructive Brand Classification From Automobile Tire Rubber Traces Using ATR/FTIR Spectroscopy and Machine Learning for Forensic Investigations** *Vishal Sharma, PhD*; Akanksha Sharma, MS*
10:30 am – 10:45 am	**B119**	**The Development of a Protocol for the Elemental Analysis of Tire Marks in Road Crime Forensics** *Matthieu Baudelet, PhD*; John Lucchi, PhD; Micaela Hernandez, BS; Alex Curto, BA*
10:45 am – 11:05 am	**B120**	**The National Institute of Standards and Technology (NIST) Mass Spectral Reference Libraries** *Edward Erisman, MS**
11:05 am – 11:30 am	**B121**	**The Development and Evaluation of a Contrastive Learning Framework for Source Identification: Technology for Transformation in the Interpretation of Forensic Data** *Danica Ommen, PhD*; Christopher Saunders, PhD; JoAnn Buscaglia, PhD*
11:30 am – 1:00 pm		**BREAK**

An Elusive Generalist, Measurement Uncertainty, Standards Implementation, and the Tyranny of Universal Standards

Moderator: Brooke Weinger Kammrath, PhD Co-Moderator: Alyssa Berthiaume, MS

1:00 pm – 1:30 pm	**B122**	**The Curious Case of the Elusive Generalist** *Sheila Willis, DSc*; Michelle Miranda, PhD*
1:30 pm – 1:50 pm	**B123**	**The Implementation of a Uniform Approach to Determine Measurement Uncertainty in Routine Chemical Forensic Casework** *Ivo Alberink, PhD*; Ingrid Bosman, PhD; Marzena Glama, MS; Dick-Paul Kloos, PhD; Annette Sprong, BS; Camille van Dijk, MS*
1:50 pm – 2:10 pm	**B124**	**A Study of Standards Implementation Across the Forensic Sciences: Notes, Trends, and Future Directions** *Vincent Desiderio, MS*; John Paul Jones, MBA; Allison Getz, MS; Crystal DeGrange, MS; Mark Stolorow, MS, MBA; Steven Johnson, BS*
2:10 pm – 2:40 pm	**B125**	**Problematic Exclusionary Differences: The Tyranny of Universal Standards for Determining Exclusionary Differences** *Janean Hanka, MS*; JoAnn Buscaglia, PhD*; Jack Hietpas, PhD; Danica Ommen, PhD; Christopher Saunders, PhD*
2:40 pm – 3:00 pm		**BREAK**

CRIMINALISTICS

Friction Ridge Applications in Research and Practice I

Moderator: Bryan T. Johnson, MSFS

3:00 pm – 3:20 pm	**B126**	**Standards Development Activities Related to Friction Ridge Examination** *Heidi Eldridge, PhD**
3:20 pm – 3:40 pm	**B127**	**Forensic Lab's Phoenix Rise: The Remarkable Redemption of a Lost Latent Fingerprint Unit** *Angelic Rountree, BS*; Alice White, BS*
3:40 pm –4:00 pm	**B128**	**Assessing the Performance of Fingerprint Laboratories Through Collaborative Exercises: The ENFSI Fingerprint Working Group Experience** *Aldo Mattei, PhD**
4:00 pm – 4:20 pm	**B129**	**An Investigation of Fingermark Residue Components and Differentiation From Contaminants** *Katelynn Perrault Uptmor, PhD*; Emma Macturk, BS*
4:20 pm – 4:30 pm		**BREAK**

Friction Ridge Applications in Research and Practice II

Moderator: Marianne Staretz, PhD

4:30 pm – 4:50 pm	**B130**	**Developing Reproducible Protocols and Definitions for Selecting Combined Minutiae: Applications in Research and Practice** *Adele Quigley-McBride, PhD*; Heidi Eldridge, PhD*; Brett Gardner, PhD*
4:50 pm – 5:10 pm	**B131**	**Likelihood Ratios for Fingerprint and Palm Impressions** *Thomas Busey, PhD*; Meredith Coon, MS*
5:10 pm – 5:30 pm	**B132**	**One Size Does Not Fit All: Variations in Documenting the ACE-V Process Among Latent Print Examiners** *Ivy Walker, MS*; John Grassel, MA; Micaela Ascolese, BA; Rebecca Shute, MS*
5:30 pm – 5:50 pm	**B133**	**Visualizing and Enhancing Latent Fingerprints Using Different Floral Powders: An Eco-Friendly Approach** *Kajol Bhati, PhD*; Amandeep Kaur Bhambara, PhD*; Ankit Singh, MSc; Rajeev Kumar, PhD; Vinny Sharma, PhD*

Friday

Poster Session

11:30 am – 1:00 pm	**B134**	**Enhanced Genetically Variant Peptide Profiling From Human Hair Using Keratinase and Trypsin** *Zheng Zhang, MD*; William Wallace, PhD; Stephen Stein, PhD*
11:30 am – 1:00 pm	**B135**	**Developing Digital Polymerase Chain-Based Assays for the Detection and Speciation of Foodborne Illness** *Sylvia Etim, MS*; Bruce McCord, PhD*
11:30 am – 1:00 pm	**B136**	**WITHDRAWN**

CRIMINALISTICS

11:30 am – 1:00 pm	**B137**	**Enhancing the Number of Contributor Inference Using mtDNA Haplotypes for Mixture Deconvolution** *Zack Beyerl, BS*; Nicole Mischak, BS*; Regan Fenske, BA; Helene Douglas, BS; Daniele Podini, PhD; Robert Lagace, BA*
11:30 am – 1:00 pm	**B138**	**Different TrueAllele Users, Same DNA Answer: A Multi-Center Proficiency Study** *William Allan, MASc*; Jennifer Bracamontes, MS; Matthew Legler, BS; Jonathan Perlin, MS; Mark Perlin, MD, PhD*
11:30 am – 1:00 pm	**B139**	**The Advancement and Practical Application of a Kinship Identification System Through the Exploration of Genetically Shared Chromosomal Regions Using High-Density SNP Data** *Sohee Cho, PhD*; Eunsoon Shin, PhD; Yong-Seok Kim, PhD; Soong Deok Lee, MD, PhD*
11:30 am – 1:00 pm	**B140**	**DNA Metabarcoding: Can It Reliably Be Used to Characterize Pollen From Surface Soils?** *Kelly Meiklejohn, PhD*; Ozge Kuddar, MS; Benjamin Callahan, PhD; Christopher Bernhardt, PhD*
11:30 am – 1:00 pm	**B141**	**An Analysis of DNA Preservation in Human Remains Embedded in Solid Building Materials** *Hayle Boechler, BS*; Mayra Mayr-Eduardoff, PhD; Sheree Hughes, PhD*
11:30 am – 1:00 pm	**B142**	**WITHDRAWN**
11:30 am – 1:00 pm	**B143**	**Microhaplotypes: A Double-Edged Sword in Forensic Genetics** *Pegah Farhadi, PhD*; Arash Alipourtabrizi, MD*
11:30 am – 1:00 pm	**B144**	**Investigating a Different Forensic Workflow for DNA Paternity Testing** *Franzoni Anna, MS*; Michele Rosso, PhD*
11:30 am – 1:00 pm	**B145**	**Enhancing Rapid DNA Programs: Implementing a Metrics Tracker to Improve Performance and Measure Success** *Emily Strelka, MFS*; Erin Forry, MS; Jason Chute, MSFS; Mikalaa Martin, BS; Misty Marra, MSFS; Patricia Melton, PhD; Shannon Krauss, PhD*
11:30 am – 1:00 pm	**B146**	**Upgrading to STRmix v2.11: A Chance to Do It All Again** *Ut Dinh, MS*; Alicia Cadenas, MS*
11:30 am – 1:00 pm	**B147**	**The Application of Deep Learning in Latent Fingerprint Enhancement** *Daye Kim, MS*; Ming-Sie Pan; Chao-Hsing Fan, PhD; Jorn Yu, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B148**	**Elucidating the Mechanism of Unwanted and Uncontrolled Water Adducts in the Tandem Mass Spectra of Synthetic Cannabinoids** *McKenna Oaks*; Christopher Poulos, MS; Emmanuel Ubana, BS; Fabien Goulay, PhD; Glen Jackson, PhD*
11:30 am – 1:00 pm	**B149**	**Utilizing a Field-Deployable, High-Resolution Mass Spectrometry System for Screening of Seized Drugs by DART-MS Analysis** *Elizabeth Robinson, MS*; Edward Sisco, PhD; Thomas Forbes, PhD*
11:30 am – 1:00 pm	**B150**	**The Effect of Mass Spectral Selection on Discrimination of Fentanyl Analog Positional Isomers** *Alexandra Rahn, BS*; Ruth Waddell Smith, PhD; Victoria McGuffin, PhD*
11:30 am – 1:00 pm	**B151**	**Structural Characterization of Nitazene Analogs Using Electrospray Ionization- Tandem Mass Spectrometry (ESI-MS/MS)** *Emma Hardwick, BA*; J. Tyler Davidson, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*

CRIMINALISTICS

11:30 am – 1:00 pm	**B152**	**Fingerprint Evidence Analysis of Fraudulent Receipts in Taichung City, Taiwan** *Yu-Chih Lin, PhD*; Pei-Yi Hua, MS; Chi-I Wu, MS; Chia-Chen Weng, MAS; Kuo-Lan Liu, MD, PhD*
11:30 am – 1:00 pm	**B153**	**The Development and Validation of a New GC/MS Decision-Point Method for Marijuana and Hemp Differentiation Using Hydrogen as Carrier Gas** *Agatha Villegas, BS*; Sandra Rodriguez-Cruz, PhD; Michael Weaver, BS*
11:30 am – 1:00 pm	**B154**	**Evaluating the Performance of DEA's New GUARDS Method Via an Interlaboratory Study** *Mark Frisch, PhD*; Sandra Rodriguez-Cruz, PhD*
11:30 am – 1:00 pm	**B155**	**Exploring Natural Aging and Depletion Processes of Latent Fingermarks With 2D and 3D Imaging** *Alexzandrea Buscarello, BS*; Josep De Alcaraz-Fossoul, PhD*
11:30 am – 1:00 pm	**B156**	**Utilizing Low Energy Ionization to Differentiate and Identify Fentanyl and Nitazene Analogs** *Kirk Lokits, PhD**
11:30 am – 1:00 pm	**B157**	**The Development and Validation of a Combined Selected Ion Monitoring-Scan GC/MS Method for Nitazene Analogs** *Alleigh Couch, BS*; Emma Hardwick, BA; Claire Phelps, MSFS; J. Tyler Davidson, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B158**	**The Differentiation of Isobaric Methyl-Substituted Fentanyl Analogs Using Direct Analysis in Real-Time Mass Spectrometry (DART-MS) and All-Ion Fragmentation (AIF)** *Christany Liggins, BS*; Alleigh Couch, BS; J. Tyler Davidson, PhD*
11:30 am – 1:00 pm	**B159**	**Thermal Desorption-Direct Analysis in Real-Time Mass Spectrometry (TD-DART-MS) of Seized Drug Mixtures** *Keshonna Towns, BS*; Alleigh Couch, BS; J. Tyler Davidson, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B160**	**An Evaluation of a Transportable Linear Ion Trap Mass Spectrometer for Rapid Seized Drug Screening** *Fiza Tajdin, BS*; Christina Chang, MS; Alleigh Couch, BS; J. Tyler Davidson, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B161**	**The Differentiation of CBD and Δ9-THC Isomers Using Copper Ion Complexation and Electrospray Ionization Tandem Mass Spectrometry** *Alleigh Couch, BS*; Christopher Zall, PhD; J. Tyler Davidson, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B162**	**Enhancing Latent Print Development With Lanconide Powder** *Lydia Buxa*; Chad Snyder, PhD*
11:30 am – 1:00 pm	**B163**	**A Modified and Optimized Duquenois Test for Classical and Designer Cannabis Products** *Marie Lemay*; Ryan Smith, BS; Ling Huang, PhD; Nanetter Wachter, PhD*
11:30 am – 1:00 pm	**B164**	**Discriminating Between the Tandem Mass Spectra of Isomeric Synthetic Cannabinoids Using the Expert Algorithm for Substance Identification (EASI)** *Alexandra Adeoye, MS*; Alleigh Couch, BS; J. Tyler Davidson, PhD; Glen Jackson, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B165**	**An Analysis of Mitragyna Hirsuta and Mitragyna Diversifolia Being Offered as Legal Alternatives to Kratom** *Megan Joos, BS*; Elizabeth Gardner, PhD*

*Presenting Author

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11:30 am – 1:00 pm	**B166**	**The Development of a Virtual Liquid Chromatography Method Development Tool** *Haley Berkland, MS**
11:30 am – 1:00 pm	**B167**	**The Drug Enforcment Administration's Basic Forensic Chemist Training Program Becomes the First Forensic Training Program Accredited by the Federal Law Enforcement Training Accreditation Board** *Jessica Rasmussen, MS**
11:30 am – 1:00 pm	**B168**	**The Development and Testing of a Novel Sorbent Material for Headspace Analysis With Application to Illicit Drugs** *Sadie Olrogg, BS*; Lauryn DeGreeff, PhD; Joongho Moon, PhD*
11:30 am – 1:00 pm	**B169**	**The Optimization of Fast Blue B Test for Cannabis Products** *Ryan Smith, BS*; Marie Lemay*; Ling Huang, PhD*
11:30 am – 1:00 pm	**B170**	**The Detection and Quantitation of Xylazine, Medetomidine, and Detomidine as Adulterants to Heroin or Illicitly Manufactured Fentanyl Using NanoLC With Various Mass Spectrometers** *Mehdi Moini, PhD*; Brian Eckenrode, PhD*
11:30 am – 1:00 pm	**B171**	**The Development of an LC/MS/MS Method for the Identification of Psilocybin and Psilocin From Seized Drugs** *Alexia Cassman, BS*; Kristen Head, MS*
11:30 am – 1:00 pm	**B172**	**DSI-GC/MS Analysis of Designer Cannabis Gummies** *Hannah LaVena*; Kevin Bisceglia, PhD; Ling Huang, PhD*
11:30 am – 1:00 pm	**B173**	**GC/VIR Technology in Seized Drug Analysis** *Sherri Tupik, BS**
11:30 am – 1:00 pm	**B174**	**WITHDRAWN**
11:30 am – 1:00 pm	**B175**	**The Development and Optimization of a Method for the Quantitation of Seized Drugs Using Rapid Gas Chromatography/Mass Spectrometry** *Marissa Ho, BS*; Briana Capistran, PhD; Edward Sisco, PhD; Ira Lurie, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B176**	**WITHDRAWN**
11:30 am – 1:00 pm	**B177**	**WITHDRAWN**
11:30 am – 1:00 pm	**B178**	**The Proliferation of Nitazenes in the United States Drug Market: Examining Powders and Counterfeit Tablets** *Mia Borrelli, MS*; Sarah Shuda, MS; Amanda Mohr, MS; Thom Browne, MA; Barry Logan, PhD*
11:30 am – 1:00 pm	**B179**	**A Discovery of False Positive Illicit Drug Identification With Portable Surface- Enhanced Raman Spectroscopy (SERS)** *Ella Galvan*; Desmond Brown; Don Ostrowski, APM; Richard Crocombe, PhD; Pauline Leary, PhD; Brooke Kammrath, PhD*
11:30 am – 1:00 pm	**B180**	**Illicit Drug Analysis in the Field With a Portable Instrument "Toolkit"** *Brooke Kammrath, PhD*; Desmond Brown; Ella Galvan; Samuel Friday, BS; Drew Kuroda, BS; Alexander Klein, BS; Jessica Persechino, MA; Jessica Behn, BS; Jon Naples; Debbie Fuller; Isabelle Radgen-Morvant, MS; Richard Crocombe, PhD*

11:30 am – 1:00 pm	**B181**	**Optimizing Extraction Methods for Cannabinoid Quantitation in Cannabis Gummies: A Comparative Study Using LC-PDA** *Ya-Chih Cheng, PhD*; Walter Wilson, PhD*
11:30 am – 1:00 pm	**B182**	**The Presumptive Identification of Psilocybin and Psilocyn in Mushrooms and Food Products Using Matrix-Assisted Ionization Vacuum (MAIV) and Time-of- Flight/Mass Spectrometry (TOF/MS)** *Maci Koester, BS*; Deborah Brimijoin, MS; Jennifer Clary, MS* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**B183**	**A Green Method for Seized Drug Analysis Using a Portable Liquid Chromatograph** *Jayda Barber, BS*; Ira Lurie, PhD*
11:30 am – 1:00 pm	**B184**	**Drug Detection in Complex Materials Using Confocal Raman Microspectroscopy** *Natasha Wheatley, MPA*; Kenzie Ballinger, BS**
11:30 am – 1:00 pm	**B185**	**WITHDRAWN**

Friday—Session I

Mixtures and Probabilities

Moderator: Kristy Kadash, PhD — Co-Moderator: Josep De Alcarz Fossoul, PhD

8:00 am – 8:30 am	**B186**	**Back to the Future: Applying Decades-Old Probabilistic Models to Today's DNA Results When Activities Are of Interest** *Simone Gittelson, PhD*; Franco Taroni, PhD; Tim Kalafut, PhD; John Buckleton, DSc*
8:30 am – 8:45 am	**B187**	**The Construction of a Microhaplotype Panel for Complex Mixture Deconvolution Using Next-Gen Sequencing** *Regan Fenske, BA*; Sarah Cavanaugh, MSFS; Helene Douglas, BS; Daniel Standage, PhD; Robert Lagace, BA; Andrew Feldman, PhD; Jeffrey Lin, MS; Kenneth Kidd, PhD; Daniele Podini, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
8:45 am – 9:00 am	**B188**	**DNA Evidence Analysis Using the Same Number of Contributors for Prosecution and Defense Will Often Frame a Non-Contributing Suspect** *Charles Brenner, PhD**
9:00 am – 9:15 am	**B190**	**Touch/Trace DNA in Activity-Level Propositions: Anatomy of a DNA Transfer** *Ashley Hall, PhD*; Ray Wickenheiser, DPS; Aldrin Alviar, MS*
9:15 am – 9:30 am	**B189**	**The Development of Universal STRmix™ Parameters for Legacy Kits** *Tim Kalafut, PhD**
9:30 am – 10:00 am	**B191**	**Evaluating the Consistency of a DNA Mixture Interpretation Protocol** *Joseph Truppi, BS*; Mario Galioto, MS; Michael Donley, MS; Katie Welch, MS*
10:00 am – 10:15 am		**BREAK**

CRIMINALISTICS

Looking Back and Moving Forward

Moderator: Kelly Knight, MS

10:15 am – 10:45 am	**B192**	**A Perspective on More Than 30 Years of Forensic DNA Research and Technology Development** *Bruce McCord, PhD**
10:45 am – 11:00 am	**B193**	**From Planning to Practice: Navigating the Implementation of Rapid DNA Technology and Tracking Success Metrics** *Jason Chute, MSFS*; Patricia Melton, PhD; Emily Strelka, MFS; Erin Forry, MS; Mikalaa Martin, BS; Misty Marra, MSFS; Shannon Krauss, PhD*
11:00 am – 11:15 am	**B194**	**A Sensitivity Evaluation of the Applied Biosystems RapidHIT ID System v2.0 and RapidINTEL Plus Sample Cartridge** *Emily Yen Dang, BS*; Morgan Eaton, MS; Raygan Harrington, BS; Tracey Dawson Green, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
11:15 am – 11:30 am	**B195**	**An Assessment of the RapidHIT ID System v2.0 for Use on Evidentiary Samples and Its Suitability for Implementation Into Law Enforcement** *Trupti Sriram, BS*; Jamia Mealy, MFS; Kristen Naughton, BS*
11:30 am – 1:00 pm		**BREAK**

How Low Can (Should) We Go?

Moderator: Pamela Marshall, PhD Co-Moderator: Baneswar Singh, PhD

1:00 pm – 1:15 pm	**B196**	**An Analysis of Pre- and Post-Coital Microbial Transfer Using Deep Shotgun Metagenomic Studies** *Andrea Ramirez Torres, BS*; Mirna Ghemrawi, PhD; George Duncan, PhD; Bruce McCord, PhD*
1:15 pm – 1:30 pm	**B197**	**Exploring the World of "Touch DNA" and "Touch Microbiome": One-Shot DNA Collection and Extraction** *Michele Di Nunzio, PhD*; Sarah Gino, MD; Andrea Bonicelli, PhD; Noemi Procopio, PhD*
1:30 pm – 1:45 pm	**B198**	**Size-Selective Purification to Separate High and Low Molecular Weight DNA** *Vinalon Mones, BS*; Helene Douglas, BS; Glenn Fahrig, MS; Gregory Peiffer, PhD; Rebecca Sloman, MFS; Katherine Hargett, MFS; Jessica Broner, MS; Jonathan King, MS; Elaine Lewis, PhD; Michael Coble, PhD; Todd Bille, MS; Daniele Podini, PhD*
1:45 pm – 2:00 pm	**B199**	**Probabilistic Clustering of Single-Cell Investigative Evaluations** *Qhawe Bhembe, MSFS*; Nidhi Sheth, PhD; Leah O'Donnell, MS; Ken Duffy, PhD; Desmond Lun, PhD; Catherine Grgicak, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
2:00 pm – 2:15 pm	**B200**	**The Comparison and Evaluation of Predictors on Single-Cell Weights of Evidence** *Catherine Grgicak, PhD*; Desmond Lun, PhD*
2:15 pm – 2:30 pm	**B201**	**Low-Level DNA Recovery From Fired Cartridge Casings, Firearms, and Explosive Devices: Comparing Conventional Methods and Sequencing-Based DNA Typing** *Mirna Ghemrawi, PhD*; Leah Nangeroni, MS*
2:30 pm – 2:45 pm	**B202**	**Getting More From Less: Low-Level DNA Mixtures on Cartridges** *Kari Danser, MS*; Jennifer Bracamontes, MS; Matthew Legler, BS; Mark Perlin, MD, PhD*

2:45 pm – 3:00 pm	**B203**	**Integrated On-Chip PCR-Capture-Sizing-CE Microsystems for Ultrasensitive Forensic DNA Typing** *Xiujun Li, PhD**
3:00 pm – 3:15 pm		**BREAK**

Administration and Planning

Moderator: Fabio Oldoni, PhD — Co-Moderator: Charlotte Word, PhD

3:15 pm – 3:45 pm	**B204**	**So, You Want a Job in Forensic Science? Getting Hired as a Forensic Scientist From the Hiring Manager's Perspective** *Matthew Gamette, MS*; Rylene Nowlin, BS**
3:45 pm – 4:15 pm	**B205**	**The Role of the National Technology Validation Implementation Collaborative (NTVIC) in Forensic Technology Implementation** *Matthew Gamette, MS**
4:15 pm – 4:35 pm	**B206**	**A National Survey and Interviews on Training in Forensic Science Service Laboratories in the United States Evaluative Report** *Kelly Elkins, PhD**
4:35 pm – 5:05 pm	**B207**	**Planning for and Executing a Disaster Response: The Rapid DNA Mass Disaster Emergency Response and Preparedness Toolkit** *Mikalaa Martin, BS*; Taylor Koepfler, MSFS; Jason Chute, MSFS; Shannon Krauss, PhD; Laura Kuyper, MFS; Katie Scott, MSFS; Jeri Ropero-Miller, PhD*

Friday—Session II

A Morning of Trace Materials—Standards, Soils, Glass, Paint, and Textiles

Moderator: Christopher Palenik, PhD — Co-Moderator: Susan Gross, MSFS

8:15 am – 8:35 am	**B208**	**Standards Development Activities in Trace Materials** *Sandra Koch, PhD*; Celeste Grover, MSFS*
8:35 am – 8:55 am	**B209**	**Differentiating Soil by Color and Mineralogy for Soil Comparisons: An Experiment Using Soil From North Carolina** *Libby Stern, PhD*; Hannah Dickson, MS; Jodi Webb, MS; Kelly Meiklejohn, PhD; Jack Hietpas, PhD; Ian Saginor, PhD; Michael Smith, PhD*
8:55 am – 9:15 am	**B210**	**Soil Discrimination by Particle-Correlated Raman Spectroscopy** *Drew Kuroda, BS*; Jasmine Kaur, MFS; Joshua Christensen; Marisia Fikiet, PhD; Peter Harrington, PhD; Peter De Forest, DCrim; Brooke Kammrath, PhD*
9:15 am – 9:35 am	**B211**	**An Elemental Analysis of Glass Powder on Spent Projectiles** *Shirly Montero, PhD*; Summer Garcia*
9:35 am – 9:55 am	**B212**	**Data Fusion From Infrared, Elemental, MSP, and Raman Analysis Techniques to the Maximization of the Efficiency of the Analytical Sequence for the Forensic Examination of Paint Evidence** *Patrick Buzzini, PhD*; Morgan Carpenter, BS; Swathi Murali, MS; James Curran, PhD*

