

DIGITAL & MULTIMEDIA SCIENCES

Thursday

JUST for Starters: Talking About The Forensic Analysis of Mobile Devices

8:30 AM – 8:50 AM	C1	A Forensic Analysis of Veo Micromobility Mobile Application on iOS® Devices <i>Nina Matulis, MS*</i> ; <i>Umit Karabiyik, PhD</i> ; <i>Marcus Rogers, PhD</i> ; <i>Baijian Yang</i>
8:50 AM – 9:10 AM	C2	A Forensic Analysis on Major Android™ Cloud SDKs <i>Chen Shi, PhD*</i> ; <i>Yong Guan, PhD</i>
9:10 AM – 9:30 AM	C3	Geodata Sleuthing: Geo-Contextualized Digital Footprints Analysis to Empower Cyber Forensic Investigations and Life Pattern Analysis <i>Mohammad Meraj Mirza, PhD*</i> ; <i>Umit Karabiyik, PhD</i>
9:30 AM – 9:50 AM	C4	The Development, Testing, and Comparison of Decontamination Methods for Drugs and Ignitable Liquids From Mobile Devices <i>Christopher Michael Haser, BS*</i> ; <i>Kimberly S. Kunkler, PhD</i> ; <i>Lauren L. Richards-Waugh, PhD</i>
9:50 AM – 10:00 AM		BREAK

It JUST Goes to Show . . . Or Does It?

10:00 AM – 10:20 AM	C5	Using File Structure to Authenticate Video Files Uploaded to Cloud Storage Via iOS® Mobile Web Browser <i>Brandon Epstein, MS*</i> ; <i>Bertram Lyons, MA*</i>
10:20 AM – 10:40 AM	C6	An Overview of Deepfake Technologies: From Creation to Detection in Forensics <i>Luca Guarnera, PhD*</i> ; <i>Sebastiano Battiato, PhD</i>
10:40 AM – 11:00 AM	C7	The Application of Artificial Intelligence in Forensic Science AI4Forensics From Deepfakes to Risks and Challenges <i>Zeno J. Geradts, PhD*</i>
11:00 AM – 11:20 AM	C8	Searching for Hidden Data in Multimedia Files with UNCOVER <i>Zeno J. Geradts, PhD*</i>
11:20 AM – 1:00 PM		BREAK

JUST in Time: Verifying Multimedia Evidence

1:00 PM – 1:20 PM	C9	The Accuracy of Time Stamps on Surveillance Recording Devices <i>Benjamin Tyler Molnar, BSME*</i> ; <i>Toby Terpstra</i> ; <i>Tilo Voitel</i>
1:20 PM – 1:40 PM	C10	Forensic Video Analysis of an Underwater Volcanic Explosion That Injured Multiple Tour Boat Passengers <i>Parris Ward, BA, JD*</i>
1:40 PM – 2:00 PM	C11	An MDCT Analysis of Copy-Paste Fragments Without Query in Digital Forensic Audio <i>Catalin Grigoras, PhD*</i> ; <i>Cole Whitecotton, MSc</i>
2:00 PM – 2:20 PM		BREAK

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2:20 PM – 2:40 PM	C12	Navigating the SILK Road: An Examination of WeChat SILK Audio Files <i>Andrew N. Crouse, BA*; Douglas S. Lacey, MS, BS*; Brian Smith, BS*; In Yong Shin, BE; Louis Chan, BBA; Ricky W.K. Lam, BS</i>
2:40 PM – 3:00 PM	C13	Validation of Image Stream Hashing: A Forensic Method for Content Verification <i>Gregory S. Wales, DFS*</i>
3:00 PM – 3:30 PM		BREAK

JUSTice For All: Joining Digital & Multimedia With Jurisprudence

3:30 PM – 3:50 PM	C14	Modeling Influences on the Understanding of Digital and Multimedia Evidence (DME) by Attorneys and Digital Forensic Examiners (DFE) Within the United States Criminal Justice System <i>Joseph Levi White, PhD*</i>
3:50 PM – 4:10 PM	C15	Uncovering Ethical and Legal Issues Associated With the Rising Trend of Using Chatbots—Crime Scene Investigation and Scientific Publishing <i>Ankita Guleria, MSc*; Rakesh Meena, MSc; Nandini Chitara, MSc; Vishal Sharma, PhD; Kewal Krishan, PhD</i>
4:10 PM – 4:30 PM	C16	The Case of the Distracted Pedestrian: The Importance of Experts in Digital Forensics <i>Jason R. Lewis, PhD*</i>
4:30 PM – 5:00 PM	C17	The Potential for Impacting Unsolved Case Outcomes With the Inclusion of Digital and Multimedia Evidence (DME) Forensics Into Cold Case Units <i>Joseph Levi White, PhD*</i>

