

DIGITAL & MULTIMEDIA SCIENCES

Thursday

Quality: Quintessential or Questionable?

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

Mobile Devices: Movable Mastery or Manipulating Minds?

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

Internet of Things (IoT): Integrating or Isolating?

1:10 pm – 1:30 pm	C10	A Forensic Analysis of Google Fit App on WearOS <i>Chen Shi, MS*; Yong Guan, PhD</i>
1:30 pm – 1:50 pm	C11	Unveiling Sleep Patterns: Insights From Garmin FIT Protocol Data <i>Nina Matulis, MS*; Jenna Rockhold, BS*; Marcus Rogers, PhD*; Umit Karabiyik, PhD*</i>

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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?

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?

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**

Friday

Biometrics: Building Boundaries or Bridges?

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*

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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?

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 – 1:40 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**

Artificial Intelligence (AI): Advancing or Alarming?

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**

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Behind the Screen: Benevolent Brainstorming or Bad Behavior?

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| 3:10 pm – 3:30 pm | C32 | Attitudes Toward and Barriers to Mental Health Support for Digital & Multimedia Forensic Examiners
<i>Sonali Tyagi, MS*; Kathryn Seigfried-Spellar, PhD*</i> |
| 3:30 pm – 3:50 pm | C33 | Emerging Ethical and Technical Challenges in Digital Profiling
<i>Chad Steel, PhD*; Angel Morningstar, MS*</i> |
| 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
<i>Reeya Ramasamy*; Tatiana Ringenberg, PhD*; Kathryn Seigfried-Spellar, PhD*</i> |
| 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
<i>Nina Matulis, MS*; Kathryn Seigfried-Spellar, PhD*; Marcus Rogers, PhD*</i> |