9:55 am – 10:15 am	**B213**	**Wait, Hot Cooking Oil Turned Your Shirt From Green to Orange?** *Tiffany Rodriguez, MS*; William Perdue, MPA**
10:15 am – 10:30 am		**BREAK**

The River's Silent Witness, Chemometric Approaches, and Clandestine Human Burials

Moderator: Thaddeus Mostowtt, PhD — Co-Moderator: Tiffany Rodriguez, MS

10:30 am – 10:50 am	**B214**	**Skeleton in the Stream: Unraveling the Murder Mystery of the River's Silent Witness** *Akhilesh Pathak, MD**
10:50 am – 11:10 am	**B215**	**Chemometric Approaches for Investigating Multiblock Hyperspectral Data in Forensic Biological Evidence Analysis** *Eugenio Alladio, PhD*; Alberto Mazzoleni, MS; Carolina Scagliarini, MS; Paolo Garofano, MD, PhD*
11:10 am – 11:30 am	**B216**	**A Layered Analytical Method for Detecting Clandestine Human Burials** *Brian Eckenrode, PhD*; Edward Bentil, PhD*
11:30 am – 1:00 pm		**BREAK**

An Afternoon of Fire Debris, Explosives, and GSR

Moderator: Andra Lewis, PhD — Co-Moderator: Edward Sisco, PhD

1:00 pm – 1:20 pm	**B217**	**Standards Development Activities Related to Ignitable Liquids, Explosives, and Gunshot Residue** *Brenda Christy, MS**
1:20 pm – 1:40 pm	**B218**	**The Validation of a Rapid GC/MS Method for Forensic Fire Debris Screening Applications** *Briana Capistran, PhD*; Elizabeth Robinson, MS; Edward Sisco, PhD*
1:40 pm – 2:00 pm	**B219**	**An Application of the Expert Algorithm for Substance Identification (EASI) to Predict ASTM E1618-19 Ignitable Liquid Classes From Gas Chromatography/Mass Spectrometry Data of Ignitable Liquid Residues** *Hannah McMillen, MS*; Glen Jackson, PhD*
2:00 pm – 2:20 pm	**B220**	**Revealing Gunshot Residue Flow and Deposition Behaviors Using Laser Sheet Scattering, High-Speed Videography, Atmospheric Particle Analysis, and Spectrometric Analytical Techniques** *Thomas Ledergerber, BS*; Matthew Staymates, MS; Kourtney Dalzell, MS; Luis Arroyo, PhD; Roger Jefferys, MS; Tatiana Trejos, PhD*
2:20 pm – 2:40 pm	**B221**	**An Assessment of the Transfer and Persistence of Gunshot Residue in Simulated Arrest Scenarios Analyzed by Screening and Confirmatory Methods** *Kourtney Dalzell, MS*; Thomas Ledergerber, BS; Leah Thomas, BS; Addio Fiordigigli, BS; Tatiana Trejos, PhD; Luis Arroyo, PhD*
2:40 pm – 3:00 pm		**BREAK**

CRIMINALISTICS

Drug Chemistry Standards, Developments, and Applications

Moderator: Pete Ausilli, MS

3:00 pm – 3:15 pm	**B222**	**Standard Development Activities in Seized Drug Analysis: The Current Status and Challenges** *Agnes Winokur, PhD**
3:15 pm – 3:30 pm	**B223**	**Tracking the Emergence of Medetomidine, Tetracaine, and Other Substances as Adulterants in Philadelphia, Pennsylvania, Recreational Opioid Markets** *Max Denn, MS*; Joshua DeBord, PhD; Alexis Quinter, MASc; Alex Krotulski, PhD; Barry Logan, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
3:30 pm – 3:45 pm	**B224**	**A Systematic Study of Liquid Chromatography in Search of the Best Separation of Cannabinoids for Potency Testing of Hemp-Based Products** *Liguo Song, PhD**
3:45 pm – 4:00 pm	**B225**	**Sample Preparation Procedures at NIST for the Determination of Δ9-THC and Its Isomers in Commercial and Seized Cannabis Vape Products by GC/MS** *Walter Wilson, PhD*; Ya-Chih Cheng, PhD*
4:00 pm – 4:15 pm	**B226**	**The Development of a Δ9-THC Colorimetric Breathalyzer Using 3D Printing Manufacture** *Savanah Allinson, BS*; Taqiyah Chernesky, MScFS; Aron Jaffe, MScFS; Stephanie Walcott, MScFS; Emanuele Alves, PhD*
4:15 pm – 4:30pm	**B227**	**Psilocin Derivatives in Edibles: Issues, Extraction Tips, and Case Studies** *H. Ross Ehmann, MSFS*; Oriana Ovide, MSFS*
4:30 pm – 4:50 pm	**B228**	**The Application of the Expert Algorithm for Substance Identification (EASI) to Differentiate Tandem Mass Spectra of 2,3-MDMA and 3,4-MDMA** *Glen Jackson, PhD*; Alexandra Adeoye, MS; Sandra Rodriguez-Cruz, PhD*
4:50 pm – 5:10 pm	**B229**	**Standardizing and Implementing Direct Analysis in Real Time-Mass Spectrometry Methods Throughout DEA Laboratories** *Sandra Rodriguez-Cruz, PhD**
5:10 pm – 5:30 pm	**B230**	**The Development and Validation of the Global Uniform Analysis and Reporting of Drug-Related Substances (GUARDS) Method** *Michael Weaver, BS*; Sandra Rodriguez-Cruz, PhD; Mark Frisch, PhD; Corey Nida, PhD*

DIGITAL & MULTIMEDIA SCIENCES

Thursday

Quality: Quintessential or Questionable?

Moderator: Josh Brunty, ScD

8:10 am – 8:30 am	**C1**	**A Framework for Systematic Error Mitigation for Digital Evidence** *Eoghan Casey, PhD**
8:30 am – 8:50 am	**C2**	**NoSQL Database Forensics: An Analysis of Redis Logs** *Muhammad Abdul Moiz Zia, BCS*; Oluwasola Mary Adedayo, PhD**
8:50 am – 9:10 am	**C3**	**Reimagining the Forensic Pipeline Out of Necessity** *Mark Guido, MS*; Justin Grover, MS**
9:10 am – 9:30 am	**C4**	**Bias in Bytes: Practitioner Awareness in Digital Forensics** *Chris Shennan, MASc**
9:30 am – 9:50 am		**BREAK**

Mobile Devices: Movable Mastery or Manipulating Minds?

Moderator: Vir Phoha, PhD

9:50 am – 10:10 am	**C5**	**A Forensics Investigation of the Social Networking Application: Tencent QQ on iOS and Android** *Yufeng Gong, MS*; Umit Karabiyik, PhD**
10:10 am – 10:30 am	**C6**	**A Story of Obsession: Data Analysis of a Stalker's Mobile Phone Device** *Nicole Odom, MSFS**
10:30 am – 10:50 am	**C7**	**ImageRec: A Tool for Android In-Memory Code Reconstruction** *Aisha Ali-Gombe, PhD**
10:50 am – 11:10 am	**C8**	**The Reliability of Confidence Factors in iPhone GPS Data for Forensic Applications** *Jeff Rutherford, BS*; Romy Haas, BA; Danielle Ponce de Leon, BS*
11:10 am – 11:30 am	**C9**	**Using TikTok Around the World: A Comparison and Updated Forensic Analysis of TikTok on Android and iOS** *Xiao Hu, MS*; Umit Karabiyik, PhD**
11:30 am – 1:10 pm		**BREAK**

DIGITAL & MULTIMEDIA SCIENCES

Internet of Things (IoT): Integrating or Isolating?

Moderator: Christine Malone, MSFS

1:10 pm – 1:30 pm	**C10**	**A Forensic Analysis of Google Fit App on WearOS** *Chen Shi, MS*; Yong Guan, PhD*
1:30 pm – 1:50 pm	**C11**	**Unveiling Sleep Patterns: Insights From Garmin FIT Protocol Data** *Nina Matulis, MS*; Jenna Rockhold, BS*; Marcus Rogers, PhD*; Umit Karabiyik, PhD**
1:50 pm – 2:10 pm	**C12**	**Utilizing Smart Watches in Forensic Science: A Case Study on Verifying Witness Statements and Tracking Drug Ingestion** *Ashraf Mozayani, PhD**
2:10 pm – 2:25 pm		**BREAK**

Computers: Creating or Curtailing?

Moderator: Grace Rubio, BS

2:25 pm – 2:45 pm	**C13**	**DarkWeb Investigations Using Offensive Security Techniques** *Gabriel Nunes, BS**
2:45 pm – 3:05 pm	**C14**	**The Combination of Non-Obvious Links in Online Fraud Investigations** *Timothy Bollé, MS*; Eoghan Casey, PhD; Thomas Souvignet, PhD*
3:05 pm – 3:25 pm	**C15**	**Principles of Locality of Reference: A Proposal to Reduce the Scope of Forensic Analysis in Cases Occurring in the Cyber Environment** *Gustavo Vilar, MS**
3:25 pm – 3:40 pm		**BREAK**

Tools and Standards: Testing or Trusting?

Moderator: Grace Rubio, BS

3:40 pm – 4:00 pm	**C16**	**Is It a Transformation? Is It Tyranny? Is It Even Cost Effective? The Value of Independent Software Testing Your Technology** *Marc Canellas, PhD**
4:00 pm – 4:20 pm	**C17**	**The Limitations of Digital Forensics Tools for Database System Examination** *Bhavye Malhotra, BS*; Oluwasola Mary Adedayo, PhD**
4:20 pm – 4:40 pm	**C18**	**Standards Development Activities in Digital and Multimedia Forensic Science** *Tracy Walraven, MFS**

DIGITAL & MULTIMEDIA SCIENCES

Friday

Biometrics: Building Boundaries or Bridges?

Moderator: Josh Brunty, ScD

8:20 am – 8:40 am	**C19**	**Facial Identification Scientific Working Group Update** *Nicole Spaun, PhD**
8:40 am – 9:00 am	**C20**	**An Update on the Status of a Facial Identification Certification Program** *Steven Johnson, BS**
9:00 am – 9:20 am	**C21**	**Distinguishing Head Poses From Camera Angles in Non-Frontal Images for Automated Face Identification** *Petra Urbanova, PhD*; Tomas Goldmann, PhD*
9:20 am – 9:40 am	**C22**	**A Global Interlaboratory Study: Assessing Consistency of Source Opinions for Face, Hands, and Clothing Image Pairs** *Kelly Meiklejohn, PhD*; Chau-Wai Wong, PhD; Melissa Scheible, MFS; Jane Harris, PhD; Christina Malone, MSFS; Lora Sims, AS*
9:40 am – 10:00 am		**BREAK**

Multimedia: Managing Morally or Maliciously Misleading?

Moderator: Alex Nelson, PhD

10:00 am – 10:20 am	**C23**	**An Evaluation of Interpolation Methods and Their Impact on Resizing Images: Is the Nearest Neighbor Algorithm the Best Solution in All Situations?** *Jason Latham, MS*; Douglas Lacey, MS*
10:20 am – 10:40 am	**C24**	**Identifying Social Media Video Provenance Through Forensic Structural Analysis** *Clarissa Tan, MS*; Brandon Epstein, MS*; Bertram Lyons, MA**
10:40 am – 11:00 am	**C25**	**The Application of Likelihood Ratios to Audio Authentications: Selected Preliminary Results** *James Zjalic, MS**
11:00 am – 11:20 am	**C26**	**Keeping Up With the Times: Are Standards Meeting the Needs of Rapidly Expanding Technology in Forensic Multimedia Analysis?** *Christina Malone, MSFS*; Wendy Dinova-Wimmer, BS**
11:20 am – 1:10 pm		**BREAK**

DIGITAL & MULTIMEDIA SCIENCES

Artificial Intelligence (AI): Advancing or Alarming?

Moderator: Martin Novak, MPA

1:10 pm – 1:30 pm	**C27**	**Detecting Generative AI Through the Structural Analysis of Multimedia Files** *Nicole Odom, MSFS**
1:30 pm – 1:50 pm	**C28**	**Artificial Intelligence for Image and Video Forensics: Mine of Information or Minefield?** *Marco Fontani, PhD*; Martino Jerian, MS; Blake Sawyer, BBA*
1:50 pm – 2:10 pm	**C29**	**Deepfake Detection: Technology as a Tool for Transformation or Tyranny** *Zeno Geradts, PhD**
2:10 pm – 2:30 pm	**C30**	**Leveraging Artificial Intelligence for Advancements in Forensic Science: The AI4Forensic Lab** *Zeno Geradts, PhD**
2:30 pm – 2:50 pm	**C31**	**The Development of a Responsible AI Framework Suitable for Forensic Science Needs** *Janet Stacey, MS*; Deepak Karunakaran, PhD; Rachel Fleming, PhD; Dion Sheppard, MS*
2:50 pm – 3:10 pm		**BREAK**

Behind the Screen: Benevolent Brainstorming or Bad Behavior?

Moderator: Jason Latham, MS

3:10 pm – 3:30 pm	**C32**	**Attitudes Toward and Barriers to Mental Health Support for Digital & Multimedia Forensic Examiners** *Sonali Tyagi, MS*; Kathryn Seigfried-Spellar, PhD**
3:30 pm – 3:50 pm	**C33**	**Emerging Ethical and Technical Challenges in Digital Profiling** *Chad Steel, PhD*; Angel Morningstar, MS**
3:50 pm – 4:10 pm	**C34**	**Exploring Fantasy Enactment and Self-Disclosure Themes in Offender-to-Offender Communication: A Comparative Study of Adult and Peer-to-Peer Groomer Digital Evidence** *Reeya Ramasamy*; Tatiana Ringenberg, PhD*; Kathryn Seigfried-Spellar, PhD**
4:10 pm – 4:30 pm	**C35**	**Proactive Detection of Child Sexual Abuse Material: Predicting Victim Risk From App Usage, Media Content, and Messaging Behaviors** *Nina Matulis, MS*; Kathryn Seigfried-Spellar, PhD*; Marcus Rogers, PhD**

ENGINEERING & APPLIED SCIENCES

Thursday

Poster Session

11:30 am – 1:00 pm	**D1**	**WITHDRAWN**
11:30 am – 1:00 pm	**D2**	**Active Air Sampling and Quantitation of Methyl Methacrylate During Controlled Pyrolysis of Poly(Methyl Methacrylate)** *Kaylee Morton, MSFS*; Mahsa Lotfi Marchoubeh, PhD*
11:30 am – 1:00 pm	**D3**	**An Examination and Analysis of False Negative in Presumptive Blood Testing Methods on Leather** *Sarahy Magdaleno, MSFS**

Thursday—Session I

Sample Analysis and Forensic Detection

Moderator: Kurt Weiss, MS — Co-Moderator: Darren Franck, MSME

8:00 am – 8:20 am	**D4**	**Failure Analysis of Ink Samples Using Multiple Modes of Pyrolysis-Gas Chromatography/ Mass Spectrometry (Py-GC/MS)** *Athena Nguyen, BS**
8:20 am – 8:50 am	**D5**	**Light It Up! Photoluminescent Lead Detection for Forensic Investigations** Kendra Adelberg, *MS*; Arno van der Weijden, PhD; Lukas Helmbrecht, PhD; Arian van Asten, PhD; Wim Noorduin, PhD*
8:50 am – 9:20 am	**D6**	**WITHDRAWN**
9:20 am – 9:40 am	**D7**	**Odorant Depletion in Propane Containers** *Tim Dunn, MS**
9:40 am – 9:55 am		**BREAK**
9:55 am – 10:15 am	**D8**	**Synthetic Routes for the Production of Xylazine: An Analysis of Clandestine Viability** *Calvin Keller, PhD**
10:15 am – 10:45 am	**D9**	**WITHDRAWN**
10:45 am – 11:15 am	**D10**	**An Economic Valuation of Environmental Damages Caused by Illegal Artisanal Mining in the Brazilian Yanomami Indigenous Territory** *David Pavanelli, PhD*; Uilian Mello, MS; Rai Cunha, BS; Rommel Pereira, BA; Erich Lima; Mauro Magliano, PhD*
11:15 am – 11:35 am	**D11**	**The Sidney Declaration: Is It a True Revisitation of the Forensic Science Principles?** *Veronica Scotti, JD*; Alessandro M. Ferrero, MSc*
11:35 am – 1:00 pm		**BREAK**

Collision/Forensic Analysis

Moderator: David Pienkowski, PhD — Co-Moderator Harold Franck, MSEE

1:00 pm – 1:30 pm	**D12**	**A Race Car Accident Analysis** *Berislav Barisic-Jaman, MEng**
1:30 pm – 1:50 pm	**D13**	**A Forensic Analysis of Unintended Vehicle Rollaway Incidents** *Chris Clarke, BSME*; Brian Herbst, BSME**
1:50 pm – 2:10 pm	**D14**	**The Role of Early Assumptions in Driver Determination for an Unwitnessed Motor Vehicle Crash** *David Porta, PhD**
2:10 pm – 2:25 pm		**BREAK**
2:25 pm – 2:55 pm	**D15**	**Roof System Failure: Causes and Misconceptions** *Darren Franck, MSME*; Harold Franck, MSEE*
2:55 pm – 3:40 pm	**D16**	**The Analysis of Vehicle Dynamics From Monitor Playback Recordings** *Michael Callahan, BSME*; Sean Snyder, BS**
3:40 pm – 4:10 pm	**D17**	**Forensic Mapping With a Real-Time Kinematics-Equipped Drone (UAS/UAV), With or Without Ground Control?** *David Sersen, BSEE*; James C. Rikard*

Thursday—Session II

Multidisciplinary Session: Engineering & Applied Sciences and Forensic Nursing Science

Moderator: Valeria Kaegi, RN — Co-Moderator: Jessica Volz, DNP

1:00 pm – 1:30 pm	**D18**	**Accidental or Deliberate? Can a Safety Razor Inflict Injuries to a Baby in a Bathtub?** *Sarah Hainsworth, PhD**
1:30 pm – 2:00 pm	**E8**	**Alternate Light Sources in Subclinical Bruising: A Systematic Review** *Maureen Canellas, MD*; Jennifer Edwards, MD*
2:00 pm – 2:30 pm	**D19**	**An Analysis of Injuries and Injury Mechanisms of Male PMHS in High-Speed, Rear-Facing Frontal Impact Scenarios** *John Bolte, IV, PhD*; Amanda Agnew, PhD; Yun-Seok Kang, PhD*
2:30 pm – 2:45 pm		**BREAK**
2:45 pm – 3:15 pm	**E9**	**Revolutionizing Forensic Nursing Education: The Impact of Virtual Reality, Artificial Intelligence, and Performance Data Analytics** *Jamie Ferrell, MBA, BSN, RN*; Sally Henin, MD*
3:15 pm – 3:45 pm	**D20**	**Empirical Testing of a Trip-Fall Incident** *Darren Franck, MSME*; Harold Franck, MSEE*
3:45 pm – 4:15 pm	**D21**	**A Windshield Fracture Incident: Injury-Producing Event or Just Cracked Glass?** *Michelle Hoffman, MS*; Kurt Weiss, MS*

ENGINEERING & APPLIED SCIENCES

Friday

Poster Session

11:30 am – 1:00 pm	**D22**	**The Impact of Artificial Intelligence in Clinical Risk Management: A Focus on Fall Prevention** *Paolo Visci, MD; Elena Graziano, MD; Michele Telegrafo, MD; Annachiara Vinci, MD*; Fiorenza Zotti, MS; Alessandro Dell'Erba, MD, PhD; Davide Ferorelli, MD*
11:30 am – 1:00 pm	**D23**	**The Role of Engineering in Forensic Science: Physics Applied in a Case of Hemorrhagic Shock From Central Venous Catheter Blood Loss** *Gabriella Maisetta, MD*; Federica Spina, MD*; Ilaria Marcacci, MD*; Julia Lazzari, MD; Giulia Berneschi, MD; Luigi Papi, MD; Paolo Maremmani, MD; Fabio Giannelli, BSN; Alessandro Mariotti, PhD*
11:30 am – 1:00 pm	**D24**	**The Use of Stationary Phases Designed for Supercritical Fluid Chromatography for the Reversed-Phase Liquid Chromatographic Separation of Nine Isomers of Δ9-Tetrahydrocannabinol** *Gunnar Franz, BS*; Ira Lurie, PhD; Walter Wilson, PhD*
11:30 am – 1:00 pm	**D25**	**Augmented Reality Visualization for Postmortem Analysis of a Traffic Accident: Clarification of Injury Mechanism Through PMCT-Based Antemortem Posture Reconstruction** *Haruki Fukuda, MD, PhD*; Akira Hayakawa, MD, PhD; Hiroyuki Tokue, MD, PhD; Rie Sano, PhD; Yoshihiko Kominato, MD, PhD*

Linguistics/Artificial Intelligence

Moderator: Carole Chaski, PhD — Co-Moderator: Nathan Holmes

8:00 am – 8:45 am	**D26**	**Environmental Signature Extraction for Forensic Analysis of Audio Recordings Using AI/LLM Models** *Lucky Onyekwelu-Udoka, MS*; Yong Guan, PhD*
8:45 am – 9:15 am	**D27**	**Quantitative Similarity Assessments of Forensic Images** *Gautham Venkatasubramanian, MS*; Alicia Carriquiry, PhD*
9:15 am – 9:35 am	**D28**	***Kumho*, Engineering, and the Linguistics of Definitions** *Jeffrey Holmes, JD*; Carole Chaski, PhD*
9:35 am – 9:55 am	**D29**	**A Tool to Quickly Estimate Uncertainty of a Forensic Test** *Alessandro Ferrero, MS*; Veronica Scotti, JD*
9:55 am – 10:10 am		**BREAK**
10:10 am – 10:30 am	**D30**	**Artificial Intelligence Tools Applied to Forensic Engineering Cases: Overcoming This Challenge Through an Academic Cooperation Program** *Jose Medeiros, DSc*; Thiago Albuquerque, MS; Sandro Torres, PhD; Lucidio Cabral, DSc; Marçal Lima Filho, PhD; Gilberto Sousa Filho, DSc; Bruno Leitão, BEng*
10:30 am – 10:50 am	**D31**	**Falsely Accused: Generative AI and the Allegation of Academic Plagiarism** *Carole Chaski, PhD**

ENGINEERING & APPLIED SCIENCES

10:50 am – 11:10 am	**D32**	**Weaknesses of Artificial Intelligence Proxies of Topic for Forensic Linguistic Applications** *Elizabeth Smith, PhD*; Cristina Aggazzotti, PhD; Nicholas Andrews, PhD*
11:10 am – 11:30 am	**D33**	**A Computational Method for Detecting Sophisticated Plagiarism** *Carole Chaski, PhD**
11:30 am – 11:50 am	**D34**	**Analyzing Generative AI's Truth-Bias in Deceit Detection: An Empirical Experiment in English and Spanish** *Ángela Almela, PhD**

