

DIGITAL & MULTIMEDIA SCIENCES

Thursday

Quality: Quintessential or Questionable?

Moderator: Nina Matulis, MS

Co-Moderator: Mary Adedayo, PhD

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| 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?

Moderator: Cole Whitecotton, MS

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| 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 |

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Internet of Things (IoT): Integrating or Isolating?

Moderator: Alex Nelson, PhD

Co-Moderator: Sneha Sudhakaran, PhD

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| 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> |
| 1:50 pm – 2:10 pm | C12 | Utilizing Smart Watches in Forensic Science: A Case Study on Verifying Witness Statements and Tracking Drug Ingestion
<i>Ashraf Mozayani, PhD*</i> |
| 2:10 pm – 2:25 pm | | BREAK |

Computers: Creating or Curtailing?

Moderator: Umit Karabiyik, PhD

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| 2:25 pm – 2:45 pm | C13 | DarkWeb Investigations Using Offensive Security Techniques
<i>Gabriel Nunes, BS*</i> |
| 2:45 pm – 3:05 pm | C14 | The Combination of Non-Obvious Links in Online Fraud Investigations
<i>Timothy Bollé, MS*; Eoghan Casey, PhD; Thomas Souvignet, PhD</i> |
| 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
<i>Gustavo Vilar, MS*</i> |
| 3:25 pm – 3:40 pm | | BREAK |

Tools and Standards: Testing or Trusting?

Moderator: Vir Phoha, PhD

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| 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
<i>Marc Canellas, PhD*</i> |
| 4:00 pm – 4:20 pm | C17 | The Limitations of Digital Forensics Tools for Database System Examination
<i>Bhavye Malhotra, BS*; Oluwasola Mary Adedayo, PhD*</i> |
| 4:20 pm – 4:40 pm | C18 | Standards Development Activities in Digital and Multimedia Forensic Science
<i>Tracy Walraven, MFS*</i> |

DIGITAL & MULTIMEDIA SCIENCES

Friday

Biometrics: Building Boundaries or Bridges?

Moderator: Andrew Crouse, BA

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

Multimedia: Managing Morally or Maliciously Misleading?

Moderator: Thomas Moore, MS

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| 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?
<i>Jason Latham, MS*</i> ; <i>Douglas Lacey, MS</i> |
| 10:20 am – 10:40 am | C24 | Identifying Social Media Video Provenance Through Forensic Structural Analysis
<i>Clarissa Tan, MS*</i> ; <i>Brandon Epstein, MS*</i> ; <i>Bertram Lyons, MA*</i> |
| 10:40 am – 11:00 am | C25 | The Application of Likelihood Ratios to Audio Authentications: Selected Preliminary Results
<i>James Zjalic, MS*</i> |
| 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?
<i>Christina Malone, MSFS*</i> ; <i>Wendy Dinova-Wimmer, BS*</i> |
| 11:20 am – 1:10 pm | | BREAK |

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Artificial Intelligence (AI): Advancing or Alarming?

Moderator: Joseph Remy, JD

Co-Moderator: Kyp Stavrou, BA

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

Behind the Screen: Benevolent Brainstorming or Bad Behavior?

Moderator: Jason Lewis, PhD

Co-Moderator: Chad Johnson, PhD

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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*</i> ; <i>Kathryn Seigfried-Spellar, PhD*</i> |
| 3:30 pm – 3:50 pm | C33 | Emerging Ethical and Technical Challenges in Digital Profiling
<i>Chad Steel, PhD*</i> ; <i>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*</i> ; <i>Tatiana Ringenberg, PhD*</i> ; <i>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*</i> ; <i>Kathryn Seigfried-Spellar, PhD*</i> ; <i>Marcus Rogers, PhD*</i> |