Friday

JUST To Let You Know: Ensuring Quality and JUSTice in Digital & Multimedia Sciences

9:00 AM – 9:20 AM	C18	A Study of Digital Evidence (DE) Processing Efficiencies in Publicly Funded Crime Laboratories <i>Christopher L. Williams, BS*; Peyton Attaway, MPH; Nichole D. Bynum, MS; Crystal Daye, MPA; Hope M. Smiley-McDonald, PhD; John H. Grassel, MS</i>
9:20 AM – 9:40 AM	C19	Standards Development Activities in Digital and Multimedia Forensic Science <i>Tracy Walraven, MFS*</i>
9:40 AM – 10:00 AM	C20	What's VITAL When It Comes to Digital/Multimedia Standards? An Update From the OSAC Video/Imaging Technology & Analysis (VITAL) Subcommittee <i>Christina A. Malone, MSFS*; Marla E. Carroll, BS*; Neil F. Johnson, PhD*; Melissa Kimbrell; Michelle Montonera, MS</i>
10:00 AM – 10:10 AM		BREAK

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JUST The Facts: Computer Forensic Investigations

10:10 AM – 10:30 AM	C21	The Integration of Forensic Science and Artificial Intelligence: The Implications in Crime Scene Investigations <i>Nandini Chitara, MSc*; Damini Siwan, MSc*; Ankita Guleria, MSc; Rakesh Meena, MSc; Vishal Sharma, PhD; Kewal Krishan, PhD</i>
10:30 AM – 10:50 AM	C22	WITHDRAWN
10:50 AM – 11:10 AM	C23	Live Memory Acquisition for STM32-Based Microcontrollers With ARM TrustZone <i>Karley Waguespack, BS*; Aisha Ali-Gombe, PhD</i>
11:10 AM – 11:30 AM	C24	Live Memory Forensics of Field Devices in Industrial Control Systems <i>Irfan Ahmed*</i>
11:30 AM – 1:00 PM		BREAK

This JUST In: Tools and Their Developments

1:00 PM – 1:20 PM	C25	Provenience-Based Cross-Verification of Digital Forensic Artifacts Applied to NTFS <i>Alex J. Nelson, PhD*; Sheldon L. Douglas</i>
1:20 PM – 1:40 PM	C26	Testing File Carving Tools <i>James R. Lyle, MS, PhD*; Barbara Guttman, BA</i>
1:40 PM – 2:00 PM	C27	The Latest Developments in Sailfish OS Forensics <i>Krassimir T. Tzvetanov, MS*</i>
2:00 PM – 2:20 PM	C28	Toward Personal Internet-of-Things User Attribution During Forensic Investigations <i>Shinelle Hutchinson*; Umit Karabiyik, PhD</i>
2:20 PM – 2:30 PM		BREAK

JUST Think: New and Novel Techniques in Multimedia Forensics

2:30 PM – 2:50 PM	C29	Deep Audio Analyzer: A Framework to Industrialize the Research on Audio Forensics <i>Valerio Francesco Puglisi, MS, BS*; Sebastiano Battiato, PhD; Oliver Giudice, PhD</i>
2:50 PM – 3:10 PM	C30	The Impact of Multi-Camera Smart Phones on Source Camera Identification <i>Stephanie Reinders, PhD*; Danica M. Ommen, PhD; Alicia Laura Carriquiry, PhD</i>
3:10 PM – 3:30 PM	C31	Research and Development of the Next Generation Digital Forensic Image Transmission Tool <i>Kevin Fairbanks, PhD*; Mark Guido, MS</i>
3:30 PM – 3:50 PM	C32	Poses and Grimaces: Challenges for Automated Face Identification Algorithms? <i>Petra Urbanova, PhD*; Dominik Cerny, MSc; Tomas Goldmann, MSc</i>