FORENSIC NURSING SCIENCE

Thursday

Morning Session

Moderator: Michelle Patch, PhD, MSN — Co-Moderator: Tamar Rodney, PhD

8:00 am – 8:25 am	**E1**	**Transforming Forensic Nursing Documentation and Enhancing Patient Outcomes Through Electronic Health Record Technology** *Jamie Ferrell, MBA, BSN, RN*; Gillian Alexander, MBA; Sally Henin, MD*
8:25 am – 8:50 am	**E2**	**Mitigating the Risk: Navigating the Legal and Ethical Challenges of Forensic Nursing Photography** *Cheryl Wier, MSN**
8:50 am – 9:15 am	**E3**	**Variability in Uploaded CODIS Profiles From Sexual Assault Kits** *Julie Valentine, PhD*; Matthew Gamette, MS*; Leslie Miles, DNP*
9:15 am – 9:40 am	**E4**	**The Development of Serial Gaming for Forensic Nurses to Advance Disaster Training** *Thiago Augusto da Silva, PhD*; Joyce Williams, PhD*; Thais Kneodler, PhD; Ronaldo Modesto; Ester da Silva; Débora Fernanda Haberland, PhD; Alexandre De Oliveira, PhD*
9:40 am – 9:55 am		**BREAK**
9:55 am – 10:20 am	**E5**	**The Importance of Selection Areas for the Collection of Sexual Assault Evidence From the Oral Cavity** *Janine Kishbaugh, MSFS*; Lawrence Quarino, PhD; Brianna Gregory, MSFS*
10:20 am – 10:45 am	**E6**	**An Analysis of Police-Led Jail Diversion Programs in Massachusetts: Evaluating Efficacy and Proposing Enhanced Crisis Response Models** *Victor Petreca, PhD*; Joanne Barros, PhD*
10:45 am – 11:10 am	**E7**	**Responding to Sexual Violence in the LGBTQIA+ Community** *Russell Rooms, DNP**
11:10 am – 1:00 pm		**BREAK**

Multidisciplinary Session: Engineering & Applied Sciences and Forensic Nursing Science

Moderator: Valeria Kaegi, RN — Co-Moderator: Jessica Volz, DNP

1:00 pm – 1:30 pm	**D18**	**Accidental or Deliberate? Can a Safety Razor Inflict Injuries to a Baby in a Bathtub?** *Sarah Hainsworth, PhD**
1:30 pm – 2:00 pm	**E8**	**Alternate Light Sources in Subclinical Bruising: A Systematic Review** *Maureen Canellas, MD*; Jennifer Edwards, MD*
2:00 pm – 2:30 pm	**D19**	**An Analysis of Injuries and Injury Mechanisms of Male PMHS in High-Speed, Rear-Facing Frontal Impact Scenarios** *John Bolte, IV, PhD*; Amanda Agnew, PhD; Yun-Seok Kang, PhD*
2:30 pm – 2:45 pm		**BREAK**
2:45 pm – 3:15 pm	**E9**	**Revolutionizing Forensic Nursing Education: The Impact of Virtual Reality, Artificial Intelligence, and Performance Data Analytics** *Jamie Ferrell, MBA, BSN, RN*; Sally Henin, MD*

3:15 pm – 3:45 pm	**D20**	**Empirical Testing of a Trip-Fall Incident** *Darren Franck, MSME*; Harold Franck, MSEE*
3:45 pm – 4:15 pm	**D21**	**A Windshield Fracture Incident: Injury-Producing Event or Just Cracked Glass?** *Michelle Hoffman, MS*; Kurt Weiss, MS*

Friday

Morning Session

Moderator: Tara Godoy, MBA, BSN, RN — Co-Moderator: Kathleen Ann Wells, MPH

8:00 am – 8:25 am	**E10**	**Beyond the Numbers: Investigating Homicide Risk Factors for Indigenous Women and Girls** *Emily Pudvah, BA*; Victor Petreca, PhD*; Courtney Hoblock, DNP*; Elizabeth Dowdell, PhD; Ann Burgess, DNSc*
8:25 am – 8:50 am	**E11**	**Changes in Patient Pain Post-Medical Forensic Examination** *Isabel Jaimes, BSFS*; Abimbola Famurewa, MPH; Nancy Downing, PhD; Jenny Black, BSN*
8:50 am – 9:15 am	**E12**	**Forensic Nursing Science: The Practice of Virginity Testing** *Janean Fossum, BSN, RN*; Venera Mehmeti, BS*
9:15 am – 9:40 am	**E13**	**Enhancing Equitable Access to Quality Forensic Sexual Assault Care: The SAFE-T System Telehealth Model** *Sheridan Miyamoto, PhD*; Jocelyn Delgado Spicuzza, PhD; Jennifer Delwiche, PhD*
9:40 am – 9:55 am		**BREAK**

Moderator: Katie Wells, MPH — Co-Moderator: Barbara Bachmeier, JD, MSN

9:55 am – 10:20 am	**E14**	**Mitigating Bias in Sexual Assault Evidence Collection Kit Analysis** *Omotinuola Okesanjo, BS*; Nancy Downing, PhD*
10:20 am – 10:45 am	**E15**	**The Reality of Intimate Partner Violence in Piedmont, Italy: The Challenges Posed by the Frequency and Severity of Violence and the Proposals to Combat It** *Sarah Gino, MD*; Paola Castagna, MD, PhD; Stefano Cenati, BS; Giulia Facci, MS; Elena Rubini, MA; Edit Shahi, MD; Daniele Radicioni, PhD; Paola Torrioni, PhD; Georgia Zara, PhD*
10:45 am – 11:15 am	**E16**	**What About the Swabs? A Retrospective Review of DNA Analysis Findings From Sexual Assault Kit Evidence** *Julie Valentine, PhD*; Leslie Miles, DNP*; Luke Johnson, BS*; Connor Alder, BS; Brian Brown, MS; Andrew Criddle, BS*
11:15 am – 1:00 pm		**BREAK**

Afternoon Session

Moderator:Barbra Bachmeier, JD, MSN — Co-Moderator: Laura La Cagnina, DNP, MSN, RN

1:00 pm – 1:20 pm	**E17**	**WITHDRAWN**
1:20 pm – 1:40 pm	**E18**	**Rewrite the Law? Everyone Is (Not) Equal Under the Law** *Valeria Kaegi, RN*; Michael J. Thali*

Wednesday

Poster Session

11:30 am – 1:00 pm	**F1**	**A Small Molecule Chemical Analysis of Residual Odor From Odor Recognition Test by Human Remains Canine Teams** *Shawn Campagna, PhD*; Zane Vickery, BS; Katarina Jones, PhD; Hector Castro, PhD; Dawnie Steadman, PhD; Mary Cablk, PhD; Mary Davis, MS; James Ha, PhD*
11:30 am – 1:00 pm	**F2**	**An Analysis of Hidden Childhood Exposure to Xenobiotics in Cases of Child Abuse: A Decade-Long Study at the Meyer Children's Hospital IRCCS of Florence, Italy** *Martina Focardi, MD*; Marta Romanelli, MD*; Valentina Gori, MD*; Fabio Vaiano, PhD; Andrea Costantino, MD; Beatrice Defraia, MD; Rossella Grifoni, MD; Ilenia Bianchi, PhD; Laura Nanni, MD; Stefania Losi, MD; Vilma Pinchi, PhD*
11:30 am – 1:00 pm	**F3**	**WITHDRAWN**
11:30 am – 1:00 pm	**F4**	**The Development and Identification of a Thin Layer Chromatography Procedure for the Rapid Identification of Cannabis Plants Through Its Major Cannabinoids** *Michele Di Nunzio, PhD*; Amadeo Pérez, MD; Elena Gonzalez-Burgos, PhD; Teresa Pérez, PhD; Maria Pieri, PhD; Pascale Basilicata, PhD; Dolores Serrano, PhD*
11:30 am – 1:00 pm	**F5**	**Does Technology Weaken the Fight for a Fair Trial? Modern Policing and Challenges of the Criminal Defense Investigation** *Briana Verdoorn, MA**
11:30 am – 1:00 pm	**F6**	**Eye in Crime Scene Investigation** *Jagmahender Singh Sehrawat, PhD*; Sushil Bhatt, MS; Vishali Gupta MS*
11:30 am – 1:00 pm	**F7**	**WITHDRAWN**
11:30 am – 1:00 pm	**F8**	**From Flat Photos to 3D Wonders: Cutting-Edge Tech Is Changing Forensic Investigations** *Giulia Berneschi, MD*; Rebecca Maggi, MD*; Chiara Ariani, MD; Giacomo Visi, MD; Eleonora Mezzetti, MD; Marco Di Paolo, MD; Marika Floris*
11:30 am – 1:00 pm	**F9**	**Long-Term DNA Stability on Buccal Swabs: Findings From Simulated Paternity Cases** *Franzoni Anna, MS*; Michele Rosso, PhD*
11:30 am – 1:00 pm	**F10**	**Protecting Arson Investigators From Exposure to Toxic and Hazardous Substances in Fire Scene Debris** *Abdulrhman Dhabbah, PhD**

Thursday

Poster Session

11:30 am – 1:00 pm	**F11**	**Multiple Firearm Wound Suicides in Maryland: A Ten-Year Look Back** *Jenaye Mack, MD*; Nicholas Boire, MD; Joseph Mininni, MD; Stephanie Dean, MD*
11:30 am – 1:00 pm	**F12**	**Northern Microbes Tell a Story: Human Decomposition Influences on the Soil Microbiome in the Upper Peninsula of Michigan** *Amanda Joslyn, BS*; Jane Harris, PhD; Josh Sharp, PhD*

11:30 am – 1:00 pm	**F13**	**Optimizing DNA Retrieval for Insect Identification From Specimens Prepared for Morphological Analysis** *Riley Hoffman, BS*; Nicholas Miller, PhD*
11:30 am – 1:00 pm	**F14**	**Sparks and Burns: A Histological Study on the Effect of Firework Explosions on Pig Skin** *Naomi Iacoponi, MD*; Matteo Leoni, MD; Rebecca Maggi, MD; Gabriella Maisetta, MD; Chiara Casula, MD; Paride Minervini; Marco Di Paolo, MD*
11:30 am – 1:00 pm	**F15**	**The Detection of Pharmaceutical and Illicit Drugs in Municipal Wastewater Using Gas Chromatography/Mass Spectrometry** *Will Harris, BS*; Ellen Mwenesongole, PhD*
11:30 am – 1:00 pm	**F16**	**The Development of LAMP-ICS and FastPCR-ICS of Human/Male Multiplex Assay for Rapid On-Site Screening** *Yujin Oh, BS*; Hakrae Lee, BS; Yebin Kim, BS; Yeju Kim, BS; Si-keun Lim, PhD*
11:30 am – 1:00 pm	**F17**	**The Impact of Sound Suppressors on Gunshot Residue Deposition** *Kathryne Hartung, BS*; Alexis Moser, BA; Jennifer Turner, MSFS*
11:30 am – 1:00 pm	**F18**	**The Impact of Storage and Container Options for Human Remains Detection Training Aids** *Daigoro Greco, BS**
11:30 am – 1:00 pm	**F19**	**The Popularity of Biometrics in India, Along With the Challenges** *Ramandeep Kaur, MS*; Mukesh Kumar Thakar, PhD*
11:30 am – 1:00 pm	**F20**	**The Prevalence of DNA on Car Vehicles for Guidance in Collecting Samples** *Joshua Boster, BS*; Kathryn Schoeneberg; Jennifer McMurray, MS; Madison Myers, BS; Jeremy Chappell, BA* *(FSF Emerging Forensic Scientist Award Poster Presentation)*

Thursday—Session I

Evidence Identification

Moderator: Tara Rick

8:30 am – 8:45 am	**F21**	**A Highly Portable and Ultra-Sensitive Platform for Rapid Forensic Identification of Wildlife Species** *Nidhi Subhashini, PhD**
8:45 am – 9:00 am	**F22**	**A High-Throughput, Multi-Biochemical Analysis of Pollen Grains for Their Identification in a Forensic Context** *Jack Trimble, BS*; Kaitlyn Cierpik; Camron Melendez; James McAleer; Matthieu Baudelet, PhD*
9:00 am – 9:15 am	**F23**	**A Universal Method for Biological Stain Identification Using Raman Spectroscopy: An Investigation of Potential False Positives** *Igor Lednev, PhD*; Luis Perez Almodovar, BS; Lenka Halámková, PhD*
9:15 am – 9:30 am	**F24**	**Considerations for Fieldable Drug Detection and Identification by High Resolution Mass Spectrometry** *Thomas Forbes, PhD*; Elizabeth Robinson, MS; Edward Sisco, PhD; Abigail Koss, PhD*
9:30 am – 9:45 am	**F25**	**Investigating Odor Signatures of Electronic Storage Devices** *Samuel Friday, BS*; Jon Naples; Pauline Leary, PhD; Marisia Fikiet, PhD; Alyssa Marsico, PhD; Brooke Kammrath, PhD*

9:45 am – 10:00 am	**F26**	**Sustainable Wood Sourcing and Species Identification Through ATR/FTIR Spectroscopy and Machine Learning in Forensic Applications** *Akanksha Sharma, MS*; Vishal Sharma, PhD*
10:00 am – 10:15 am		**BREAK**

Thermal Related

Moderator: Cliff Akiyama, MPH, MA

10:15 am – 10:30 am	**F27**	**Finding the Ignition Source in Burned Bones: A Forensic Research Investigation** *Caighley Logan*; Suzzanne McColl, PhD*
10:30 am – 10:45 am	**F28**	**Postmortem Thermal Injuries Due to Muzzle Flash Ignition** *Mariana Voudouri, MD**
10:45 am – 11:00 am	**F29**	**Pyrolysis Products Obtained From Household Substrates at Crime Scenes: An Analytical Challenge for Forensic Fire Investigation Experts** *Khalid Feras, MS*; Tahir Jamshaid, MPhil**
11:00 am – 11:15 am	**F30**	**WITHDRAWN**
11:15 am – 11:30 am	**F31**	**The Refinement of a Thermodynamic Model to Explain the Weathering Patterns of Ignitable Liquids on Household Substrates at Elevated Temperatures** *Chaney Ganninger, BS*; Glen Jackson, PhD*
11:30 am – 1:00 pm		**BREAK**

AI Technology

Moderator: Jerry DeMenna, PhD

1:00 pm – 1:15 pm	**F32**	**Advancing AI-Enhanced Topic Modeling With BERT in Forensic Text Analysis** *Amir Alipour Yengejeh, MCS*; Larry Tang, PhD*
1:15 pm – 1:30 pm	**F33**	**AI-Enabled Systems and Applications in Forensic Science: A Landscape Analysis and Future Directions** *Melissa Taylor, BA*; Henry Swofford, PhD; Niki Osborne, PhD*
1:30 pm – 1:45 pm	**F34**	**Artificial Intelligence, Forensic Science, and the Criminal Justice System: New Challenges and Ethical Implications for Innovative Technologies** *Giuseppina Seppini, MSN*; Iolanda Ippolito, MS*
1:45 pm – 2:00 pm	**F35**	**Lessons Learned From the Development of Sexual Assault Kit Evidence Machine Learning Models** *Julie Valentine, PhD*; Luke Johnson, BS*; Leslie Miles, DNP; Brian Brown, MS; Connor Alder, BS; Andrew Criddle, BS*

2:00 pm – 2:15 pm	**F36**	**The Application of Artificial Intelligence in Medicolegal Assessments** *Giada Rovito, MD*; Matilde Ruju, MD*; Luca Diani, MD*; Irene Pradelle, MD; Laura Camilla Gasparini, MD; Felice Carabellese, MD; Margherita Neri, MD, PhD*
2:15 pm – 2:30 pm	**F37**	**The European AI Act: A Risk-Based Approach to Regulating AI** *Veronica Scotti, JD**
2:30 pm – 2:45 pm	**F38**	**Technology: A Tool for Transformation of Data Element Exchange in Specialized Types of Medicolegal Death Investigations** *Kelly Keyes, BS*; Erica Fornaro, BS; Jeri Ropero-Miller, PhD*
2:45 pm – 3:00 pm	**F39**	**The Impact of Automated Asylum Determination Processes on Asylum Applicants Subjected to Acts of Torture** *Hasna Sheikh, LLM*; Elspeth Guild; Nikolas P. Lemos, PhD**
3:00 pm – 3:15 pm		**BREAK**

Standards

Moderator: Brett Harding, MBA

3:15 pm – 3:30 pm	**F40**	**Developing Standards and Risk Management Profiles for the Responsible Adoption of Artificial Intelligence in Forensic Science** *Niki Osborne, PhD*; Melissa Taylor, BA; Reva Schwartz, MA*
3:30 pm – 3:45 pm	**F41**	**Improving Polygraph Screening Examinations With Computerized Scoring Algorithms and Minimum Data Standards** *James OBurke, MS**
3:45 pm – 4:00 pm	**F42**	**The Benefits and the Challenges of an Independent Crime Lab** Alesia Wheeler-Moore, MA*; Erin Price, BS
4:00 pm – 4:15 pm	**F43**	**The District of Columbia (DC) Department of Forensic Sciences: A Fall From Grace and a Path Back to Accreditation** *Jennifer Love, PhD*; Francisco Diaz, MD**
4:15 pm – 4:30 pm	**F44**	**Washington, DC, Department of Forensic Sciences (DFS): A Unique Approach to Developing Impactful, Strategic Testing Plans While Minimizing Cognitive Bias** *Samira Taylor, BS**
4:30 pm – 5:00 pm	**F45**	**The National Institute of Justice Research and Development Program** *Lucas Zarwell, MSFS**

Thursday – Session II

Identification

Moderator: Mark Benecke, PhD

8:30 am – 8:45 am	**F46**	**A Photograph of a Partially Skeletonized Finger Confirms Positive Identification: A Case Study** *Emily King, BA*; Carrie Costello, MS*
8:45 am – 9:00 am	**F47**	**Overlooking the Utility of the Tattoo as an Investigatory Lead: Comparing Tattoo Documentation Practices Among Investigators and Medical Examiners** *Deanna Corsetti, BS*; Marcelle Morin, MS; Michelle Miranda, PhD*
9:00 am – 9:15 am	**F48**	**A Study in Distortion on Determining Latent Print Classification** *Kevin Parmelee, PhD*; Charu Arya, MBA*
9:15 am – 9:30 am	**F49**	**WITHDRAWN**
9:30 am – 9:45 am	**F50**	**Seasonal Patterns of Fly-Associated Ignatzschineria in Human Decomposition- Impacted Soils** *Lois Taylor, PhD*; Allison Mason, PhD; Jennifer DeBruyn, PhD*
9:45 am – 10:00 am	**F51**	**A Preliminary Study: The Application of 3D Models, Simulations, and Finite Element Analysis (FEA) in Shooting Reconstruction** *Baillie Poulton, MS*; Keith Morris, PhD*
10:00 am – 10:15 am		**BREAK**

Cases

Moderator: Traci Nakatsuka, BA Co-Moderator: Doug Scott, PhD

10:15 am – 10:30 am	**F52**	**A Couple of Air Fresheners Ought to Do the Trick! A Case Report on Human Remains Found in an Occupied Residence After Ten Years** *Robert Hunkeler, MFS*; James Fannin, AS; Kent Harshbarger, MD*
10:30 am – 10:45 am	**F53**	**Cigarette Butt DNA Solves a 30-Year-Old Homicide Cold Case: A Case Study** *Megan Collins*; Carrie Costello, MS*
10:45 am – 11:00 am	**F54**	**In the Wrong Place at the Wrong Time** *Andra Lewis, PhD**
11:00 am – 11:15 am	**F55**	**When All You Have Is a Foot** *Lara Newell, MA**
11:15 am – 11:30 am	**F56**	**Shots Fired! The Escalating Rise of Violence Against Law Enforcement by Youth Street Gangs After the COVID-19 Pandemic** *Cliff Akiyama, MPH, MA**
11:30 am – 1:00 pm		**BREAK**

GENERAL

Education

Moderator: Theresa DeAngelo, MSFS

1:00 pm – 1:15 pm	**F57**	**A Simple Water Laboratory Experiment to Teach Students Good Laboratory Practices and Quality Assurance** *Tamra Legron Rodriguez, PhD*; Charoltte Disney; Dana-Marie Dennis, PhD*
1:15 pm – 1:30 pm	F58	**CSIxR: Creating a Virtual Reality CSI Application** *David Fisher, MS*; Kevin Parmelee, PhD*; Margarita Vinnikov, PhD; Michael Kehoe, BS*
1:30 pm – 2:00 pm	**F59**	**Evaluating the Scientific Validity of Forensic Methods: Guidelines for Study Design and Analysis** *Michael Rosenblum, PhD*; Maria Cuellar, PhD*; Susan Vanderplas, PhD; Amanda Luby, PhD*
2:00 pm – 2:15 pm	**F60**	**Examining Social Belonging and Connectedness in an Online Forensic Science Course** *Gina Londino-Smolar, EdD**
2:15 pm – 2:30 pm	**F61**	**Project-Based Learning in Undergraduate Forensic Chemistry: Standards Development and Professional Practice** *April Hill, PhD**
2:30 pm – 3:00 pm	**F62**	**Using Virtual Reality in Crime Scene Education, Training, and Proficiency Testing** *Susan Blankenship, DBA**
3:00 pm – 3:15 pm		**BREAK**

Miscellaneous

Moderator: Anita Roman, BS

3:15 pm – 3:45 pm	**F63**	**Grizzlies, Guns, and Glaciers: Interesting National Park Deaths** *Tatiana Bihun, MD*; Joseph Prahlow, MD; Cristin Rolf, MD; Richard Sine, BA; Amy Schaefer, BA; Kenneth Gallagher, MD; Gary Zientek, MD; Karen Cline-Parhamovich, DO*
3:45 pm – 4:00 pm	**F64**	**PHD ETDC—The Forensic Reconstruction Methodology: A Scientific Process to Solve Cases and Avoid Wrongful Convictions** *Carlos Gutierrez Ayala, DFS**
4:00 pm – 4:15 pm	**F65**	**Video Technology for Training and Testimony Preparation** *Alaina Anderson, MS*; James Miller, MA; Mona Colca, BA*
4:15 pm – 4:30 pm	**F66**	**How Research Improves Public Crime Lab Efficiency and Accuracy: The National Institute of Justice-Sponsored Outcomes** *Tracey Johnson, MSFS**
4:30 pm – 4:45 pm	**F67**	**Old Legal Frameworks and New Technologies: The Baltimore, Maryland, Experience** *Andrew Northrup, JD**

Friday

Poster Session

11:30 am – 1:00 pm	**F68**	**The Stability and Variability of the Korean Saliva Microbiome Over a Period of Time** *Ha-Eun Cha, BS*; Hye-Seon Cho, BS; Ji-woo Lee, BS; A-Jeong Jeon, BS; Jooree Seo, BS; Si-keun Lim, PhD*
11:30 am – 1:00 pm	**F69**	**The State of Forensic Science in India: Progress and Pitfalls** *Moin Ahmad Butt, MS*; Mukesh Kumar Thakar, PhD*
11:30 am – 1:00 pm	**F70**	**WITHDRAWN**
11:30 am – 1:00 pm	**F71**	**You Take My Breath Away! An Unusual Case of Uxoricide-Suicide by Double Choking** *Michela Ferrara, MD*; Natascha Pascale, MD, PhD*; Aldo di Fazio, PhD*; Mariagrazia Calvano, MD; Giuseppe Bertozzi, MD; Mauro Ciavarella, MD*
11:30 am – 1:00 pm	**F72**	**An Efficacy Catalytic Hydrated Photo-Oxidation Tool in Reducing Biocontaminants During Autopsy Procedures: A Pilot Study** *Francesco Sessa, PhD*; Martina Francaviglia, MD*; Maria Paola Pinacchi, MD*; Massimiliano Esposito, MD*
11:30 am – 1:00 pm	**F73**	**Child Abuse or an Accident? The Role of the Forensic Expert in Pediatric Emergency Departments: A Case Series** *Manoj Parchake, MD**
11:30 am – 1:00 pm	**F74**	**Sodium Nitrite Poisoning: "Suicide Kits" Sold on the Internet** *Madelyn Kinneary, MS*; Sophia Garcia-Jackson, MS; Erica Williams, MD*
11:30 am – 1:00 pm	**F75**	**The First Fingerprint Conviction: Argentina's Historic 1892 Fingerprint Case** *Jeff Teitelbaum, MA**
11:30 am – 1:00 pm	**F76**	**Combating Sexual- and Gender-Based Violence: A Crucial Imperative in the Great Lakes Region of Africa** *Edwin Huffine, MS*; Dora Byamukama, LLM*
11:30 am – 1:00 pm	**F77**	**WITHDRAWN**

Friday – Session I

Standards

Moderator: Emily King, BA

8:30 am – 9:00 am	**F78**	**An Update on Forensic Science Standards Within the Crime Scene Investigation Disciplines** *Michael Kessler, PSM*; Charles DeFrance, MFS*
9:00 am – 9:15 am	**F79**	**Progress on Developing Dogs and Sensors Standards: Sniffing Out Success** *Kenneth Furton, PhD*; Paola A. Prada-Tiedemann, PhD; Suzanne Perry, BA*
9:15 am – 9:30 am	**F80**	**Standards Development Activities in Medicolegal Death Investigation, Including Disaster Victim Identification** *Kelly Keyes, BS*; Michelle Rippy, EdD*

