Nineteenth Annual IFIP WG 11.9 International Conference on Digital Forensics

SRI International
1100 Wilson Boulevard, Suite 2800 (28th Floor)
Arlington, Virginia 22209
January 30-31, 2023

January 30, 2023 (Monday)

8:15am - 8:50am: Breakfast

9:00am - 9:10am: Welcoming Remarks and Logistics
Laura Tinnel, Conference General Chair, SRI International, Arlington, Virginia, USA

9:10am - 10:10am: Keynote Lecture
U.S. Secret Service National Computer Forensics Institute: Operationalizing Education, Training and Research with Academic Partners
Steven Baskerville, Assistant to the Special Agent in Charge, U.S. Secret Service National Computer Forensic Institute
Laboratory, University of Tulsa, Tulsa, Oklahoma, USA

10:10am - 10:40am: Session 1
Chair: Laura Tinnel, SRI International, Arlington, Virginia, USA

Evolution of Digital Forensics Laws Globally and the Emerging Challenges
Kaushik Thinnaneri Ganesan
Indian Revenue Service, Ministry of Finance, Mumbai, India

10:40am - 11:00am: Break

11:00am - 12:00pm: Session 2
Chair: Gilbert Peterson, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

Analysis of Security Features in Security Documents
Pulkit Garg, Saheb Chhabra, Garima Gupta and Gaurav Gupta
Indian Institute of Technology Jodhpur, Jodhpur, India
Indraprastha Institute of Information Technology Delhi, New Delhi, India
Ministry of Electronics and Information Technology, New Delhi, India

Dynamic Malicious Document Detection Using Multi-Memory Features
Yuanyuan Wang, Gengwang Li, Min Yu, Kam-Pui Chow, Jianguo Jiang, Xiang Meng and Weiqing Huang
Chinese Academy of Sciences, Beijing, China
University of Hong Kong, Hong Kong, China

12:00pm - 1:00pm: Lunch

1:10pm - 2:10pm: Keynote Lecture
Digital Forensic Investigations of Field Devices in Industrial Control Systems
Irfan Ahmed, Associate Professor of Computer Science, Virginia Commonwealth University, Richmond, Virginia, USA

January 30, 2023 (Monday) (continued)

2:10pm - 3:10pm: Session 3
Chair: Yong Guan, Iowa State University, Iowa, USA

A Blockchain Concept for Sharing Criminal Information in Criminal Justice Systems
Pardon Takalani Ramazhambauan
Council for Scientific and Industrial Research, Pretoria, South Africa

Identifying Superspreaders Using a Ranking System Object Instance Graph
Rajani Mohan Suryavanshi, Xiaoyan Sun and Jun Dai
California State University Sacramento, Sacramento, California, USA

3:10pm - 3:30pm: Break

3:30pm - 5:00pm: Session 4
Chair: Huw Read, Norwich University, Northfield, Vermont, USA

Automated Temporal Reconstruction in Autopsy
Ryan Montgomery
Air Force Office of Special Investigations, Joint Base Andrews, Maryland, USA

Mobile Payment Forensic Analysis of Apple Pay on iOS
Trevor Nicolson, Darren Hayes and Nhien-An Le-Khac
University College Dublin, Dublin, Ireland
Pace University, New York, New York, USA

Anti-Fuzzing Approach for Android Apps
Chao-Chun Cheng, Li Lin, Chen Shi and Yong Guan
Iowa State University, Ames, Iowa, USA

5:00pm - 5:30pm: IFIP WG 11.9 Business Meeting

January 31, 2023 (Tuesday)

8:15am - 8:45am: Breakfast

8:45am - 9:45am: Session 5
Chair: Kam-Pui Chow, University of Hong Kong, Hong Kong, China

Deepfake Detection Using Multiple Facial Features
Xinzhe Wang, Duohe Ma, Liming Wang, Zhitong Lu, Zhenchao Zhang and Junye Jiang
Chinese Academy of Sciences, Beijing, China

Using Perceptual Hashing in Targeted Content Scanning
Leon Twenning, Harald Baier and Thomas Göbel
Bundeswehr University Munich, Munich, Germany

9:45am - 10:00am: Break

10:00am - 11:00am: Keynote Lecture
Reading Individual Bits from Transistors in Non-Volatile Memory
Shawn McKay, Post-Doctoral Researcher, University of Tulsa, Tulsa, Oklahoma, USA

11:00am - 12:00pm: Session 6
Chair: Thomas Göbel, Bundeswehr University Munich, Munich, Germany

Revealing Human Attacker Behaviors Using an Adaptive Internet of Things Honeypot Ecosystem
Armin Ziaie Tabari, Guojun Liu, Xinming Ou and Anoop Singhal
University of South Florida, Tampa, Florida, USA
National Institute of Standards and Technology, Gaithersburg, Maryland, USA

Traceable Transformer-Based Anomaly Detection in a Water Treatment System
Shengzhi Qin, Yubo Lang and Kam-Pui Chow
University of Hong Kong, Hong Kong, China
Shenyang University of Technology, Shenyang, China

12:00pm - 1:00pm: Lunch

1:10pm - 2:10pm: Session 7
Chair: Sujeet Shenoi, University of Tulsa, Tulsa, Oklahoma, USA

Nintendo 3DS Forensic Examination Tools
Konstantinos Xynos, Huw Read, Iain Sutherland, Matthew Bovee and Trang Do
MycenX Consultancy Services, Stuttgart, Germany
Norwich University, Northfield, Vermont, USA
Noroff University College, Kristiansand, Norway

Forensic Analysis on Android Cryptocurrency Wallet Applications
Chen Shi and Yong Guan
Iowa State University, Ames, Iowa, USA