9:30 am – 9:45 am	**F81**	**Standards Development Activities in Wildlife Forensic Biology** *Jason Byrd, PhD*; Christina Lindquist, MSFS**
9:45 am – 10:00 am	**F82**	**Washington, DC, Department of Forensic Sciences: Achieving Accreditation Through Collaboration** *Krystyna Hopkinson, MSFS*; Timothy Scanlan, PhD*
10:00 am – 10:15 am		**BREAK**

Case Related

Moderator: Lara Newell, MA

10:15 am – 10:30 am	**F83**	**A Facial Perspective Atlas: A Tool to Assist Morphological Facial Comparisons** *Katie Pottage, MS*; James Zjalic, MS*
10:30 am – 10:45 am	**F84**	**Forensic Reconstruction and Forensic Taphonomy: An Experiment for a High-Profile Case Conducted for the First Time in Chile** *Carlos Gutierrez Ayala, DFS**
10:45 am – 11:00 am	**F85**	**The Sad Story of Two Young Lovers: The Truth Lies in the Details** *Giovanni De Gabriele, MD*; Antonio Marzaioli, MD; Angela Colucci, MD; Sara Di Trani, MD; Alessandro Cristalli, MD; Enrica Macorano, MD; Francesco Introna, MD, PhD*
11:00 am – 11:15 am	**F86**	**Combating Wrongful Murder Statements With Technology: A Wrongful Conviction Case Study** *Kevin Parmelee, PhD**
11:15 am – 11:30 am	**F87**	**Forensic Sciences as an Instrument for Improving the Lives of Populations: A Multidisciplinary Theoretical-Practical Case Study in Brazil** *Marcio Fernandes, PhD*; Caroline D´Oca, PhD; João Resende, PhD*
11:30 am – 1:00 pm		**BREAK**

Technology

Moderator: Paschal Chinedu Gbaruko, BSC

1:00 pm – 1:15 pm	**F88**	**Electric Vehicles: A Technological Firestorm** *Stacey Chepren, MS**
1:15 pm – 1:30 pm	**F89**	**Leveraging Analytical Chemistry and Advanced Flow Visualization for the Evaluation of Canine Training Aid Containment Systems** *Shawna Gallegos, PhD*; Matthew Staymates, MS**
1:30 pm – 1:45 pm	**F90**	**A Validation of Inkjet Printing Methodology in the Development of Non-Detonable Explosive Training Aids** *Shawna Gallegos, PhD**
1:45 pm – 2:00 pm	**F91**	**Investigating Nuisance Alerts Given by Canines Arising From Substrates Exposed to Composition C-4** *Himanshi Upadhyaya, MS*; Alexis Hecker, MS; John Goodpaster, PhD*
2:00 pm – 2:20 pm	**F92**	**Micro-CT Imaging and 3D Laser Scanning as Tools for Evidence Presentation in Court** *Sofia Goia, PhD*; Charlotte Primeau, PhD; Mark Williams, PhD*

2:20 pm – 2:40 pm	**F93**	**The Effects of a Bullet on the Motion and Distribution of Unburnt Gunshot Residue Particles** *Lauren White, BS**
2:40 pm – 3:00 pm	**F94**	**Process Maps: The Beginning of a Technological Revolution for Fire Investigations** *Terry-Dawn Hewitt, LLM**
3:00 pm – 3:15 pm		BREAK

Identification—Genealogy and Wildlife

Moderator: Megan Collins

3:15 pm – 3:30 pm	**F95**	**Forensic Genetic Genealogy: An Emerging Tool for Identification in Transnational Missing Persons Cases** *Aline Minervino, MS*; Laura Cainé, PhD*
3:30 pm – 3:45 pm	**F96**	**Watkins Who?: The Use of Forensic Genealogy in a Medical Examiner's Cold Case** *Alex Verdoorn, BA**
3:45 pm – 4:00 pm	**F97**	**The Development and Validation of the EX38 Kit: A Comprehensive Forensic Tool for Enhanced Genetic Identification** *Atif Adnan, MD, PhD**
4:00 pm – 4:15 pm	**F98**	**Wildlife Forensic Proteomics: Approaches and Applications** *Ashley Spicer, MS*; Nicole Slattengren, MS; Kyle Burk, MS; Glendon Parker, PhD*
4:15 pm – 4:45 pm	**F99**	**You Can Get DNA Conclusions From That?: Case Studies Involving Animal DNA** *Christina Lindquist, MSFS*; Teri Kun, MSFS*

Friday—Session II

Coroners

Moderator: Ashley Spicer, MSFS, CWFS

8:30 am – 8:45 am	**F100**	**Safeguarding the Community: Rewriting the Narrative on the Modern Coroner in Today's Society** *Brett Harding, MBA*; Christina Di Loreto, MD; Jessica Macdonald, MA; Richard Riffle, BS*
8:45 am – 9:00 am	**F101**	**WITHDRAWN**
9:00 am – 9:15 am	**F102**	**Technology Use Among the Nation's Medical Examiner and Coroner Offices: A Snapshot** *Jeri Ropero-Miller, PhD*; Kelly Keyes, BS; Connor Brooks, MA, MSc; Micaela Ascolese, BA; Liat Weinstein, BA; Hope Smiley-McDonald, PhD*
9:15 am – 9:30 am	**F103**	**How Local Coroner/Medical Examiners Can Contribute to Advancing Forensic Science** *David Kintz, BS**
9:30 am – 9:45 am	**F104**	**Cell Phones—Can They Replace Advanced Digital Cameras in Medicolegal Scene Photography Investigations?** *Rachael Landrie, BS*; Francisco Diaz, MD*

9:45 am – 10:00 am	**F105**	**Navigating the Challenges: The Struggle of Medicolegal Death Investigations in Sparsely Populated Regions** *Michelle Rippy, EdD*; Kelly Keyes, BS*
10:00 am – 10:15 am		**BREAK**

More Coroners

Moderator: Tina Ross, PhD

10:15 am – 10:45 am	**F106**	**Mass Fatality on a Budget** *Robert Hunkeler, MFS**
10:45 am – 11:00 am	**F107**	**"We Specialize in the Heartbreakers": Practitioner Perspectives on Investigating Long-Term Unidentified Persons Cases Throughout the United States** *Molly Kaplan, MA**
11:00 am – 11:15 am	**F108**	**Abuse or Self-Neglect? A Medicolegal Case Study Exploring Multi-Agency Failure to Report a Vulnerable Adult** *Ella Butler, MS**
11:15 am – 11:30 am	**F109**	**Cases of Child Abuse and Maltreatment: A Retrospective Observational Study From Meyer Children's Hospital IRCCS of Florence, Italy, Between 2010 and 2022** *Martina Focardi, MD*; Andrea Costantino, MD*; Marta Romanelli, MD; Valentina Gori, MD; Beatrice Defraia, MD; Rossella Grifoni, MD; Ilenia Bianchi, PhD; Laura Nanni, MD; Stefania Losi, MD; Vilma Pinchi, PhD*
11:30 am – 1:00 pm		**BREAK**

Miscellaneous

Moderator: Tiana Mash, PhD

1:00 pm – 1:15 pm	**F110**	**Bridging the Gap: Collaborative Programs and Initiatives That Are Transforming the Interface Between Forensic Science and the Legal System** *Caitlin Porterfield, MS*; Mark McCoy, EdD*; Jennifer Schmitz, JD**
1:15 pm – 1:30 pm	**F111**	**Forensic Intelligence: A Contemporary Application or How to Approach a Paradigm Shift** *Joe Trevino, MS**
1:30 pm – 1:45 pm	**F112**	**The Unexpected Role of Pacemaker Data in Solving a Homicide: A Case Study** *Emily King, BA*; Carrie Costello, MS*
1:45 pm – 2:00 pm	**F113**	**"Follow the Bloodstains and Find the Truth"—The Importance of Site Inspection** *Naomi Iacoponi, MD*; Chiara Casula, MD; Damiano Marra, MD; Giulia Berneschi, MD; Julia Lazzari, MD*
2:00 pm – 2:15 pm	**F114**	**Is Forensic Chemistry Different?** *Max Houck, PhD**
2:15 pm – 2:45 pm	**F115**	**A Comparison of Particulate Collection Methods Using Fluorescent Polyethylene Beads and an Introduction to the Use of a Pulse Lavage for Particulate Evidence Collection** *Madison Smith, BS** *(FSF Emerging Forensic Scientist Award Oral Presentation)*

JURISPRUDENCE

Thursday

Poster Session

11:30 am – 1:00 pm	**G1**	**Facial Recognition Technologies in Police and Security Activities: Legal Aspects in the Era of the European AI Act** *Donatella Curtotti, PhD*; Sebastiano Battiato, PhD; Giovanni Ziccardi, PhD*
11:30 am – 1:00 pm	**G2**	**The Italian National Cybersecurity Agency (ACN) and Criminal Justice: An Integrated Cooperation Model for Cyber Resilience, Crime Prevention, and Security** *Donatella Curtotti, PhD*; Gianluca Ignagni, MA*; Marcello Albergoni, MA*; Guido Colaiacovo, PhD; Federico Niccolò Ricotta, PhD; Alessandro Valenti, MA*
11:30 am – 1:00 pm	**G3**	**The SARS-CoV-2 Vaccination Mandate in Light of Italian Constitutional Court Judgments No. 14 and No. 15 of 2023** *Anna Santamaria, MD*; Simone La Torre, MD; Giuseppe Rinaldi, MD; Miriam Solenne, MD; Valentina Milone, MD; Jeannet Cappitelli, MD*
11:30 am – 1:00 pm	**G4**	**Transnational Investigations on Encrypted Platforms: The Italian Experience** *Donatella Curtotti, PhD*; Vittorio Rizzi; Giuseppe Giliberti; Wanda Nocerino, PhD*

Morning Session

Moderator: Mary Izadi, JD

8:30 am – 8:55 am	**G5**	**Strategic Opportunities to Advance Forensic Science in the United States: A Path Forward Through Research and Standards** *Henry Swofford, PhD**
8:55 am – 9:15 am	**G6**	**Communicating Forensic Findings** *Sandra Koch, PhD*; John Paul Jones, MBA**
9:15 am – 10:00 am	**G7**	**Black-Box and Other Forensic Decision Analysis Studies: Understanding Limitations and Criticisms** *R. Austin Hicklin, PhD*; Nicole Richetelli, PhD*; JoAnn Buscaglia, PhD**
10:00 am – 10:20 am		**BREAK**

Moderator: Michele Vaira, JD

10:20 am – 10:40 am	**G8**	**Standards Use in Legal Proceedings and Primers for Officers of the Court** *John Paul Jones, MBA*; Dana Delger, JD**
10:40 am – 11:00 am	**G9**	**Direct-to-Stakeholders: One State's Centralized Effort to Improve Crime Laboratory Record Discovery and Increase Transparency in Forensic Science** *Leigh Tomlin, JD*; Kevin Callahan, MS*
11:00 am – 11:30 am	**G10**	**When Are Opinions "Based on My Training and Experience" (BOMTAE) Reliable—And How Can You Show It?** *Colin Bellair, JD*; Pate Skene, PhD**
11:30 am – 1:00 pm		**BREAK**

NIST DNA Studies Findings

Moderator: Michele Vaira, JD

1:00 pm – 1:30 pm	**G11**	**DNA Human Factors Study** *Melissa Taylor, BA**
1:30 pm – 2:00 pm	**G12**	**DNA Mixture Interpretation Foundation Study** *John Butler, PhD**

Activity-Level Propositions and TTRP

Moderator: Charlotte Word, PhD

2:00 pm – 2:45 pm	**G13**	**How Should DNA Analysts Answer the "How" Questions? Pitfalls and Recommendations for Evaluations of DNA Results Given Activity-Level Propositions** *Lynn Garcia, JD**
2:45 pm – 3:00 pm		**BREAK**
3:00 pm – 4:00 pm	**G14**	**Bridging the Knowledge Gap on DNA-TPPR in the American Court System** *Clinton Hughes, JD*; John Schmid, JD**
4:00 pm – 4:15 pm		**Q&A Discussion: ALP and TTRP**
4:15 pm – 4:30 pm		**BREAK**

DNA Evidence Disclosure and Communication

Moderator: Paul Messner, JD

4:30 pm – 4:50 pm	**G15**	**Communicating Complex Topics in Forensic DNA Through Data and Process Visualization** *Nathaniel Adams, BS*; Dan Krane, PhD*
4:50 pm – 5:30 pm	**G16**	**DNA's Value as Evidence for the Accused: Increasing the Awareness of Potentially Favorable Evidence in DNA Casework** *Joseph Cavise, JD*; Nicolas Hughes, JD*; Jessica Goldthwaite, JD; Allison Lewis, JD*

Friday – Session I

Morning Session

Moderator: Danielle Ruttman, JD

8:30 am – 9:10 am	**G17**	**Validation** *Erin Forry, MS*; Melissa Taylor, BA*; Robert Ramotowski, MSFS**
9:10 am – 9:40 am	**G18**	**Firearm Examination Foundation Study** *Theodore Vorburger, PhD*; Steven Lund, PhD**
9:40 am – 10:00 am		**BREAK**

*Presenting Author

Moderator: J.D. Schmid, JD

10:00 am – 10:45 am	**G19**	**The False Promise of Firearms Examination Validation Studies: Lay Controls, Simplistic Comparisons, and the Failure to Soundly Measure Misidentification Rates** *Richard Gutierrez, JD*; Emily Prokesch, JD**
10:45 am – 11:30 am	**G20**	**Exploring New Approaches to Reporting Inconclusive Decisions in Firearm and Toolmark Comparison** *Lynn Garcia, JD*; Henry Swofford, PhD*
11:30 am – 1:00 pm		**BREAK**

Afternoon Session

Moderator: Robert Taylor, Jr., JD

1:00 pm – 1:45 pm	**G21**	**A Collaborative Approach to Informing the Adoption of Trustworthy AI in Forensic Science and Legal Proceedings** *Melissa Taylor, BA*; Dana Delger, JD; Henry Swofford, PhD; Niki Osborne, PhD*
1:45 pm – 2:10 pm	**G22**	**Overcoming Unscientific Opposing Arguments Using Relevant Data** *Jennifer Bracamontes, MS*; William Allan, MASc; Mark Perlin, MD, PhD*
2:10 pm – 2:30 pm	**G23**	**Data Transparency in Probabilistic Genotyping Validation Studies** *Nathaniel Adams, BS*; Dan Krane, PhD*
2:30 pm – 2:45 pm		**BREAK**

Moderator: Mary Dayton, JD Co-Moderator: Colin Bellair, JD

2:45 pm – 3:30 pm	**G24**	**AI and Black-Box Algorithms, Wrongful Conviction Risks, and the Importance of Access to Evidence** *Mitha Nandagopalan, JD**
3:30 pm – 4:15 pm	**G25**	**Litigating AI-Generated Child Sex Abuse Material: Technical and Legal Challenges** *Marc Canellas, PhD**
4:15 pm – 4:30 pm		**BREAK**
4:30 pm – 5:30 pm	**G26**	**A Few Common Misconceptions in AI** *Jeffrey Holmes, JD**

Friday – Session II

Morning Session

Moderator: Ashfaq Kharal, PhD

8:30 am – 9:00 am	**G27**	**Confronting the Confrontation Clause** *Raymond Valerio, JD*; Ray Wickenheiser, DPS*
9:00 am – 9:30 am	**G28**	**What Experts and Attorneys (and Hopefully Judges) Need to Know About the New Federal Rule of Evidence 702** *Donald Shelton, JD**
9:30 am – 10:00 am	**G29**	**The Conclusion May Not Be As It Appears: Does Your Evidence Interpretation Address the Right Question?** *Jack Hietpas, PhD*; JoAnn Buscaglia, PhD*; Danica Ommen, PhD; Janean Hanka, MS; Christopher Saunders, PhD*

Moderator: Gail Groy, JD

10:00 am – 10:15 am		**BREAK**
10:15 am – 10:40 am	**G30**	**Reevaluating the Current State of Forensic Accreditation in the United States** *Brian Gestring, MS**
10:40 am – 11:00 am	**G31**	**Footwear and Tire Impression Exam Foundation Study** *Kelly Sauerwein, PhD**
11:00 am – 11:30 am	**G32**	**The Accuracy of Cadaver Dogs to Detect Human Residual Odor in a Scientific Test: Implications for the Courts** *Dawnie Steadman, PhD*; Mary Cablk, PhD*; Shawn Campagna, PhD*; James Ha, PhD*; Mary Davis, MS; Zane Vickery, BS; Hector Castro, PhD; Katarina Jones, PhD*

ODONTOLOGY

Thursday

Poster Session

11:30 am – 1:00 pm	**H1**	**Diagnostic Omission in Radiology of Odonto-Stomatological Structures: Who Is Responsible? A Case Report and Review of Jurisprudence** *Giulia Vitale, DMD*; Ilenia Bianchi, PhD; Vilma Pinchi, PhD; Francesco Pradella, MD, DMD*
11:30 am – 1:00 pm	**H2**	**Positive Identification Using Photographic Facial Superimposition in a 20-Year-Old Cold Case** *Elizabeth Smith, DDS**
11:30 am – 1:00 pm	**H3**	**Optimizing Mass Fatality Operations: The Synergy of Technology and Forensic Odontology** *Khlea Sumani, DMD*; Amanda Alvarez Wright, MPA**

Morning Session I

Moderator: Victoria McGowen, DMD Co-Moderator: Sarah Friend, DDS

8:30 am – 9:00 am	**H4**	**Recent Advances in Forensic Odontology Standards** *Kenneth Aschheim, DDS**
9:00 am – 9:20 am	**H5**	**A Comparison of the Plaster Model and the Digital Dental Scan in the Analysis of Palatal Rugae** *Federica Mele, MD*; Laura Roselli, DDS; Carmela Suriano, MD; Roberto Catanesi, MD; Massimo Petruzzi, PhD; Valeria Santoro, PhD*
9:20 am – 9:40 am	**H6**	**Animal Bitemarks** *Megha Shah, DDS**
9:40 am – 10:00 am	**H7**	**Teeth as the Sole Identifier of Heavily Challenged Ajnala Skeletal Remains: A Multifaceted Approach** *Jagmahender Singh Sehrawat, PhD**
10:00 am – 10:10 am		**BREAK**

Morning Session II

Moderator: Lindsay Spears, DDS Co-Moderator: Iliana Saavedra, DDS

10:10 am – 10:40 am	**H8**	**Transforming Forensic Odontology: Unlocking the Power of Artificial Intelligence (AI) and Augmented Intelligence (AuI) for Dental Identification** *Kenneth Aschheim, DDS*; Itai Rosenblatt, BS*
10:40 am – 11:00 am	**H9**	**Research Dynamics in the Application of Mandibular Radiometric Dimensions for Sex and Age Estimation Using Different Radiological Modalities: A Bibliometric Analysis** *Jagmahender Singh Sehrawat, PhD*; Shria Sharma, MS; Shubham Thakur, MS*
11:00 am – 1:00 pm		**BREAK**

ODONTOLOGY

Afternoon Session I

Moderator: Walter F. Zoller, DMD

Co-Moderator: Heather Kilpatrick, DMD

1:00 pm – 1:20 pm	**H10**	**From Inside to Outside or Vice Versa? An In Vitro Study on the Deposition of Substances of Abuse in Dental Tissues** *Ilenia Bianchi, PhD*; Emma Croce, MS; Alexandra Dimitrova, RF; Federica Gelli, DMD; Martina Focardi, MD; Annalisa Ugolini; Fabio Vaiano, PhD; Guido Mannaioni, PhD; Vilma Pinchi, PhD*
1:20 pm – 1:50 pm	**H11**	**An Evaluation of Degradation Pattern of Different RNA Types and Gene Expression in Human Dental Pulp Tissue Under Varied Temperatures and Storage Time Intervals** *Shalini Gupta, PhD**
1:50 pm – 2:20 pm	**H12**	**Teeth as Indicators of the Late Postmortem Interval (PMI): A Method Based on Histomorphological Changes of Dental Pulps and the Integrity of the Odontoblastic DNA** *Ilenia Bianchi, PhD*; Annalidia Seclì, DMD; Martina Focardi, MD; Laura Calosi, MS; Daniele Bani, PhD; Vilma Pinchi, PhD*
2:20 pm – 2:30 pm		BREAK

Afternoon Session II

Moderator: Ashley Epperly, DDS

Co-Moderator: Julie Wallace, DDS

2:30 pm – 3:00 pm	**H13**	**Advancements in Forensic Odontology: Enhancing Medicolegal Death Investigations Through Technology and Collaboration** *Khlea Sumani, DMD*; Amanda Alvarez Wright, MPA**
3:00 pm – 3:20 pm	**H14**	**The Use of Self-Portrait Photographs (Selfies) for Dental Identification: A Pilot Study** *Larisa Saracevic, MS*; Satu Valoriani, PhD; Matteo Borrini, PhD*
3:20 pm – 3:40 pm	**H15**	**Forensic Odontology in Mass Disaster Victim Identification: The Surfside Condominium Collapse Case Study** *Steven Lanster, DMD**

Afternoon Session III

Moderator: Elif Aksoylu, DMD

Co-Moderator: Christine Mason, DD

4:00 pm – 4:30 pm	**H16**	**A Machine Learning-Assisted Combination of Skeletal and Dental Methods for Age Estimation in Subadults** *Ilenia Bianchi, PhD*; Giorgio Oliva; Giulia Vitale, DMD; Francesco Pradella, MD, DMD; Martina Focardi, MD; Vilma Pinchi, PhD*
4:00 pm – 4:30 pm	**H17**	**Can Standard Forensic Processing Practices Alter Dental Age Estimation Markers?** *Joe Adserias-Garriga, PhD*; Cheyenne Hindman, MS; Luis Cabo, MS*

PATHOLOGY/BIOLOGY

Wednesday

Poster Session

11:30 am – 1:00 pm	**I1**	**A Decomposition Scoring System for Indoor Death Scenes** *David Carter, PhD*; Audrey Pilar, BS; Marlon Francisco, BS; Bratt Katherine, BS; Carter Charlotte, MS; Alexis Peterson, BA*
11:30 am – 1:00 pm	**I2**	**Temperature Variation in Marquette, Michigan, in Relation to Protein Degradation Patterns for Postmortem Interval Determination** *Julia Emery, BS*; Josh Sharp, PhD; Jane Harris, PhD; Evan Pratt, PhD*
11:30 am – 1:00 pm	**I3**	**An Analysis of the Sequencing Quality of Next-Generation Sequencing for the Entire Mitochondrial Genome in Decomposed Human Samples** *Moon-Young Kim, MD, PhD*; Seung Eun Lee, MS; Ga Eun Kim, MS; Dong Yeon Lee, BS; Hajin Kim, PhD*
11:30 am – 1:00 pm	**I4**	**The Effect of Decomposition on Recovery of DNA Evidence and Its Subsequent Impact on Identification** *Kathryn Melançon*; Katelyn Bolhofner, PhD; Jonathan Parrott, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**I5**	**Immersion Deaths in Seoul, a City With a River: The Implication of Decomposition in the Diagnosis of Drowning** *Dong Yeon Lee, BS*; Hajin Kim, PhD; Soong Deok Lee, MD, PhD; Moon-Young Kim, MD, PhD*
11:30 am – 1:00 pm	**I6**	**Animal Predation Versus Scavenging in Medicolegal Death Investigations** *Erika Poole; Hannah Jarvis, MRCS**
11:30 am – 1:00 pm	**I7**	**The Changes in Cuticular Hydrocarbon Profiles of a Single Blow Fly Species as a Function of Developmental Stage and Preservation Method** *Alexander Jutila, BS*; William Shirley, BS; Ruth Waddell Smith, PhD*
11:30 am – 1:00 pm	**I8**	**Disguising Decomposition: Attempted Concealment and the Insects Associated With Remains in Criminal Investigations** *Krystal Hans, PhD**
11:30 am – 1:00 pm	**I9**	**A Developmental and Genomic Study to Strengthen Forensic Entomology Baseline Data** *Jonathan Parrott, PhD*; Alexandier Brossia, BS; Gracie Thompson, BS*
11:30 am – 1:00 pm	**I10**	**WITHDRAWN**
11:30 am – 1:00 pm	**I11**	**Bulletproof Heart: Defying the Odds With an Embedded Remote Projectile** *Nahimarys Colón Hernández, MD*; Tatyana Zinger, DO; Kristinza Giese, MD*
11:30 am – 1:00 pm	**I12**	**Severe Acute Myocardial Injury Associated With Heat-Related Illness** *Biliana Mileva, MD*; Metodi Goshev, MD, PhD; Tihomir Dikov, MD; Milena Velizarova, MD, PhD; Vesela Ivanova, MD, PhD*
11:30 am – 1:00 pm	**I13**	**Unlocking the Mystery Behind Sudden Cardiac Death: A Case Series** *Grazia Giulia Pantè, MD*; Martina Francaviglia, MD*; Maria Paola Pinacchi, MD*; Federica Ministeri, MD*

11:30 am – 1:00 pm	**I14**	**An Assessment of Myocardial Ischemia Using Coronary Postmortem Computed Tomography Angiography Based on the Voronoi Algorithm: A Case Report** *Haruki Fukuda, MD, PhD*; Hiroyuki Tokue, MD, PhD; Akira Hayakawa, MD, PhD; Yoshihiko Kominato, MD, PhD; Rie Sano, PhD*
11:30 am – 1:00 pm	**I15**	**Broken Heart Syndrome: Can an Argument Kill?** *Martina Francaviglia, MD*; Grazia Giulia Pantè, MD*; Maria Paola Pinacchi, MD*; Fabrizio Vanaria, MD*
11:30 am – 1:00 pm	**I16**	**The Impact of a Cardiac Surgery Scar on Heart Rupture Following a Fall From Height: A Case Report** *Biancamaria Treves, MD*; Alessandro Ghamlouch, MD; Fabio Del Duca, MD; Gabriele Napoletano, MD*
11:30 am – 1:00 pm	**I17**	**The Medicolegal Implications of Atrial Fibrillation Ablation Complications and Their Management** *Gabriele Napoletano, MD*; Alessandro Ghamlouch, MD; Biancamaria Treves, MD; Fabio Del Duca, MD*
11:30 am – 1:00 pm	**I18**	**A Case of Suicide by Sodium Nitrite and Dimethyl Sulfoxide Ingestion** *Yoo Min Ahn, DO*; Grant Herndon, DO*
11:30 am – 1:00 pm	**I19**	**Fatal Occupational Exposure to Hydrogen Sulfide: A Case Report Emphasizing the Need for Differential Diagnosis** *Romina Malerba, MD; Alejandro Partida Contreras, MD*; Adam Gonzalez, MD; Mario Rascon, MD*
11:30 am – 1:00 pm	**I20**	**Synthetic Cannabinoids and Sudden Death** *Edward Quan, BA*; Tatiana Bihun, MD; Joseph Prahlow, MD; Nina Sadigh, MD; Timothy Wysozan, MD; Prentiss Jones, PhD; David Halperin, MD; Sarah Riley, PhD*
11:30 am – 1:00 pm	**I21**	**Heat Shock Proteins (HSPs) Expression in Cocaine-Related Deaths: A Systematic Review** *Francesco Carpano, MD*; Diego Moro, MD; Giovanni Gurgoglione, MD; Isabella Di Marzo Polzi, MD; Elena Giacani, MD; Roberta Bibbò, MD*
11:30 am – 1:00 pm	**I22**	**Accidental Vehicular Carbon Monoxide Fatalities: A Ten-Year Review** *Bethany Bless, MS*; Nichole Miller, BS; Hannah Jarvis, MRCS*

Thursday

Poster Session

11:30 am – 1:00 pm	**I23**	**A Survival Analysis Based on a Forensic Investigation of Motorcycle Road Traffic Accidents in the Athens Metropolitan Area During 2021–2023** *Emmanouil Sakelliadis, PhD*; Dimitrios Kouzos, MD; Konstantinos Katsos, PhD; Ioannis Papoutsis, PhD; Artemisia Ntona, PhD; Nikolaos Georgiadis, MS; Theodoros Sergentanis, PhD; Chara Spilopoulou, MD, PhD*
11:30 am – 1:00 pm	**I24**	**The Forensic Utility of Botany in Railway Accident Cases** *Maria Cristina Verrina, MD*; Matteo Antonio Sacco, MD*; Saverio Gualtieri, MD*; Fabrizio Cordasco, MD, PhD; Raffaele Gangale, MD; Wandamaria Mazzuca; Isabella Aquila, MD, PhD**

PATHOLOGY/BIOLOGY

11:30 am – 1:00 pm	**I25**	**A Differential Diagnosis Between Acute Mechanical Asphyxia and Fatal Arrhythmia During Law Enforcement Restraint** *Andrea Costantino, MD*; Marta Guerini, MD*; Beatrice Defraia, MD; Silvio Chericoni, PhD; Martina Focardi, MD*
11:30 am – 1:00 pm	**I26**	**Five Types of Hepatic Lacerations: Can You See the Difference?** *Angela Colucci, MD*; Enrica Macorano, MD; Giovanni De Gabriele, MD; Alessandro Cristalli, MD; Sara Di Trani, MD; Antonio Marzaioli, MD; Gerardo Cazzato, MD, PhD; Francesco Introna, MD, PhD*
11:30 am – 1:00 pm	**I27**	**"Terminal Burrowing" and Paradoxical Undressing: A Case Series Representing Lethal Hypothermia** *Biliana Mileva, MD*; Alexander Alexandrov, MD, PhD; Mihaela Georgieva, MD; Tihomir Dikov, MD; Martina Valcheva, MD; Metodi Goshev, MD, PhD; Vesela Ivanova, MD, PhD*
11:30 am – 1:00 pm	**I28**	**An 18-Year Review of Decedents Recovered From the Mississippi River and Associated Tributaries at the West Tennessee Regional Forensic Center** *Annie Addison, BA*; Danielle Harrell, DO*
11:30 am – 1:00 pm	**I29**	**Overkill: A Case Series Analysis by Detailed Body Examination, Crime Scene Investigations, and Criminological Characterization** *Chiara Fabrello, MD*; Diego Moro, MD; Maria Antonella Bosco, MD; Giovanni Pollice, MD; Claudia Angela Damato, MD; Raffaella Campagna, MD*
11:30 am – 1:00 pm	**I30**	**Understanding the Phenomenon of Overkill: An Analysis of Eight Cases From Southern Italy** *Ilaria Fracassi, MD*; Alessandro Feola, MD, PhD; Federica Cascone, MD; Mariavictoria De Simone, MD; Paolo Palermo, MD; Filomena Casella, MD; Pasquale Giugliano, MD; Anna Carfora, PhD; Carlo Pietro Campobasso, MD, PhD*
11:30 am – 1:00 pm	**I31**	**Sudden Deaths in Athletes: The Role of Autopsy in a Literature Review** *Jasmine Calafiore, MD*; Matteo Antonio Sacco, MD*; Fabrizio Cordasco, MD, PhD*; Saverio Gualtieri, MD; Raffaele Gangale, MD; Pietrantonio Ricci, MD, PhD; Isabella Aquila, MD, PhD**
11:30 am – 1:00 pm	**I32**	**Fatalities Caused by Elapids and Viperids: A Critical Analysis of Cases Coming to a Tertiary Care Center** *Nilesh Tumram, MD**
11:30 am – 1:00 pm	**I33**	**Suicide Analysis in India: Causes, Trends, and Forensic Implications** *Ashish Saraf, MD; Navneet Ateriya, MD**
11:30 am – 1:00 pm	**I34**	**An Autopsy of a Patient With Schizophrenia and Compulsive Eating: A Case Report Highlighting Choking Risks in Psychiatric Patients** *Bethany Faust, MD*; Harry Sanchez, MD; Na Niu, MD, PhD*
11:30 am – 1:00 pm	**I35**	**A Forensic Analysis of a Carbonization in a Complex Case of Dubious Suicide** *Matteo Antonio Sacco, MD*; Saverio Gualtieri, MD*; Fabrizio Cordasco, MD, PhD; Lucia Tarda, MD; Santo Gratteri, MD; Isabella Aquila, MD, PhD**
11:30 am – 1:00 pm	**I36**	**May–Thurner Syndrome: A Case Report of an Undiagnosed Left Iliac Vein Thrombosis** *Alessandro Ghamlouch, MD*; Fabio Del Duca, MD; Gabriele Napoletano, MD; Biancamaria Treves, MD*
11:30 am – 1:00 pm	**I37**	**The Eyewear Suicide: A Rare Case of Suicide Caused by the Inhalation of Homemade Hydrogen Sulfide** *Annachiara Vinci, MD*; Paolo Visci, MD; Maurizio Mastrapasqua, MD; Vito Maria Goffredo, MD; Davide Ferorelli, MD; Alessandro Dell'Erba, MD, PhD*

11:30 am – 1:00 pm	**I38**	**The Strange Case of Cable Ties: Suicide or Murder?** *Sara Di Trani, MD*; Enrica Macorano, MD; Giovanni De Gabriele, MD; Alessandro Cristalli, MD; Antonio Marzaioli, MD; Angela Colucci, MD; Matilde Talamo, MD; Francesco Introna, MD, PhD*
11:30 am – 1:00 pm	**I39**	**Death by Self-Inflicted Captive Bolt Device** *Breanna Cuchara-Blagmon, MS*; Francisco Diaz, MD; Lakshmanan Sathyavagiswaran, MD*
11:30 am – 1:00 pm	**I40**	**Suicide by Knitting Needle—An Ambiguous Method of Self-Inflicting Fatal Heart Injuries: A Case Report** *Filippo Bolzan, MD*; Michela Peruch, MD; Maria Buffon, MD; Riccardo Addobbati, MD, PhD; Pier-Riccardo Bergamini, MD; Davide Radaelli, MD, PhD*

Thursday – Session I

Omics Approaches in Forensic Taphonomy

Moderator: Noemi Procopio, PhD — Co-Moderator: Lavinia Iancu, PhD

8:00 am – 8:30 am	**I41**	**A Decade of "Omics" in Forensic Science From Lab to Court: Where Are We Standing, Where Are We Going?** *Noemi Procopio, PhD**
8:30 am – 8:50 am	**I42**	**The Impact of Heroin on Thanatomicrobiome and the Postmortem Interval** *Christina Harris*; Gulnaz Javan, PhD*; Sarah Shado, MScFS; Silvia Visonà, PhD*
8:50 am – 9:10 am	**I43**	**Investigating Flunitrazepam's Influence on Calliphora Vicina (Diptera: Calliphoridae) Growth and Its Impact on Microbiome Diversity** *Lavinia Iancu, PhD*; Noemi Procopio, PhD; Andrea Bonicelli, PhD; Ranjana Mosby, BS*
9:10 am – 9:30 am	**I44**	**Microbial Succession of Necrophagous Beetles and Soil During Small Carcass Decomposition: Potential Uses in Understanding Body Translocation Scenarios** *Kelly Waters, BS*; Anthony Grigsby, MS; Bethany Mikles, MS; Jennifer Pechal, PhD; Mark Benbow, PhD*
9:30 am – 9:50 am	**I45**	**Differential Biochemical Decomposition in Single and Mass Grave Deposition** *Andrea Bonicelli, PhD*; Nengi Ogbanga, PhD; Danny Wescott, PhD; Timothy Gocha, PhD; Hayley Mickleburgh, PhD; Noemi Procopio, PhD*
9:50 am – 10:10 am	**I46**	**A Metabolomic Regression Model for PMI Estimation on Human Pericardial Fluid** *Alberto Chighine, MD*; Matteo Stocchero, PhD; Giulio Ferino, PhD; Fabio De-Giorgio, MD, PhD; Matteo Nioi, MD; Ernesto d'Aloja, MD, PhD; Emanuela Locci, PhD*
10:10 am – 10:30 am	**I47**	**Estimation of the Postmortem Interval in Human Vitreous Humor by Infrared Spectroscopy** *Eva Montanari, PhD*; Angelo Montana, MD, PhD*; Francesco Paolo Busardò*
10:30 am – 11:00 am	**I48**	**Why "Novel PMI Estimation Methods" Are Rarely Applied in Forensic Routine: An Example on a Decade of Research on Postmortem Protein Degradation** *Stefan Pittner, PhD*; Peter Steinbacher, PhD; Fabio Monticelli, PhD*
11:00 am – 11:30 am		**Discussion and Q&A**
11:30 am – 1:00 pm		**BREAK**

PATHOLOGY/BIOLOGY

Entomology and Ecology

Moderator: David Carter, PhD — Co-Moderator: Andrea Bonicelli, PhD

1:00 pm – 1:20 pm	**I49**	**Closing the Divide: Evaluating the Discrepancy in Forensic Entomology Research and Casework Needs** *Lauren Weidner, PhD**
1:20 pm – 1:40 pm	**I50**	**Who Let the Dogs Out? A Comparison of Antemortem and Postmortem Canine Activity** *Alyssa Byrd, MD*; Meredith Frank, MD; James Caruso, MD; Ian Puffenberger, MD; Sterling McLaren, MD*
1:40 pm – 2:00 pm	**I51**	**Impacts of Vertebrate Scavenging on Blow Fly Oviposition on Human Remains** *Hayden McKee-Zech, PhD*; Erin Patrick, MS; Charity Grace Owings, PhD; Dawnie Steadman, PhD*
2:00 pm – 2:20 pm	**I52**	**Morphometric Analysis of Posterior Spiracles for Species Identification of Necrophagous Third Instar Larvae** *Tae Mo Kang, PhD*; Zi Yan Liu, BA; Kwang Soo Ko, MA; Seong Hwan Park, MD, PhD*
2:20 pm – 2:40 pm	**I53**	***Lucilia Mexicana* and Its Population Structure in Texas** *Cesar Cantu, BS*; Rachel Houston, PhD; Christopher Randle, PhD; Sibyl Bucheli, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
2:40 pm – 3:00 pm	**I54**	**Visualizing and Clustering the Species in the Mixture of Pollen Flow Cytometry** *Slun Booppasiri, MS*; Matthieu Baudelet, PhD; Jack Trimble, BS; Larry Tang, PhD*
3:00 pm – 3:20 pm	**I55**	**A Comparison of Drying Characteristics of Insect Stains and Human Bloodstains** *David Rivers, MD, PhD*; Tyler Vega, BA*
3:20 pm – 3:40 pm		**Discussion and Q&A**

New Technologies and Imaging to Improve Forensic Investigations

Moderator: Lorenzo Gitto, MD — Co-Moderator: Simone Grassi, MD

3:40 pm – 4:00 pm	**I56**	**Optimizing Efficiency: Evaluating the Role of Limited Examination in Non-Suspicious Deaths Outside the Residence** *Riley Lochner, MD*; Si Gao, MS; Pramod Gumpeni, MD*
4:00 pm – 4:20 pm	**I57**	**An Application of 3D Virtual Animation in Complicated Suicide Scenarios: A Multidisciplinary Approach to Forensic Investigations** *Monica Concato, MD*; Massimiliano Gori, BS; Luca De Rosa, BS; Simone Danesin, BS; Francesco Camana, PhD; Stefano D'Errico, PhD*
4:20 pm – 4:50 pm	**I58**	**Enhancing Medicolegal Death Investigations: The Successful Adoption of Postmortem Computer Tomography (PMCT) Technology at the Institute of Forensic Sciences in Puerto Rico** *Paola Luna, MD*; Meisshialette Ortiz, MS*; Maria Conte, MD; Irma Rivera, MD*
4:50 pm – 5:10 pm	**I59**	**WITHDRAWN**

PATHOLOGY/BIOLOGY

Thursday – Session II

Case Studies and Reviews—Part 1

Moderator: Nicole Croom, MD, MPH Co-Moderator: Simone Grassi, MD

8:30 am – 8:50 am	**I60**	**Bayou Blues: Unraveling Mysteries of the Murky Depths of the Houston Bayou System** *Daniel Taylor, MD*; Si Gao, MS; Ana Lopez, MD*
8:50 am – 9:10 am	**I61**	**Non-Traumatic Companion Cases: A Ten-Year Review and Examination of Investigative and Autopsy Findings** *Hannah Jarvis, MRCS*; Nichole Miller, BS; Bethany Bless, MS*
9:10 am – 9:30 am	**I62**	**A Meeting With Death: How Medical Examiner/Coroner Offices Can Help Support the Surveillance of Respiratory Illnesses** *Savannah Hardin, MPH*; Christopher Gulledge, MD; Rachel Franklin, MPH*
9:30 am – 9:50 am	**I63**	**When Lightning Strikes! A 22-Year Review of Fatalities in Houston, Texas, and New York City** *Hannah Jarvis, MRCS*; Gregory Dickinson, MD*
9:50 am – 10:10 am	**I64**	**Foreign Matter and Surgery: A Forensic Approach to Identification and Source Determination** *Christopher Palenik, PhD**
10:10 am – 10:30 am	**I65**	**Did George Floyd Die of Cardioinhibition From Pressure on His Neck?** *Victor Weedn, MD, JD*; Pete Speth, MD; Alon Steinberg, MD*
10:30 am – 11:00 am		**Discussion and Q&A**
11:00 am – 1:00 pm		**BREAK**

Multidisciplinary Session: Pathology/Biology and Toxicology

Moderator: Gregory Schmunk, MD Co-Moderator: Rebecca Hartman, PhD

1:00 pm – 1:15 pm	**L47**	**Two Fatalities Involving Hydroxychloroquine** *Teresa Gray, PhD*; Jennifer Ross, MD; Marianne Beynon, MD*
1:15 pm – 1:30 pm	**L48**	**An Unexpected Fatal Methadone Ingestion in a Child** *Jordan Taylor, MD**
1:30 pm – 1:45 pm	**L49**	**A Toxicological and Pathological Re-Evaluation of Media-Reported Mitragynine (Kratom) Deaths in Florida** *Marilyn Huestis, PhD*; Karl Williams, MD*
1:45 pm – 2:00 pm	**L50**	**Endogenous Carbon Monoxide Due to Hemolytic Anemia: A Forensic Red Herring** *Orianna Thomas, MSFS*; Sandra Bishop-Freeman, PhD*
2:00 pm – 2:15 pm	**I66**	**Drug-Related Deaths in the Elderly: A Five-Year Overview of Western Michigan** *Abigail Grande, MPH*; Gemma Harkin, MPH; Bo Collins, MPH; Amanda Fisher-Hubbard, MD*
2:15 pm – 2:30 pm	**I67**	**Fatal Intoxications vs. Congenital Cardiac Disorders in Sudden Death: Where to Draw the Line?** *Simone Grassi, MD*; Alexandra Dimitrova, RF; Fabio Vaiano, PhD; Vincenzo Arena, MD; Oscar Campuzano, MD; Sabina Strano Rossi, PhD; Ramon Brugada, MD; Antonio Oliva, MD, PhD*

*Presenting Author

2:30 pm – 2:45 pm	**I68**	**Illicit Drug Deaths in Decedents Over 60 Years of Age in the City and County of San Francisco From 2020 to 2024** *Ellen Moffatt, MD*; Luke Rodda, PhD; Anson Tsang, MS*
2:45 pm – 3:00 pm	**I69**	**Sodium Azide/Nitrite Suicides in the Netherlands Between 2015 and 2022** *Karen van den Hondel, PhD*; Dominique van Pelt, MS; Lizanne Schweren, PhD; Manon Ceelen, PhD*
3:00 pm – 3:15 pm	**I70**	**Fatal Drug Intoxication in the Pediatric Population of El Paso, Texas** *Romina Malerba, MD; Alejandro Partida Contreras, MD*; Adam Gonzalez, MD; Mario Rascon, MD*

Friday

Poster Session

11:30 am – 1:00 pm	**I71**	**A Multicentric Study on Forensic Investigation of Bodies Exposed to Fire: The Importance of an Interdisciplinary Approach** *Enrica Callegari, MD*; Gennaro Baldino, MD; Guido Viel, MD, PhD; Giovanni Cecchetto, MD, PhD; Margherita Neri, MD, PhD; Antonio Oliva, MD, PhD; Elvira Ventura Spagnolo, MD*
11:30 am – 1:00 pm	**I72**	**Fire and Blood: Homicide With Combined Sharp Force Injury and Carbonization** *Benedetta Baldari, MD, PhD*; Gianluca Piras, MD; Anna Maria Manta, MD; Valentina Milone, MD; Roberta Bibbò, MD; Luigi Cipolloni, MD, PhD*
11:30 am – 1:00 pm	**I73**	**Models of Autopsy Techniques Compared in the Era of Minimally Invasive Techniques** *Saverio Gualtieri, MD*; Maria Chiara Militi*; Matteo Antonio Sacco, MD*; Fabrizio Cordasco, MD, PhD; Pietro Tarzia, MD; Raffaele Gangale, MD; Pietrantonio Ricci, MD, PhD; Isabella Aquila, MD, PhD*
11:30 am – 1:00 pm	**I74**	**The Role of Forensic Anthropology and Radiography in Supporting Identifications in a Medical Examiner's Office** *Amy Joy Spies, PhD*; Kaitlyn Fulp, MA; Katelyn Bolhofner, PhD; Christen Eggers, MS; Laura Fulginiti, PhD, PhD*
11:30 am – 1:00 pm	**I75**	**The Suicide: An Experimental Study of the Expression of the Neurotrophic Factors BDNF and GDNF in the Brain of Subjects Who Died by a Suicidal Act** *Stefania De Simone, MD, PhD*; Luigi Cipolloni, MD, PhD*; Maria Antonella Bosco, MD; Margherita Neri, MD, PhD; Santina Cantatore; Francesca Consalvo, MD, PhD*
11:30 am – 1:00 pm	**I76**	**A Postmortem Diagnosis of Bloodborne Infectious Diseases Using Point-of-Care Test Kits** *Ga Eun Kim, MS*; Dong Yeon Lee, BS; Eun-Byoul Jung, BS; oon-Young Kim, MD, PhD*
11:30 am – 1:00 pm	**I77**	**It's a ME...MA! When Genetics Is the Actual Cause of Death** *Damiano Marchesini, MD*; Marida Imbriani, MD; Gianluca Piras, MD; Benedetta Baldari, MD, PhD*
11:30 am – 1:00 pm	**I78**	**The Application of Intracerebral Aquaporin-4 (AQP4) Expression in Differential Diagnosis of Drowning: An Immunohistochemical Study Related to the Timing of the Autopsy** *Elena Giacani, MD*; Francesco Carpano, MD; Jeannet Cappitelli, MD; Anna Santamaria, MD; Fiorenzo D'Abate, MD; Stefania De Simone, MD, PhD*

PATHOLOGY/BIOLOGY

11:30 am – 1:00 pm	**I79**	**The Essential Role of Genetic Analysis in Sudden Cardiac Death: Advancing Molecular Autopsies and the Potential for Preventive Screening** *Gabriella Maisetta, MD*; Chiara Ariani, MD; Julia Lazzari, MD; Ilaria Marcacci, MD; Rebecca Pieretti, MD; Martina Modena, PhD; Andrea Scatena, MD; Marco Di Paolo, MD*
11:30 am – 1:00 pm	**I80**	**Extra-Articular Gout Deposits Can Be Clinically Significant and Contribute to Death** *Ellen Moffatt, MD*; Stephany Fiore, MD*
11:30 am – 1:00 pm	**I81**	**Digital Pathology in Education: Shaping Career Choices and Recruitment Strategies in Forensic Pathology** *Nahimarys Colón Hernández, MD**
11:30 am – 1:00 pm	**I82**	**A Fatal Citrobacter-Induced Meningitis Complicated With Pneumocephalus in an Infant: A Case Report** *Stefano Di Maria, MD*; Raffaella Vetrini, MD; Tommaso Livieri, MD; Michela Peruch, MD; Calogero Cuttaia, MD; Matteo Bolcato, MD*
11:30 am – 1:00 pm	**I83**	**Death After Spontaneous Splenic Rupture in a Newborn Child With Severe Hemophilia A Caused by De Novo Mutation: A Case Report With Literature Review** *Andrea Cisternino, MD*; Silvia Visonà, PhD; Gulnaz Javan, PhD; Nicolas Martinelli, MD; Yao Chen, MD*
11:30 am – 1:00 pm	**I84**	**Fatal Neonatal Herpes Simplex Virus Infection** *George Kostanian, MD*; Julie Schrader, DO*
11:30 am – 1:00 pm	**I85**	**Sudden Pediatric Death: The Lethal Intersection of Influenza and Hypoplastic Coronary Artery Disease** *Ruben Alberto Hiraldo, MD*; Tatyana Zinger, DO; Renu Virmani, MD*
11:30 am – 1:00 pm	**I86**	**The Occasional and Rare Finding of Choroid Plexus Papilloma in the Cerebellopontine Angle in an Infant: A Case Report** *Vito Maria Goffredo, MD*; Maurizio Mastrapasqua, MD; Michele Telegrafo, MD; Francesco Calò, MD; Paolo Visci, MD; Alessandro Dell'Erba, MD, PhD; Davide Ferorelli, MD*
11:30 am – 1:00 pm	**I87**	**Undiagnosed T-Lymphoblastic Lymphoma Mimicking Asthma and Leading to Sudden Death in a Pediatric Patient** *Jonathan Buehne, BS*; Joseph Prahlow, MD*
11:30 am – 1:00 pm	**I88**	**A Comparison of Histomorphological Changes of Atherosclerosis and Lipid Profile in Non-Cardiac Deaths Among Children and Young Adults at Autopsy** *Yogender Bansal, MD*; Pulkit Girdhar, MD; Uma Saikia, MD*
11:30 am – 1:00 pm	**I89**	**A Multivessel Sudden Coronary Artery Dissection During the Peripartum Period** *Amber Melchers, MHS*; Wendy Gunther, MD*

PATHOLOGY/BIOLOGY

Friday – Session I

Pregnancy-Related and Pediatric Deaths

Moderator: Michael Harrell, MD — Co-Moderator: Jolee Suddock, DO

8:00 am – 8:20 am	**I90**	**Pregnancy-Associated Manners of Death in Western Michigan, 2016–2024** *Nicolas Kostelecky, MD*; Hunter Berger, BS; Anna Tart, MD; Abigail Grande, MPH; Amanda Fisher-Hubbard, MD*
8:20 am – 8:40 am	**I91**	**An Approach to Placental Examination and Placental Pathology for the Forensic Pathologist** *Michael Harrell, MD*; Jolee Suddock, DO; Lorraina Robinson, DO; Paul Zamiara, MD*
8:40 am –9:10 am	**I92**	**Examining the Lung Float Test: Ending the Use of a Broken Tool for Pregnancy Criminalization and Wrongful Convictions** *Dara Gell, JD**
9:10 am – 9:40 am	**I93**	**Genetic Insights Into Pediatric Sudden Cardiac Death: A Case Report of Anomalous Left Coronary Artery Originating From the Right Sinus of Valsalva** *Alejandro Partida Contreras, MD*; Romina Malerba, MD; Mario Rascon, MD*
9:40 am – 10:00 am	**I94**	**Retinal Fold Apical Attachment of the Internal Limiting Membrane Is Not Specific for Vitreoretinal Traction During Alleged Cycles of Ocular Acceleration-Deceleration Based on Lange's Folds Histology** *Ashley Smith, MD*; Tammy Sexton, BA; William Harrison, MD; Anna McDonald, MD; Patrick Lantz, MD*
10:00 am – 10:20 am	**I95**	**Frequency and Distribution Patterns of Rib Fractures in Deceased Neonates, Infants, and Young Children** *Olivia Millington, MS*; Emma Cheshire, PhD; Roger Malcomson, PhD*
10:20 am – 10:40 am	**I96**	**Pediatric Autopsies in Luxembourg: A Retrospective Analysis of a Five-Year Period (2018–2022)** *Thorsten Schwark, MD*; Martine Schaul, MD*
10:40 am – 11:00 am	**I97**	**Suicides in Children and Young Teens: A Nine-Year Retrospective Review From the Cook County Medical Examiner's Office** *Ilaria Tarozzi, MD*; Lorenzo Gitto, MD*
11:00 am – 11:30 am		**Discussion and Q&A**
11:30 am – 1:00 pm		**BREAK**

Case Studies and Reviews—Part 2

Moderator: Denise Gemmellaro, PhD — Co-Moderator: Sterling McLaren, MD

1:00 pm – 1:20 pm	**I98**	**WITHDRAWN**
1:20 pm – 1:40 pm	**I99**	**A Nearly Missed Homicide: Pre-Cremation and Delayed Detection of Gunshot Wounds in a Mistaken Love Triangle** *Wendy Gunther, MD**

1:40 pm – 2:10 pm	**I100**	**An Update on Forensic and Medicolegal Aircraft Accident Investigation: New Challenges Meet Novel Technologies** *Michael Schwerer, MD**
2:10 pm – 2:30 pm	**I101**	**Familial Dyadic Deaths: A Sample Study From Southern Italy** *Alessandro Feola, MD, PhD; Edoardo Mazzini, MD; Federica Cascone, MD; Mariavictoria De Simone, MD; Ilaria Fracassi, MD; Paolo Palermo, MD*; Filomena Casella, MD; Pasquale Giugliano, MD; Carlo Pietro Campobasso, MD, PhD*
2:30 pm – 2:50 pm	**I102**	**Par for the Course: Exploring Unexpected Golf-Related Fatalities in Northwest Florida** *Andres Candela, MD*; Deanna Oleske, MD; Lorraine Lopez Morell, MD*
2:50 pm – 3:10 pm	**I103**	**Military Defendants Exonerated by Independent Autopsy** *Bret Dunn, JD*; Gerald Feigin, MD; Gil Sapir, JD, MSc; Benjamin Anderson, JD*
3:10 pm – 3:40 pm		**Discussion and Q&A**

Friday – Session II

Postmortem Markers

Moderator: Rhonda Mittenzwei, MD Co-Moderator: Zach Burcham, PhD

8:30 am – 8:50 am	**I104**	**Promising Autophagic Markers in Traumatic Brain Injury: An Immunohistochemical Study** *Davide Radaelli, MD, PhD*; Tommaso Livieri, MD; Calogero Cuttaia, MD; Alice Mazzetto, BS; Emiliana Giacomello, PhD; Margherita Neri, MD, PhD; Stefano D'Errico, PhD*
8:50 am – 9:10 am	**I105**	**Gross, Microscopic, and Immunohistochemical Features of Antemortem Thrombi, Agonal Thrombi, and Postmortem Clots: A Pilot Study** *Nicola Pigaiani, MD, PhD*; Francesco Ausania, MD, PhD; Vito Cirielli, MD, PhD; Matteo Brunelli, MD, PhD; Federica Bortolotti, MD, PhD*
9:10 am – 9:30 am	**I106**	**How Technology Can Enhance the Reliability of Histopathological Forensic Evidence for Use in Court** *Irene Pradelle, MD*; Matilde Ruju, MD*; Laura Camilla Gasparini, MD; Luca Diani, MD; Giada Rovito, MD; Francesca Righini, PhD; Rosa Maria Gaudio, MD; Margherita Neri, MD, PhD*
9:30 am – 9:50 am	**I107**	**Unraveling Sudden Unexpected Death: Metabolomic Insights From the Friuli-Venezia Giulia Sudden Cardiac Death Register in the Young** *Davide Radaelli, MD, PhD*; Tommaso Livieri, MD; Monica Concato, MD; Raffaella Vetrini, MD; Aneta Aleksova, MD; Mariano Stornaiuolo, PhD; Stefano D'Errico, PhD*
9:50 am – 10:10 am	**I108**	**Procalcitonin as a Marker of Sepsis at Autopsy: A Reflective, Novel, Evidence-Based, Effective Point-of-Care Tool** *Aswini Chandran, MS*; Arneet Arora, MD; Sagar Khadanga, MD*
10:10 am – 10:30 am	**I109**	**WITHDRAWN**
10:30 am – 11:00 am		**Discussion and Q&A**
11:00 am – 1:00 pm		**BREAK**

PATHOLOGY/BIOLOGY

The Bigger Picture

Moderator: Siddhartha Das, MD — Co-Moderator: Sarah Gino, MD

1:00 pm – 1:20 pm	**I110**	**Standards Development Activities in Medicolegal Death Investigation and Forensic Pathology** *J. Keith Pinckard, MD, PhD**
1:20 pm – 1:40 pm	**I111**	**A Comprehensive Framework for Undergraduate Forensic Medicine Training in Turkish Medical Faculties** *Ersi Kalfoglou, PhD*; Aykut Taner Güven, MD; Sotirios Kalfoglou, PhD*
1:40 pm – 2:10 pm	**I112**	**Sudden Cardiac Death in the Balkan Area: A Multidisciplinary Approach and Multinational Cooperation** *Djordje Alempijevic, MD, PhD*; Zlatko Jakovski, MD, PhD; Chara Spilopoulou, MD, PhD; Milica Keckarevic-Markovic, PhD; Ersi Kalfoglou, PhD; Davide Radaelli, MD, PhD; Karin Writzl, MD, PhD; Aleksandra Stankovic, PhD; Matteo Dal Ferro, MD; Aneta Aleksova, MD; Gianfranco Sinagra, MD; Giorgia Girotto, PhD*
2:10 pm – 2:30 pm	**I113**	**Forensic Medical Evidence and the Assessment of Violence at the International Borders in the Balkan Area** *Djordje Alempijevic, MD, PhD*; Alan Mitchell, MBChB; Ömer Müslümanoğlu, MD; Alexander Minchev, MD; Nikola Kovačević, LLM*
2:30 pm – 2:50 pm	**I114**	**The 48-Hour Protocol on Deaths Following Traumatic Events at the Hospital of Novara in Eastern Piedmont, Italy: A Review of the Effectiveness of Reporting to the Judicial Authority** *Federica Collini, MD*; Alessia Kretschmer, MD; Sarah Gino, MD*
2:50 pm – 3:20 pm	**I115**	**Cognitive Bias in Forensic Pathology: Types, Error, and Mitigation** *Paul Uribe, MD**
3:20 pm – 3:40 pm	**I116**	**"To Err Is Human": AIn't? Medical and Forensic Perspectives on Artificial Intelligence Use in the Italian and European Context** *Antonio Marzaioli, MD*; Enrica Macorano, MD; Giovanni De Gabriele, MD; Alessandro Cristalli, MD; Sara Di Trani, MD; Angela Colucci, MD; Francesco Introna, MD, PhD*
3:40 pm – 4:10 pm		**Discussion and Q&A**

Friday – Session III

Jay Dix Memorial Lecture Series

Moderator: James Gill, MD

9:00 am – 9:10 am	**I117**	**Introduction** *James Gill, MD*
9:10 am – 10:00 am	**I117**	**Firearm Injuries** *Andrew Baker, MD*
10:00 am – 10:15 am		**BREAK**
10:15 am – 11:05 am	**I117**	**Thermal and Smoke Inhalation Injuries** *Kanayo Tatsumi, MD*
11:05 am – 11:55 am	**I117**	**Intoxication Deaths** *Nicole Jackson, MD*
11:55 am – 2:00 pm		**BREAK**
2:00 pm – 2:50 pm	**I117**	**Sudden Unexpected Deaths in Adults** *Susan Ely, MD*
2:50 pm – 3:05 pm		**BREAK**
3:05 pm – 3:55 pm	**I117**	**Investigation of Pediatric Deaths** *Katherine Maloney, MD*
3:55 pm – 4:45 pm	**I117**	**Death Certification** *James Gill, MD*

PSYCHIATRY & BEHAVIORAL SCIENCE

Thursday

Poster Session

11:30 am – 1:00 pm	**J1**	**A Forensic Investigation of a Psychiatric Patient: Cause of Death Associated With Risperidone Usage** *Vjola Fera, MD**
11:30 am – 1:00 pm	**J2**	**Woman-in-Danger Thermometer: An AI-Driven Predictive Tool Designed to Assess the Risk of Femicide** *Ingrid Knochenhauer de Souza Mendes, MEng*; Túlio Leal Corrêa*
11:30 am – 1:00 pm	**J3**	**Medicolegal Approaches to the Analysis of Femicide Victims: Diagnosis, Autopsy, and Forensic Implications** *Antonio Pallante, MD*; Grazia Giulia Pantè, MD*; Francesco Sessa, PhD*; Andrea Pashalidis, MD; Giuliana Pennisi, MD*
11:30 am – 1:00 pm	**J4**	**A Psychiatrist's Criminal Liability: A Study of Italian Final Criminal Judgements on Suicide and Hetero-Aggressiveness Cases of the Mentally Ill** *Andrea Cioffi, MD*; Camilla Cecannecchia, MD*; Stefania De Simone, MD, PhD; Simona Vittorio, BBA; Luigi Cipolloni, MD, PhD; Stefano Ferracuti, MD*
11:30 am – 1:00 pm	**J5**	**"I Don't Remember . . . It Seems Like I Remember": The Erba Massacre Trial When False Testimony Precludes a Verdict of Innocence** *Anna Maria Casale, PsyD*; Vincenzo Lusa, PhD**
11:30 am – 1:00 pm	**J6**	**Attention Deficit Hyperactivity Disorder, Substance Use, and Driving** *Cristian Palmiere, MD*; Maria Pia Scarpelli, MD*
11:30 am – 1:00 pm	**J7**	**Evaluation Issues on Imputability and Aggravating Circumstances in Crimes Caused by Pathological Jealousy: A Retrospective Study of 20 Judgments of the Italian Supreme Court of Cassation** *Andrea Cioffi, MD*; Camilla Cecannecchia, MD*; Stefania De Simone, MD, PhD; Simona Vittorio, BBA; Luigi Cipolloni, MD, PhD; Stefano Ferracuti, MD*
11:30 am – 1:00 pm	**J8**	**The Effect of Plaintiff Malingering, Deception, and Perceived Reprehensibility on Damage Awards** *Erica Baer, PhD*; Richard Conti, PhD; Joseph Preckajlo, MA*
11:30 am – 1:00 pm	**J9**	**Interdependency Between Alexithymia and Alcohol Use Disorder** *Cristian Palmiere, MD*; Maria Pia Scarpelli, MD*
11:30 am – 1:00 pm	**J10**	**The Role of Forensic Assessment/Investigation in the Protection of Incapable Adults** *Giancarlo Di Vella, MD*; Cristiano Barbieri, MD, PhD; Caterina Bosco, MD; Ignazio Grattagliano, PsyD*

PSYCHIATRY & BEHAVIORAL SCIENCE

Morning Session I

Moderator: Gregory Mack, PhD — Co-Moderator: David Annas, MD, MPH

8:30 am – 10:00 am	**J11**	**Misinformation in Forensic Sciences: False Statements Regarding Parental Alienation Theory** *William Bernet, MD*; Yaakov Aichenbaum, MA*; Lawrence DeMarco, JD**
10:00 am – 10:15 am		**BREAK**

Morning Session II

Moderator: Corina Freitas, MD, MSc, MBA — Co-Moderator: David Annas, MD, MPH

10:15 am – 11:00 am	**J12**	**A Comparison of Virtual and In-Person Forensic Evaluations** *Lindsay Poplinski, DO*; Etuajie Oiyemhonlan Halbert, DO*; Philip Candilis, MD; Viviana Alvarez-Toro, MD*
11:00 am – 11:30 am	**J13**	**Future-Proofing Forensic Psychiatry: Technological Advances Aiming to Shape Tomorrow** Bellanirys Acosta Arias, MD*; Olufunlola Adefalu, MD*; Jack Wright, BA
11:30 am – 1:00 pm		**BREAK**

Afternoon Session I

Moderator: Jessica Morel, DO — Co-Moderator: David Annas, MD, MPH

1:00 pm – 2:15 pm	**J14**	**Military Sexual Trauma, PTSD, and the Forensic Psychiatric Exam** *John Chaves, MD**
2:15 pm – 3:00 pm	**J15**	**Forensic Implications of Excited Delirium Syndrome: Diagnostic Challenges and A Case Series** *Sara Sablone, MD*; Luigi Buongiorno, MD*; Andrea Nicola Cardinale, MD*; Anna Margari, MD; Alessandro Tavone, MD; Giulia Petroni, MD; Cinzia Niolu, MD, PhD; Gabriele Mandarelli, MD, PhD; Silvestro Mauriello, MD, PhD; Francesco Introna, MD, PhD; Gian Luca Marella, MD, PhD*
3:00 pm – 3:15 pm		**BREAK**

Afternoon Session II

Moderator: Dean DeCrisce, MD — Co-Moderator: David Annas, MD, MPH

3:15 pm – 4:30 pm	**J16**	**Recovered Memories and False Memories in Sexual Assault and Homicide Investigations** *Peter Collins, MD, MCA**
4:30 pm – 5:00 pm	**J17**	**The Recent Acceptance of Borderline Personality Disorder for Pretrial Mental Health Diversion in California** *Isabel Yin, MD**

PSYCHIATRY & BEHAVIORAL SCIENCE

Friday

Poster Session

11:30 am – 1:00 pm	**J18**	**Cognitive Bias in Forensic Psychiatric Evaluation: A Scoping Review** *Luigi Buongiorno, MD*; Federica Mele, MD; Giulia Petroni, MD; Anna Margari, MD; Felice Carabellese, MD; Roberto Catanesi, MD; Gabriele Mandarelli, MD, PhD*
11:30 am – 1:00 pm	**J19**	**Missing White Woman Syndrome: An Evaluation of Bias Surrounding the Presentation of Missing Persons' Cases in True Crime Podcasts** *Dante McKinnell, MA*; Erica Baer, PhD*
11:30 am – 1:00 pm	**J20**	**Safe and Sound: A Retrospective Analysis of Deaths in Custody in Rome, Italy, From 2000 to 2024** *Dalila Tripi, MD*; Federica Spadazzi, MD*; Anna Maria Manta, MD*; Benedetta Baldari, MD, PhD; Stefania De Simone, MD, PhD; Maria Chiara David, PhD; Costantino Ciallella, MD; Luigi Cipolloni, MD, PhD; Mariarosaria Aromatario, MD*
11:30 am – 1:00 pm	**J21**	**The Role of the Psychological Autopsy in the Analysis of a Case of Fatal Intoxication** *Carmen Scalise, MD*; Fabrizio Cordasco, MD, PhD*; Matteo Antonio Sacco, MD*; Saverio Gualtieri, MD; Pietrantonio Ricci, MD, PhD; Isabella Aquila, MD, PhD*
11:30 am – 1:00 pm	**J22**	**Forgotten Baby Syndrome: Society's Reaction to the Phenomenon Via a Presented Case** *Nevzat Alkan, MD*
11:30 am – 1:00 pm	**J23**	**General Self-Efficacy Belief as a Predictor of Job Satisfaction in the Crime Prevention Department: The Case of Addis Ababa Police** *Zelalem Markos Borko*
11:30 am – 1:00 pm	**J24**	**The Role of Trauma in Shaping Antisocial Personality Disorder and Criminal Behavior Among Incarcerated Males** *Görkem Ayas, MD*; Vedat Şar, MD; Yağmur Aksuna; Gamze Akyüz, MD*
11:30 am – 1:00 pm	**J25**	**Examining the Influence of Demographic Factors on Abuse Dynamics: Enhancing the Power Control Wheel Framework for Diverse Populations in VAWA Evaluations** *Lisa Long, PsyD*; Marlena Ryba, PhD*
11:30 am – 1:00 pm	**J26**	**Medicolegal Ethics Associated With Access to Insanity Defense Reports** *Kathleen Patchan, MD*; Christopher Wilk, MD; Liam Guenther, MD; Gerardo Collazo, MD; Raquel Williams, MD*

Morning Session I

Moderator: Klaus Neudecker, MD — Co-Moderator: David Annas, MD, MPH

8:30 am – 9:00 am	**J27**	**A Novel and Implicit Measure of Self-Regulation: The Internal Moderation Questionnaire (IMQ)** *Görkem Ayas, MD*; Vedat Şar, MD; Tuğba Türk-Kurtça, PhD*
9:00 am – 9:30 am	**J28**	**Enhanced Trauma-Informed Policing: An Integrated Approach to Mental Health Safety in Law Enforcement Workplaces** *Gregory Mack, PhD*; Monica Brooker, PhD*
9:30 am – 10:00 am	**J29**	**The Relevance of Ethnopsychiatric and Clinical Forensic Reports in the Medical Assessment of Asylum Seekers in the Metropolitan City of Milan, Italy** *Lorenzo Franceschetti, MD, PhD*; Alessandro Minard, MD; Francesca Magli, MS; Marzia Marzagalia, MD; Cristina Cattaneo, MD, PhD, BSc*

10:00 am – 10:15 am **BREAK**

Morning Session II

Moderator: Peter Collins, MD Co-Moderator: David Annas, MD, MPH

10:15 am – 10:45 am **J30** **The Economical Cost of Forensic Mental Health: Are We Saving Some Money?**
Sebastien Prat, MD; Gary Chaimowitz, MBChB*

10:45 am – 11:30 am **J31** **Electronic Health Records and the Forensic Examiner: Pitfalls and Implications**
*Vivian Shnaidman, MD**

11:30 am – 1:00 pm **BREAK**

Afternoon Session I

Moderator: Corina Freitas, MD, MSc, MBA Co-Moderator: David Annas, MD, MPH

1:00 pm – 1:30 pm **J32** **Do Beliefs About Science Matter? Evidence of the CSI Effect in the United States**
*Brianne Suldovsky, PhD**

1:30 pm – 2:00 pm **J33** **WITHDRAWN**

2:00 pm – 2:30 pm **J34** **The Potential Role of AI in the Process of Radicalization**
Cristina Brasi, MASc; M. Denise Gemmellaro, PhD*

2:30 pm – 3:15 pm **J35** **A Review of Preteen Suicides: The Child Death Review Committee of Oakland County, Michigan**
William Cardasis, MD; Ljubisa Dragovic, MD*

3:15 pm – 3:30 pm **BREAK**

Afternoon Session II

Moderator: Vivian Shnaidman, MD Co-Moderator: David Annas, MD, MPH

3:30 pm – 4:00 pm **J36** **Pregnant Inmates: An Examination of Reproductive Justice in Correctional Settings**
*Danielle Lenahan, MD**

4:00 pm – 4:30 pm **J37** **Crime and Brain Disorders: The Legal Maze of Neuroimaging Evidence**
Carla Occhipinti, MD; Federica Spina, MD*; Chiara Casula, MD; Matteo Leoni, MD; Eleonora Mezzetti, MD; Ilaria Zampieri, PhD; Marco Di Paolo, MD; Pietro Pietrini, MD, PhD*

4:30 pm – 5:00 pm **J38** **The Murder of Serena Mollicone: The Need for an Interdisciplinary Approach and the Use of Bayesian Network in a Cold Case**
Laura Volpini, PhD; Luciano Garofano, PhD**

QUESTIONED DOCUMENTS

Thursday

Morning Session

Moderator: Larry Olson, MFS

8:00 am – 8:20 am	**K1**	**How to Do Less With More: Screening 101 Known Writers Down to a Manageable Number** *Mark Goff, BA**
8:20 am – 8:40 am	**K2**	**WITHDRAWN**
8:40 am – 9:00 am	**K3**	**Academy Standardization: Progress and Goals for Forensic Document Examination** *Carl McClary, MS**
9:00 am – 9:40 am	**K4**	**An Introduction to the Forensic Handwriting Analysis Software Handwriter** *Stephanie Reinders, PhD*; Alicia Carriquiry, PhD; Danica Ommen, PhD*
9:40 am – 10:00 am	**K5**	**Analyzing Toner Particle Distribution to Sequence Ink Lines and Laser Printing** *Zain Bhaloo, MS*; Mathieu Arès, BS; Brent Ostrum, BS*
10:00 am – 10:20 am		**BREAK**
10:20 am – 10:40 am	**K6**	**An Overview and Comparison of Software Tools for Quantifying the Value of Handwriting Evidence** *Danica Ommen, PhD**
10:40 am – 11:00 am	**K7**	**An Update on Standards Development Activities Related to Forensic Document Examination** *Kevin Kulbacki, MSFS**
11:00 am – 11:20 am	**K8**	**Current Status and Future Trends: Computer Science and AI in Forensic Handwriting Casework** *C. Elisa van den Heuvel, PhD*; Samiah Ibrahim, BS**
11:20 am – 1:00 pm		**BREAK**

Afternoon Session

Moderator: Carolyn Bayer-Broring, MFS

1:00 pm – 1:20 pm	**K9**	**Blocked Photographs: An Exploration of Methods of Separating Photographs Adhered as a Mass by Moisture** *Mark Goff, BA**
1:20 pm – 1:40 pm	**K10**	**Defining Contemporaneous(ly)** *Meg OBrien, MS**
1:40 pm – 2:00 pm	**K11**	**Definitive Conclusions: Should They Be Defenestrated?** *Linton Mohammed, PhD**
2:00 pm – 2:20 pm	**K12**	**Distinguishing Dominant and Non-Dominant Handwriting Using General and Individual Characteristics** *Andrea Ledić, MChem*; Ana Kraljević, MS; Jerković Ivan, PhD*

2:20 pm – 2:40 pm		**BREAK**
2:40 pm – 3:00 pm	**K13**	**Font Flexin' With Aptos: Is This Next-Gen Typeface Slayin' or Playin'?** *Linton Mohammed, PhD*; Gina Hunter, BS*
3:00 pm – 3:20 pm	**K14**	**A Forensic Analysis and Comparison of the Degradation of Cristal Violet in Blue Ballpoint Pen Inks Under Room Conditions and Accelerated Aging Conditions** *Andrea Ledić, MChem*; Veronika Marinović, PhD; Ivana Bolanča Mirković; Stjepan Brzica, MChem*
3:20 pm – 3:40 pm	**K15**	**Leopold-Loeb Revisited and Reprised: Document Examiners Help Unravel "The Perfect Crime"** *Larry Olson, MFS**
3:40 pm – 4:00 pm	**K16**	**The Application of Multispectral Imaging in the Analysis of the Strokes Sequencing on Documents** *Andrea Ledić, MChem*; Vladimir Cviljušac, PhD; Jana Žiljak Gršić, PhD; Damir Modrić, PhD*
4:00 pm – 4:20 pm	**K17**	**The Availability and Detection of Signature and Handwriting Fonts** *Elaine Wooton, MFS**

Friday

Poster Session

11:30 am – 1:00 pm	**K18**	**WITHDRAWN**
11:30 am – 1:00 pm	**K19**	**Counterfeit Cannabis Packaging: Detecting Fakes Through Forensic Document Examination** *Josep De Alcaraz-fossoul, PhD*; Lindsey Weinger, MBA; Marisia Fikiet, PhD; Richard Crocombe, PhD; Pauline Leary, PhD; Brooke Kammrath, PhD*
11:30 am – 1:00 pm	**K20**	**Leopold-Loeb Revisited and Reprised: The Documents in the Case** *Larry Olson, MFS**
11:30 am – 1:00 pm	**K21**	**WITHDRAWN**

Morning Session

Moderator: Mark Goff, BA

8:40 am – 9:00 am	**K22**	**The Advantages of a Trial Lawyer Also Being an Expert in the Same Subject Matter as the Experts to Be Examined and Cross-Examined: The Ideal Scenario in Questioned Document Litigation** *Andrew Sulner, JD**
9:00 am – 9:20 am	**K23**	**WITHDRAWN**
9:20 am – 9:40 am	**K24**	**The Odyssey of Building a Functional Digital Forensic Research Library** *Timothy Campbell, BS**
9:40 am – 10:00 am		**BREAK**
10:00 am – 10:20 am	**K25**	**WITHDRAWN**

QUESTIONED DOCUMENTS

10:20 am – 10:40 am	**K26**	**Which Came First? The Copy? Or the Other Copy?** *Carolyn Bayer-Broring, MFS**
10:40 am – 11:20 am	**K27**	**Rocketbook: The Notebook of the Future, Part 2** *Stephanie Kingsbury, MFS**
11:20 am – 1:00 pm		**BREAK**

The Forensic Document Examiner Forum

Moderator: Mark Goff, BA

1:00 pm – 3:00 pm	**K28**	**The Forensic Document Examiner Forum** *Carl McClary, MS*; Karen Nobles, MS; Samiah Ibrahim, BS*

TOXICOLOGY

Wednesday

Poster Session

7:30 pm – 9:00 pm	**L1**	**A Risk Assessment of Lead Exposure in Glass Industry Workers: Evaluating Occupational Toxicity** *Nrashant Singh, PhD**
7:30 pm – 9:00 pm	**L2**	**An Alcohol Impairment Evaluation in Cases of Severe Injury** *Maria Pieri, PhD*; Pascale Basilicata, PhD; Mariagrazia Marisei, MD; Angela Simonelli, PhD; Angela Silvestre, MD; Rossella Guadagni, PhD; Emanuele Capasso, MD, PhD; Massimo Niola, PhD*
7:30 pm – 9:00 pm	**L3**	**Biofluid Sampler: A Green and Robust Sampling and Sample Preparation Platform for Forensic Toxicological Analysis** *Abuzar Kabir, PhD*; Kenneth Furton, PhD*
7:30 pm – 9:00 pm	**L4**	**Cannabis-Based Medicines and Driving: Current Legal Issues in Switzerland** *Cristian Palmiere, MD*; Maria Pia Scarpelli, MD*
7:30 pm – 9:00 pm	**L5**	**Cocaine and Aortic Dissection: The Need to Overcome the Underreporting Bias** *Mariagrazia Marisei, MD*; Pascale Basilicata, PhD; Antonio Lombardi, MD; Angela Simonelli, PhD; Angela Silvestre, MD; Rossella Guadagni, PhD; Massimo Niola, PhD; Maria Pieri, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
7:30 pm – 9:00 pm	**L6**	**Comparative Postmortem Blood Alcohol Concentrations in Cardiac and Peripheral Blood: A Case Series** *Giulia Ricchezze, MS*; Erika Buratti, PhD; Alice Cerioni, PhD; Gianmario Mietti, PhD; Marta Cippitelli, PhD; Rino Froldi, MS; Mariano Cingolani, MD; Roberto Scendoni, MD, PhD*
7:30 pm – 9:00 pm	**L7**	**Ethanol Stability Over Time in Blood Samples Undergoing Headspace Analysis** *Ava La Lande*; M. Denise Gemmellaro, PhD*
7:30 pm – 9:00 pm	**L8**	**Forensic "ToxAIcology": Is It Really Over for the Forensic Human Community?** *Maria Pieri, PhD*; Pascale Basilicata, PhD; Mariagrazia Marisei, MD; Angela Simonelli, PhD; Angela Silvestre, MD; Rossella Guadagni, PhD; Claudia Casella, PhD; Massimo Niola, PhD*
7:30 pm – 9:00 pm	**L9**	**Leveraging Surveillance Data for the Analysis of Trends, Adulteration, and Novel Substances in the District of Columbia Needle Exchange Programs: A Four-Year Review** *Snehal Parikh, BS*; William Kim, BS; Marsha Cox*
7:30 pm – 9:00 pm	**L10**	**Mapping Mortality: A Decade's Review of Drug Usage in Maryland (2014–2024)** *Nicholas Boire, MD*; Stephanie Dean, MD; Rebecca Phipps, PhD*
7:30 pm – 9:00 pm	**L11**	**Revolutionizing Anti-Doping and Sports Forensics: Comprehensive Screening of Nutritional Supplements for WADA-Banned Substances Using High Resolution Mass Spectrometry** *Astha Pandey, PhD*; Anirudha Dixit, MS; Disha Kothari, PhD; Abhishek Trivedi, MS*
7:30 pm – 9:00 pm	**L12**	**The Opioid Crisis in Pakistan and Toxicological Interpretation: A Case Report** *Muhammad Chaudhary, MPhil**
7:30 pm – 9:00 pm	**L13**	**WITHDRAWN**

TOXICOLOGY

7:30 pm – 9:00 pm	**L14**	**The Underreporting of Psychoactive Adulterants of Illicit Drugs of Abuse in Toxicological Samples** *Shayna Kasher, MSFS** *(FSF Emerging Forensic Scientist Award Poster Presentation)*
7:30 pm – 9:00 pm	**L15**	**A Comparison of Sample Preparation Techniques for the Analysis of Drugs of Abuse in Oral Fluids** *Jared Burkhart*; Samantha Herbick, MSFS*
7:30 pm – 9:00 pm	**L16**	**A Gas Chromatography/Mass Spectrometry Analysis of Tetrahydrozoline in Alcoholic Beverage Residue Related to Drug-Facilitated Sexual Assault** *Alyssa Hampton, BS*; Ellen Mwenesongole, PhD*
7:30 pm – 9:00 pm	**L17**	**A Look at Nitazenes Our Lab Has Detected Across the Country From 2020 to 2024** *Stuart Kurtz, MS*; Laureen Marinetti, PhD; Kevin Shanks, MS*
7:30 pm – 9:00 pm	**L18**	**A Ten-Year Retrospective Review of Death in Custody Toxicology Results From Jefferson County, Alabama** *Amy Theriault, DO*; Karen Scott, PhD*
7:30 pm – 9:00 pm	**L19**	**Accidental Acute Intoxication With Gummies Containing Delta-8- Tetrahydrocannabinol** *Stjepan Brzica, MChem*; Slavena Cukrov Bezbradica, PhD; Kristina Jurković, PhD; Martina Cvjetko Ljutić*
7:30 pm – 9:00 pm	**L20**	**An Assessment of Cross-Reactivity for Cannabinoids in Blood and Oral Fluid Using Enzyme Immunoassay Kits** *Sara Jablonski, MSFS*; Curt Harper, PhD*
7:30 pm – 9:00 pm	**L21**	**An Evaluation of Enzyme-Linked Immunosorbent Assay (ELISA) Screening Kits for the Detection of Nitazene Analogs** *Amanda Pacana, MSFS*; Britni Skillman, PhD*
7:30 pm – 9:00 pm	**L22**	**An Incident of Food Poisoning Attributed to Bongkrekic Acid and a Forensic Examination of the Deceased in Taiwan** *Chou Yihung, MS**
7:30 pm – 9:00 pm	**L23**	**Assessing the Stability of NPS Benzodiazepines in Blood, Urine, and Serum Using LC/QqQ/MS** *Savannah Baker, MS*; Sara Walton, MS; Donna Papsun, MS; Alex Krotulski, PhD*
7:30 pm – 9:00 pm	**L24**	**Drug/Substance Toxicity-Related Deaths Examined at the West Tennesse Regional Forensic Center and Their Prescription Drug History: A Comparison of 2023 to 2013** *Madeleine Phan, BS*; Ibrahim Ortanca, MD*
7:30 pm – 9:00 pm	**L25**	**Evaluating Extraction Parameters for the Detection of Chronic and Single-Dose Drug Exposure in Forensic Hair Analysis Using Design of Experiments** *Kaylyn Keith, BS*; Anthony DeCaprio, PhD; Mariana Colome Pena*
7:30 pm – 9:00 pm	**L26**	**Evaluation of the Cross-Reactivity of 27 Parent and 26 Metabolite Tetrahydrocannabinol Analogs Using a Tetrahydrocannabinol Carboxylic Acid ELISA and HEIA Kit** *Taylor Yates, BS*; Justin Poklis, BS; Alaina Holt, PhD; Ciena Bayard, BS; Michelle Peace, PhD; Stephen Raso, PhD*

TOXICOLOGY

7:30 pm – 9:00 pm	**L27**	**A Forensic Analysis of Environmental Fate and Biodegradation of Benzodiazepines in Synthetic Wastewater Using SPE-LC/MS** *Ali Alawi, MS**
7:30 pm – 9:00 pm	**L28**	**Gabapentin Detection and Trends in Alabama Toxicology Cases (2017–2023)** *Belicia Sutton, MSFS*; Curt Harper, PhD; Taylor Williams*
7:30 pm – 9:00 pm	**L29**	**Improving Liquid Chromatography/Mass Spectrometry Sensitivity for Barbiturates** *Ethan Khandaker, BA*; William Campbell, PhD*
7:30 pm – 9:00 pm	**L30**	**Matrix-Matched Standards for Quantitative Elemental and Molecular Analysis of Hair in Forensic Toxicology** *Kaitlyn Bonilla, MS*; Ashley Fox; Chloe Phillips, BS; Matthieu Baudelet, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
7:30 pm – 9:00 pm	**L31**	**Modification of a Liquid Chromatography/Tandem Mass Spectrometry Method Targeting Lysergic Acid Diethylamide and Its Primary Metabolite to Include Nine Analogs** *Amy Patton, PhD*; Erin Karschner, PhD; Jeffrey Walterscheid, PhD; Jason Garcia, PhD*
7:30 pm – 9:00 pm	**L32**	**Old vs. New: A Novel Approach to Blood Alcohol Analysis In the Modern Day Forensic Laboratory.** *Timothy Fassette, MS**
7:30 pm – 9:00 pm	**L33**	**Profiling Heavy Metals in Kratom Powder Purchased in Southeastern Pennsylvania and Southern New Jersey** *Xavia Pough*; Tom Gluodenis, PhD*
7:30 pm – 9:00 pm	**L34**	**The Quantitation of an Oral Fluid Drug Panel, Including THC, Using High Resolution Accurate-Mass (HRAM) Orbitrap Mass Spectrometry** *Courtney Patterson, MPS*; Kerry Hassell, PhD*
7:30 pm – 9:00 pm	**L35**	**WITHDRAWN**
7:30 pm – 9:00 pm	**L36**	**The Detection and Quantitation of Alcohol in Packed Red Blood Cells** *Jordan Keller, BS*; Connor Gailliot, BAS; Justin Poklis, BS; Carrol Nanco, MCLS; Carl Wolf, PhD; Grace Williams, PhD*
7:30 pm – 9:00 pm	**L37**	**WITHDRAWN**
7:30 pm – 9:00 pm	**L38**	**The Postmortem Distribution of the Synthetic Cathinone MDPHP in a Fatal Intoxication Case** *Andrea Costantino, MD*; Emma Croce, MS*; Alexandra Dimitrova, RF*; Fabio Vaiano, PhD*; Ilenia Bianchi, PhD; Vilma Pinchi, PhD; Martina Focardi, MD*
7:30 pm – 9:00 pm	**L39**	**The Validation of an Analytical Method for the Quantitation of Xylazine in Human Hair** *Andre Sukta, MSFS**

TOXICOLOGY

Thursday

Annual Lectureship in Toxicology

Moderator: Erin Karschner, PhD — Co-Moderator: Svante Vikingsson, PhD

8:00 am – 8:15 am		**Welcome & Introductions**
8:15 am – 9:15 am		**Invited Lectureship** *Michael Baumann, PhD* *National Institude on Drug Absue Intramural Research Program*
9:15 am – 9:45 am	**L40**	**An Update on Standards Development Activities in Forensic Toxicology** *Marc LeBeau, PhD**
9:45 am – 10:00 am	**L41**	***Smith vs. Arizona* and Strategies to Support the Admissibility of Toxicology Testimony: Don't Stop Reading at Page 18** *M.J. Menendez, JD*; Barry Logan, PhD**
10:00 am – 10:15 am		**BREAK**

Postmortem Toxicology and Drug Adulteration

Moderator: Stephen Raso, PhD — Co-Moderator: Lauren Richards-Waugh, PhD

10:15 am – 10:30 am	**L42**	**Beyond the Green Thumb—The Role of Technology in a Case of Suicide by Pesticide Poisoning** *Luca Diani, MD*; Giada Rovito, MD*; Laura Camilla Gasparini, MD; Irene Pradelle, MD; Matilde Ruju, MD; Donata Favretto, MS; Negar Eftekhari, PhD; Carmela Vaccaro, MS; Matteo Marti, MS; Margherita Neri, MD, PhD*
10:30 am – 10:45 am	**L43**	**Comparisons of Blood, Vitreous Fluid, and Urine (When Available): Drug Screen Findings in Over 100 Cases** *Laureen Marinetti, PhD**
10:45 am – 11:00 am	**L44**	**The Determination of Measurement Uncertainty of Non-Routine Measurements in Forensic Toxicological Casework** *Ingrid Bosman, PhD*; Dick-Paul Kloos, PhD; Camille van Dijk, MS; Ivo Alberink, PhD*
11:00 am – 11:15 am	**L45**	**Evaluating the Pharmacokinetics of Xylazine in Humans: A Paired Forensic and Clinical Model** *Alex Krotulski, PhD*; Sara Walton, MS; Brittany Chapman, BS; Patricia Martinez, MD; Aidan Hampson, PhD; Jyothi Polackal, BS; Deborah Olabisi, MD; John Nguyen, BSN; John Broach, MD; Brianna Stang, MS; Alyssa Reyes, MS; Barry Logan, PhD*
11:15 am – 11:30 am	**L46**	**Paired Toxicology Assays for the Quantitation of Medetomidine and the Differentiation of Dexmedetomidine and Levomedetomidine** *Sara Walton, MS*; Brianna Stang, MS; Alex Krotulski, PhD; Sherri Kacinko, PhD; Barry Logan, PhD*
11:30 am – 1:00 pm		**BREAK**

TOXICOLOGY

Multidisciplinary Session: Pathology/Biology and Toxicology

Moderator: Gregory Schmunk, MD — Co-Moderator: Rebecca Hartman, PhD

1:00 pm – 1:15 pm	**L47**	**Two Fatalities Involving Hydroxychloroquine** *Teresa Gray, PhD*; Jennifer Ross, MD; Marianne Beynon, MD*
1:15 pm – 1:30 pm	**L48**	**An Unexpected Fatal Methadone Ingestion in a Child** *Jordan Taylor, MD**
1:30 pm – 1:45 pm	**L49**	**A Toxicological and Pathological Re-Evaluation of Media-Reported Mitragynine (Kratom) Deaths in Florida** *Marilyn Huestis, PhD*; Karl Williams, MD*
1:45 pm – 2:00 pm	**L50**	**Endogenous Carbon Monoxide Due to Hemolytic Anemia: A Forensic Red Herring** *Orianna Thomas, MSFS*; Sandra Bishop-Freeman, PhD*
2:00 pm – 2:15 pm	**I66**	**Drug-Related Deaths in the Elderly: A Five-Year Overview of Western Michigan** *Abigail Grande, MPH*; Gemma Harkin, MPH; Bo Collins, MPH; Amanda Fisher-Hubbard, MD*
2:15 pm – 2:30 pm	**I67**	**Fatal Intoxications vs. Congenital Cardiac Disorders in Sudden Death: Where to Draw the Line?** *Alexandra Dimitrova, RF*; Simone Grassi, MD; Fabio Vaiano, PhD; Vincenzo Arena, MD; Oscar Campuzano, MD; Sabina Strano Rossi, PhD; Ramon Brugada, MD; Antonio Oliva, MD, PhD*
2:30 pm – 2:45 pm	**I68**	**Illicit Drug Deaths in Decedents Over 60 Years of Age in the City and County of San Francisco From 2020 to 2024** *Ellen Moffatt, MD*; Luke Rodda, PhD; Anson Tsang, MS*
2:45 pm – 3:00 pm	**I69**	**Sodium Azide/Nitrite Suicides in the Netherlands Between 2015 and 2022** *Karen van den Hondel, PhD*; Dominique van Pelt, MS; Lizanne Schweren, PhD; Manon Ceelen, PhD*
3:00 pm – 3:15 pm	**I70**	**Fatal Drug Intoxication in the Pediatric Population of El Paso, Texas** *Romina Malerba, MD; Alejandro Partida Contreras, MD*; Adam Gonzalez, MD; Mario Rascon, MD*
3:15 pm – 3:30 pm		**BREAK**

Toxicology Special Session: Drugs and Driving

Moderator: Ayako Chan-Hosokawa, MS — Co-Moderator: Sara Dempsey, PhD

3:30 pm – 3:45 pm	**L51**	**Recommendations for Drug Testing in Driving Under the Influence of Drugs (DUID) and Motor Vehicle Fatality Cases—2025 Update** *Amanda D'Orazio, MS, D-AFBT-FT*; Barry Logan, PhD; Amanda Mohr, MS; Ayako Chan-Hosokawa, MS; Curt Harper, PhD; Marilyn Huestis, PhD; Sarah Kerrigan, PhD; Jennifer Limoges, MS; Amy Miles, BS; Colleen Scarneo, MS; Karen Scott, PhD*
3:45 pm – 4:00 pm	**L52**	**New York's Drug Recognition Expert (DRE) Oral Fluid Field Certifications** *Jennifer Limoges, MS**

4:00 pm – 4:15 pm	**L53**	**How High Will It Go? The Alarming Rise of Fentanyl Tolerance** *Ayako Chan-Hosokawa, MS*; Zachary Shaner*
4:15 pm – 4:30 pm	**L54**	**Driving Under the Influence Snapshot: Uncovering Drug Prevalence Trends in Washington, DC** *Kimberley Heine, MFS*; Samantha Tolliver, PhD*
4:30 pm – 4:45 pm	**L55**	**Drug Use by Drivers in Fatal Traffic Crashes** *Amanda Mohr, MS*; Grace Cieri, MS; James Gill, MD; Barry Logan, PhD*
4:45 pm – 5:00 pm	**L56**	**Impaired Driving Cases With Gabapentin** *Nicholas Tiscione, MS*; Edward Zumaeta, MS*

Friday

Novel Psychoactive Substances

Moderator: Tate Yeatman, MS — Co-Moderator: Lynn Wagner, PhD

8:00 am – 8:15 am	**L57**	**2024 Novel Psychoactive Substance Trends and a Comparison Against NPS Discovery Scope Recommendations** *Donna Papsun, MS*; Alex Krotulski, PhD; Barry Logan, PhD*
8:15 am – 8:30 am	**L58**	**Metabolic Profiling of the Semi-Synthetic Tetrahydrocannabinols (THCs), Delta 10-THC, and Delta 6a,10a-THC, Using Human Liver Microsomes and LC/MS** *Nathan Layle, MS*; Jonathon Bassman, MS; Marc Gregerson, PhD; Jeffrey Williams, MS; Donna Iula, PhD*
8:30 am – 8:45 am	**L59**	**Cytochrome P450-Mediated Metabolism of Isotonitazene, a Novel Synthetic 2-Benzylbenzimidazole Opioid** *Madison Schackmuth, PhD*; Sarah Kerrigan, PhD* *(FSF Emerging Forensic Scientist Award Oral Presentation)*
8:45 am – 9:00 am	**L60**	**Metabolite Profile Commonalities of Methoxylated Fentanyl Analogs** *Jillian Morgan, MS*; Candice Bridge, PhD*
9:00 am – 9:15 am	**L61**	**Novel Psychoactive Substance Presence in Fentanyl/Norfentanyl-Positive Clinical Urine Specimens** *Theresa Meli, MS*; Jillian Neifeld, MS; Sarah Bartock, PhD*
9:15 am – 9:30 am	**L62**	**The Prevalence of p-Fluorofentanyl and Xylazine in Postmortem Fentanyl Casework: A Three-Year Retrospective Study** *Marco Ballotari, PhD*; Michael Truver, PhD; Jennifer Hoyer, MS; Bruce Goldberger, PhD; Chris Chronister, PhD*
9:30 am – 9:45 am	**L63**	**The Detection of Novel Psychoactive Substances in Urine Specimens From a Large United States Prison System** *Jillian Neifeld, MS*; Theresa Meli, MS; Sarah Bartock, PhD*
9:45 am – 10:00 am	**L64**	**Two Fatal Cases Involving N-Ethylpentedrone in a Secured Forensic Psychiatric Clinic** *Jeroen Roosendaal, PhD*; Ingrid Bosman, PhD; Pieter Van Driessche, MD; Janneke Hulshof, PhD; Bas van de Velde, MS; Theo Klein, PhD; Kristof Maudens, PhD*

10:00 am – 10:15 am **BREAK**

Alcohol & General Forensic Toxicology

Moderator: Michael Wagner, MS, PA Co-Moderator: Melissa Rodriguez, MS

10:15 am – 10:30 am **L65** **Insights Into Phosphatidylethanol (PEth) 16:0/18:1 Formation and Degradation Analysis by Supercritical Fluid Chromatography-Tandem Mass Spectrometry**
Munchelou Gomonit, BS; Markus Roman, MS; Britni Skillman, PhD; Michael Truver, PhD; Robert Kronstrand, PhD*
(FSF Emerging Forensic Scientist Award Oral Presentation)

10:30 am – 10:45 am **L66** **Alcohol Extrapolation: Contentions Within the Scientific and Legal Systems**
Kira Bochard, MScFS; Lynne Seborowski, JD; John Brick, PhD*
(FSF Emerging Forensic Scientist Award Oral Presentation)

10:45 am – 11:00 am **L67** **Performing Blood Alcohol Calculations According to ASB 122 Using a Simple Spreadsheet**
Rebecca Hartman, PhD; Svante Vikingsson, PhD*

11:00 am – 11:15 am **L68** **Drug-Facilitated Crime: A Review of Findings Between 2019 and 2023**
Meaghan Hessler, MSFS; Sherri Kacinko, PhD; Barry Logan, PhD*

11:15 am – 11:30 am **L69** **An Investigation Into the Utility of Creatinine and the Submaxillary Gland Androgen-Regulated Protein 3B as Adulteration Biomarkers and Normalization Factors in Oral Fluid**
Marta Concheiro-Guisan, PhD; Christopher McGrowder, BS; Alejandro Ocampo, MS; Mechthild Prinz, PhD*

11:30 am – 1:00 pm **BREAK**

Toxicology Special Session: Pediatric Toxicology

Moderator: Nikolas Lemos, PhD Co-Moderator: Timothy Rohrig, PhD

1:00 pm – 3:00 pm **L70** **Postmortem Pediatric Forensic Toxicology: Children Are Not Small Adults**
Nikolas Lemos, PhD; Timothy Rohrig, PhD**

LAST WORD SOCIETY

Thursday

Moderator: Kenneth Melson, JD *Co-Moderator: Carla Noziglia, MS*

8:00 pm – 8:20 pm	**LW1**	**The Doll and Its Maker: The Tale of Three Men Who Shaped Modern Forensic Practice Told Through Their Forensic Casework** *Brian Gestring, MS**
8:20 pm – 8:40 pm	**LW2**	**The Lampshades and Pocket Knife Pouch From the Buchenwald Concentration Camp Are Made From Human Skin** *Mark Benecke, PhD*; Antoaneta Trommer, MSc; Sandra Stenzel, PhD; Kristina Baumjohann, MSc; Holm Kirsten, MSc*
8:40 pm – 9:00 pm	**LW3**	**Weaponizing Psychiatry: Not a Thing of the Past** *Corina Freitas, MD*; George Annas, MD; Carmen Nichita, MD*
9:00 pm – 9:20 pm	**LW4**	**(Un)solving Jack the Ripper: How Bias and Prejudice Shaped the Search for the Whitechapel Killer** *Matteo Borrini, PhD**
9:20 pm – 9:40 pm	**LW5**	**The Survivors of the Battle of Shiloh—A Photo Legacy** *Colleen Fitzpatrick, PhD**

YFSF POSTER SESSION

Wednesday

Poster Session

11:30 am – 1:00 pm	**Y1**	**Assessing the Accuracy and Precision of Crime Scene Measurements Obtained From Apple LiDAR Scans** *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**Y2**	**Utilizing Honey Bees (Apis Mellifera) as a Surveillance and Monitoring Technique for Bacterial Pathogens in Specific Environments** *Jordan Walter, BSc*; James Creecy, PhD*
11:30 am – 1:00 pm	**Y3**	**Human Profiling: The Application of the Oral Microbiome in the Prediction of Geographic Origin** *Nengi Ogbanga, PhD*; Andrew Nelson, PhD; Darren Smith, PhD; Noemi Procopio, PhD*
11:30 am – 1:00 pm	**Y4**	**Understanding Postmortem Changes in the Porcine Muscle Metabolome for Postmortem Interval Estimation** *Maria Elena Chiappetta, MSc*; Sara Locorriere, BSc; Peter Cross, MSc; Andrea Bonicelli, PhD; Noemi Procopio, PhD*
11:30 am – 1:00 pm	**Y5**	**The Rearing and Forensic Use of Calliphora Vomitoria Blow Fly Larvae** *Isabelle Cucinotta, BS*; Heather Coyle, PhD*
11:30 am – 1:00 pm	**Y6**	**Psychiatry Resident Compliance With the Informed Consent Process for Voluntary Psychiatric Hospitalization** *Cecilia Zemanek, MD*; James Knoll, MD*
11:30 am – 1:00 pm	**Y7**	**Detecting Peri- and Post-Menopausal Bone Changes Utilizing Micro-CT for Forensic Anthropology** *Theresa De Cree, MS*; Shelby Garza, MA; Emily Brooks, MS; Emma Giacomello, MA* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**Y8**	**Breaking the Silence: A Study of the Efficacy of Diverse Interrogation Methods** *Rayna Yang**
11:30 am – 1:00 pm	**Y9**	**Visualizing Risk Factors of Missingness: How Spatial Software Can Illuminate Structural Violence** *Sarajane Smith-Escudero, BA*; Jesse Goliath, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**Y10**	**Gendered Language Discourse in Forensic Sciences Proceedings** *Samantha Unwin, BA*; Samantha Blatt, PhD; Jose Sanchez, BS; Elizabeth Redd, PhD*
11:30 am – 1:00 pm	**Y11**	**A Quantitative Analysis of Explosive Taggants in Forensic Samples Using Total Vaporization-Headspace/Gas Chromatography/Mass Spectrometry (TV- HS/GC/MS)** *Alexis Hecker, MS*; John Goodpaster, PhD; Jacqueline Boulet*
11:30 am – 1:00 pm	**Y12**	**Fingerprint Age Determination Using Spectrometry Imaging by Analyzing and Comparing the Degradation of Specific Compounds Within the Fingerprint Residue in Crime Scene and Surrounding Areas** *Esmael Mahmud, BSc**

YFSF POSTER SESSION

11:30 am – 1:00 pm	**Y13**	**Non-Human Proxies in Human Skeletal Research: Some Sampling and Treatment Considerations** *Dakota Bell, MS*; Luis Cabo, MS; Francisco Medina Paz, PhD; Sara C. Zapico, PhD; Joe Adserias-Garriga, PhD*
11:30 am – 1:00 pm	**Y14**	**To Scale or Not to Scale: The Accuracy and Impact Behind Scaling Three-Dimensional (3D) Models** *Ashley Paris, BS*; Micki Besse, MS; Savanna Agilar, MS; Heather Walsh-Haney, PhD*
11:30 am – 1:00 pm	**Y15**	**A Composition of Decomposition in Three Varying Conditions Involving Body Coverage Using Pig Carcasses** *Greta Zahn, BA*; Teja Vayuvegula, BAS; Emily Rancourt, MSFS; An-Di Yim, PhD; Joseph Dizinno, DDS*
11:30 am – 1:00 pm	**Y16**	**Designing Cerium-Doped Copper Oxide-Based Nanozymes for Microfluidic Sensing of Pesticides** *Aditi Kishor Dhamne, MSc**
11:30 am – 1:00 pm	**Y17**	**An Evaluation of Optimal Pretreatment and Quantitative Method Pairings for the Analysis of GC/MS Data From Weathered Gasoline** *Grace Boyer*; Mary Gregg, PhD*
11:30 am – 1:00 pm	**Y18**	**Integrating Machine Learning and ATR/FTIR Spectroscopy for Geographical Origin Identification to Combat Illegal Wood Trafficking** *Akanksha Sharma, MS*; Vishal Sharma, PhD*
11:30 am – 1:00 pm	**Y19**	**Optimizing OdoPlex Primers for Use in Pennsylvania Elk** *Tianna Warner, BS*; Mitchell Holland, PhD; Nicole Chinnici, DHSc; Jason Brooks, PhD*
11:30 am – 1:00 pm	**Y20**	**An Investigation Into the Feasibility of ICP/OES With Discriminant Function Analysis for the Forensic Characterization of Red Lipstick Samples** *Caroline Wisler, BS*; Ellen Hondrogiannis, PhD*
11:30 am – 1:00 pm	**Y21**	**Transforming Bioarchaeology: Computer Vision for Sex Identification in Skeletal Remains** *Kate Collette, BA**
11:30 am – 1:00 pm	**Y22**	**Investigating the Limits of Low-Input DNA Libraries for Genome Sequencing of Cryptosporidium** *Katherine Hshieh, BS*; Jenny Maloney, PhD; Aleksey Molokin, MSc*
11:30 am – 1:00 pm	**Y23**	**A Civil War Field Hospital: STR Analysis of Samples Collected From a Bloody Surgical Table** *Alyssa Spillar, BS*; Natalie Spencer, BS; Kristin Mossé, MS; J. McClintock, PhD*
11:30 am – 1:00 pm	**Y24**	**Cartridge Casings in Forensic Science: An Analyzation and Comparison of Cartridge Casings Fired From Unknown and Known Firearms** *Anna Sommerville, BS*; Kristin Mossé, MS*
11:30 am – 1:00 pm	**Y25**	**Pen Ink Analysis Via Raman Spectroscopy** *Alex Potter, BSc*; Ellen Hondrogiannis, PhD; Mary Sanjini Devadas, PhD*
11:30 am – 1:00 pm	**Y26**	**A Gas Chromatography/Mass Spectrometry and Pyrolysis Gas Chromatography/ Mass Spectrometry Analysis of Lubricant and Spermicide in Condoms and Personal Lubricants** *Laura Cross**

YFSF POSTER SESSION

11:30 am – 1:00 pm	**Y27**	**Evaluating the General Acceptance of Race-Neutral Statistical Analyses of CODIS Loci** *Isabelle Reed*; James Creecy, PhD*
11:30 am – 1:00 pm	**Y28**	**Utilizing Fragmentation of the Gentueri CollectEject Swab for CODIS Upload** *Hannah Schaeffer, BS*; Pamela Marshall, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**Y29**	**Evaluating the Reliability of the Megyesi Total Body Scoring Method on People of Color** *Eliana Gutierrez, MA*; Danny Wescott, PhD*
11:30 am – 1:00 pm	**Y30**	**The Characterization and Quantification of Cell-Free DNA in Touch Samples** *Veronica Poole*; Michael Marciano, PhD*
11:30 am – 1:00 pm	**Y31**	**A Robustness Analysis of High-Dimensional Consensus (HDC) Mass Spectra in Forensic Drug Identification** *Briana Capistran, PhD; Wencheng Zhong, MEng*; Amudhan Krishnaswamy Usha, PhD; Anthony Kearsley, PhD*
11:30 am – 1:00 pm	**Y32**	**Maximum Likelihood Techniques for Discriminating Mass Spectra of Isomers** *Amudhan Krishnaswamy Usha, PhD*; Briana Capistran, PhD; Anthony Kearsley, PhD*
11:30 am – 1:00 pm	**Y33**	**The Persistence of Trace DNA Samples in a Carjacked Scenario** *Daniel Leitholf, BS*; Bas Kokshoorn, PhD; Fabio Oldoni, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**Y34**	**The Effect of Ethanol on GHB UDP-Glucuronosyltransferase Activity** *Julie Loison, BS*; Robert Powers, PhD*
11:30 am – 1:00 pm	**Y35**	**Problematic Exclusionary Differences: The Tyranny of Universal Standards for Determining Exclusionary Differences** *Janean Hanka, MS*; JoAnn Buscaglia, PhD; Jack Hietpas, PhD; Danica Ommen, PhD; Christopher Saunders, PhD*
11:30 am – 1:00 pm	**Y36**	**An Investigation of the Impact of the Fire Debris Sample Extraction Process on Latent Fingerprints** *Hope Hardman, BS*; Robyn Lewis, BS; Derek Hardy, BA; Kimberly Kunkler, PhD*
11:30 am – 1:00 pm	**Y37**	**Using Historical Biocultural Variables and Vitamin D Deficiency to Assist With Biological Profiles** *Kristy Henson, MS**
11:30 am – 1:00 pm	**Y38**	**The Impact of Different Environments on DNA Degradation in Decomposing Mammalian Specimens** *McKenzie Lamm*; Kristy Henson, MS*
11:30 am – 1:00 pm	**Y39**	**An LC/MS/MS Analysis of Novel Psychoactive Arylcyclohexylamines in Blood** *Sean Lordo, BS*; Sara Walton, MS; Michael Truver, PhD; Alex Krotulski, PhD; Anthony Costantino, PhD*
11:30 am – 1:00 pm	**Y40**	**Investigating the Ability to Generate DNA Profiles From Swabs of the Body Surface Utilizing Rapid DNA Technology: A Pilot Study** *Nicole Clayton, BS*; Kaitlyn Glavee, BA; Krista Latham, PhD; Jami Sego, MS; Stephen Nawrocki, PhD*

YFSF POSTER SESSION

11:30 am – 1:00 pm	**Y41**	**The Development of a Quantitative Method for the Analysis of Illicit and Novel Benzodiazepines in Tablets Using Ultra-Performance Liquid Chromatography Coupled With Triple Quadrupole Mass Spectrometry** *Brielle Etze, BS*; Joshua DeBord, PhD; Alex Krotulski, PhD; Heather Harris, JD*
11:30 am – 1:00 pm	**Y42**	**DNA in Drugs: An Interdisciplinary Approach to Identify Drugs and the DNA Within** *Jaycie Esteban, BS*; Lindsay Kotchey, MS; Joshua DeBord, PhD; Joshua Kotchey, MSFS; Fabio Oldoni, PhD; Heather Harris, JD*
11:30 am – 1:00 pm	**Y43**	**LC/QqQ/MS Method Development and Validation for the Quantitative Analysis of Drugs and Their Metabolites in Postmortem Blood** *Allison Blocker, BS*; Amanda Mohr, MS; Brittany Casey, PhD; Anthony Costantino, PhD*
11:30 am – 1:00 pm	**Y44**	**A 12-Month Study on the Storage Conditions of Ignitable Liquids on Carbon Strips Used for Forensic Fire Debris Analysis** *Imani Peat*; Amanda Burkhart, PhD*
11:30 am – 1:00 pm	**Y45**	**An Analysis of Locally Purchased Δ8-Tetrahydrocannabinol Products Via Gas and Liquid Chromatography** *Austin Vest*; Amanda Burkhart, PhD*
11:30 am – 1:00 pm	**Y46**	**An Investigation of DNA Contribution From Trace Samples Recovered From a Hammer Used in a Simulated Assault Scenario** *Hope Rozycki, BS*; Bas Kokshoorn, PhD; Mechthild Prinz, PhD; Fabio Oldoni, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**Y47**	**The People Who Do Forensic Anthropology: Inferences From Interviews With Ten Forensic Anthropologists** *Valerie Arroyo, BA**
11:30 am – 1:00 pm	**Y48**	**Mapping Mortality: A Decade's Review of Drug Usage in Maryland (2014–2024)** *Nicholas Boire, MD*; Stephanie Dean, MD; Rebecca Phipps, PhD*
11:30 am – 1:00 pm	**Y49**	**Forensic Analysis of PDFs: The Role of Peritus in Standardization and Reproducibility** *Dineusa Maria do Amaral*; Cristiane Barbosa**
11:30 am – 1:00 pm	**Y50**	**Echoes of a Shotgun: Unraveling the Forensic and Clinical Mystery of Multiple Gunshot Wounds in a 26-Year-Old Male** *Treasa James, MBBS*; Akhilesh Pathak, MD*

Thursday

Poster Session

11:30 am – 1:00 pm	**Y51**	**An Assessment of Postmortem Interval by Analyzing Cellular Changes in Bone Marrow in Autopsy Cases: An Observational Study** *Treasa James, MBBS*; Akhilesh Pathak, MD*
11:30 am – 1:00 pm	**Y52**	**The Extraction, Amplification, and Analysis of Human DNA Recovered From Carrion Larvae and Adult Flies (Sarcophaga Bullata)** *Katie Long, BS*; Kristy Henson, MS*

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11:30 am – 1:00 pm	**Y53**	**CODIS-Eligible DNA Collection From Sexual Assault Victims** *Ella Noha*; Abimbola Famurewa, MPH; Jenny Black, BSN; Rebecca Vieh, MS; Nancy Downing, PhD*
11:30 am – 1:00 pm	**Y54**	**Age Dynamics in the Violence Reporting and Examination Process for Female Victims in Santa Catarina, Brazil (2021–2024)** *Ingrid Knochenhauer de Souza Mendes, MEng*; Túlio Leal Corrêa*
11:30 am – 1:00 pm	**Y55**	**The Early Identification of Respiratory Illnesses in Infants Through Medicolegal Death Investigative Practices** *Carletta Dunn, MS**
11:30 am – 1:00 pm	**Y56**	**Analyzing the Photo-Oxidation Effects of UV on the Physical Structure and Optical Properties of Synthetic Fibers** *Vicky Wang, BS*; Walter Rowe, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**Y57**	**A Comparison of Confiscated Vaping Products From Virginia Schools From 2019–2020 to 2022–2024** *Meredith Buckmire*; Kelsey Moss, BS; Alaina Holt, PhD; Ashleigh Outhous, MS; Justin Poklis, BS; Caroline Cobb, PhD; Michelle Peace, PhD*
11:30 am – 1:00 pm	**Y58**	**Fetal Pig Decomposition in Western Pennsylvania: A Characterization of Burial Environment and the Decomposition Process in a Western Pennsylvania Non-Human Outdoor Decomposition Facility** *Dakota Dickerson, BA**
11:30 am – 1:00 pm	**Y59**	**A Novel Technique to Identify Impurities Recovered With DNA Swabbing From Unfired Brass Ammunition** *AJ Troyer, BSFS*; Desiree Bliss, BS; Sangeetha Balabhadra, PhD; Khalid Lodhi, DSc; Zhiping Luo, PhD*
11:30 am – 1:00 pm	**Y60**	**A Comprehensive Study of 3D Scanning and Mapping Technology in Forensic Investigations: Accuracy, Efficiency, and Volume** *Emma Mancuso, BS (expected May 2025)*; Jessica Abbott, PhD*
11:30 am – 1:00 pm	**Y61**	**WITHDRAWN**
11:30 am – 1:00 pm	**Y62**	**A Qualitative and Quantitative Analysis of Heavy Metals in Topical Cannabis Pain Relief Products** *Sarah Murphy, BS*; Marisia Fikiet, PhD; Alyssa Marsico, PhD*
11:30 am – 1:00 pm	**Y63**	**The Identification and Quantification of Illicit Drugs in Blood Using Stir Bar Sorptive Extraction and LC/QqQ/MS** *Abigail Noll, BS*; Stephanie Wetzel, PhD; Sean Fischer, PhD; Ashley Ebert, PhD*
11:30 am – 1:00 pm	**Y64**	**Optimizing Simultaneous DNA, RNA, and Protein Extraction From Human Teeth: The Effects of Incubation Time and Environmental Factors** *Maria Castagnola, MA*; Mayaas Hassan, BA; Alixs Pujols, BS; Shelby Feirstein, MS; Luis Cabo, MS; Joe Adserias-Garriga, PhD; Sara C. Zapico, PhD*
11:30 am – 1:00 pm	**Y65**	**The Influence of Heat on Animal Fiber Transformation: Macroscopical and Microscopical Approaches** *Hwan Hee Lee, BS*; Walter Rowe, PhD*

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11:30 am – 1:00 pm	**Y66**	**A Portable Microfluidic Biochip for the Simultaneous On-Site Detection of Streptococcus Pneumoniae and Bordetella Pertussis for Forensic Pathology Investigation** *Angel Gutierrez Ruiz*; Ariana Almanza*; Xiujun Li, PhD*
11:30 am – 1:00 pm	**Y67**	**Investigating Without A Badge: How Civilian Detectives Influence Forensic Science and Law Enforcement** *Emily Lentsch, BS**
11:30 am – 1:00 pm	**Y68**	**The Effects of Anxiety and Depression on Adolescent Offender Behavior** *Maylynn Burns*; Rose Danek, PhD*
11:30 am – 1:00 pm	**Y69**	**Posthumous Sperm Viability: Exploring the Impact of Time Since Death for Forensic and Reproductive Applications in India** *Mrinal Patnaik, MD*; Raghvendra Vidua, MD; Arneet Arora, MD; Ashwani Tandon, MD*
11:30 am – 1:00 pm	**Y70**	**Isolating Novel DNA Methylomic Bone Signatures for Age Estimation in Fresh and Forensic Samples** *Luke W. Gent, Mres, BSc*; Edward Schwalbe, PhD; Dean Thompson, PhD; Noemi Procopio, PhD*
11:30 am – 1:00 pm	**Y81**	**Volatile Organic Compounds (VOC) of Decomposition of Tissues Exposed to Diphenhydramine and Ibuprofen Influence on Fly Attraction** *Mei Conlon*; Ashley Almeida, BS; Jovina Monteiro, BS; Samantha Sawyer, PhD*
11:30 am – 1:00 pm	**Y82**	**How Do Muzzle Velocity, Bullet Mass, and Overall Kinetic Energy Influence Skeletal Fracture Initiation and Propagation Patterns?** *Delaney Edwards, MA*; Mariyam Isa, PhD*

Friday

Poster Session

11:30 am – 1:00 pm	**Y71**	**The Variation of Aerosolized Nicotine as Ethanol Concentration Increases in E-Cigarette Formulations** *Jessemia Meekins, BS*; Justin Poklis, BS; Michelle Peace, PhD; Abby Veeser, MFS*
11:30 am – 1:00 pm	**Y72**	**An Analysis of the Incidence of Selected Opioids Seized Across Canada, 2018–2022** *Bella Lehtamaki-Croiser, BSc*; Matthew Leon, BSc; James Watterson, PhD*
11:30 am – 1:00 pm	**Y73**	**The Unsupervised Learning of Individuals in Keystroke Dynamics Via Semi-Supervised Multilayer Mixture Models** *Andrew Simpson, MS*; Semhar Michael, PhD*
11:30 am – 1:00 pm	**Y74**	**An Analysis of Human DNA Extraction From Plants in a Mock Burial** *Rebecca Sines, BS*; Lyndsie Ferrara, PhD; Sheree Hughes, PhD; Pamela Marshall, PhD*
11:30 am – 1:00 pm	**Y75**	**Examining the Presence of Foreign DNA on Neck Swabs** *Alexa Gonzalez Morales, BS*; Lyndsie Ferrara, PhD*
11:30 am – 1:00 pm	**Y76**	**The Persistence of Human eDNA in Air** *Pamela Marshall, PhD; Lyndsie Ferrara, PhD; Kayla Houghton, BS**
11:30 am – 1:00 pm	**Y77**	**The Development of a Multilocus Sequence Typing Scheme for Characterizing Geographically Distributed Yarrowia Lipolytica Strains** *Renea Douglas, BSc*; James Crill, BAS*

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11:30 am – 1:00 pm	**Y78**	**Subjective to Objective: An Investigation of Manual and Digital Qualitative Color Change Tools** *Giavanna Bassi, BS*; Savanna Agilar, MS; Micki Besse, MS; Heather Walsh-Haney, PhD* *(FSF Emerging Forensic Scientist Award Poster Presentation)*
11:30 am – 1:00 pm	**Y79**	**The Application of ATR/FTIR Spectroscopy for Differentiation of Liquid Cosmetic Foundations** *Kelly Elkins, PhD; Jaden Force, BS**
11:30 am – 1:00 pm	**Y80**	**The Effect the Distance Between the Sample and Charcoal Strip and the Type of Passive Headspace System Have on Overall Chromatographic Patterns of Ignitable Liquid Residues** *Emily Gondek, BS*; Ellen Hondrogiannis, PhD*

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- Presentations must be in PowerPoint® format.
- Proposals must be submitted on this form accompanied by a "6-slides-per-page" printout of the presentation and an electronic copy on CD or flash drive.
- BYOS is not intended as a forum to present scientific papers. It is designed as a means to present interesting information and/or unusual case(s) that may be educational and blended with humor.
- Speakers should plan on 10 minutes in which to present their material.
- Material being presented in other parts of the AAFS scientific program will not be accepted at BYOS.ppt.
- Tables, charts, and graphs should be avoided, making every effort to use slides of scenes, bodily findings, and evidence.

This completed form, a "6-slides-per-page" printout, and the electronic presentation copy should be delivered to the on-site AAFS Registration Desk by 4:00 p.m. on Wednesday, February 19, 2025. Presentations will be selected and scheduled based on perceived interest to the audience and in the order in which the completed submissions are received. This form and required printout are needed to organize the BYOS.ppt program and to allow appropriate allocation of continuing education credit.

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Name and Degree(s): _____

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The presentation is being offered primarily to:

☐ Solicit input/advice on a challenging case
☐ Present interesting information or case(s) for education purposes
☐ Entertainment

Presentation is:

☐ A single case
☐ A series of cases with a common topic
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Briefly describe the material to be presented: _____

_____

What are the major points to be emphasized?: _____

_____

How will the attendees benefit from this presentation?: _____

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How much presentation time is required?: _____ minutes How many PowerPoint® slides will be shown?: _____

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The BYOS agenda, scheduled presentation times, and continuing education credit hours will be posted near the BYOS meeting room.

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