



Seventeenth Annual IFIP WG 11.9 International Conference on Digital Forensics
Fully Virtual (All Times U.S. Eastern Standard Time: UTC-5)
February 1-2, 2021

February 1, 2021 (Monday)

12:00pm - 12:10pm: Welcoming Remarks and Logistics

12:10pm - 01:10pm: Keynote Lecture

The Questions of Digital Forensics – Cues from Forensic Science

Martin Olivier, Professor of Computer Science, University of Pretoria, Pretoria, South Africa

01:10pm - 02:10pm: Session 1

Chair: Gilbert Peterson, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

A Digital Forensic Acquisition Kill Chain

Gunnar Alendal, Geir Olav Dyrkolbotn and Stefan Axelsson

Norwegian University of Science and Technology, Gjøvik, Norway

Halmstad University, Halmstad, Sweden

Empirical Evaluation of Network Traffic Analysis Using Approximate Matching Algorithms

Thomas Göbel, Frieder Uhlig and Harald Baier

Darmstadt University of Applied Sciences, Darmstadt, Germany

Technical University of Darmstadt, Darmstadt, Germany

Bundeswehr University Munich, Neubiberg, Germany

02:10pm - 02:30pm: Break

02:30pm - 04:00pm: Session 2

Chair: Mason Rice, Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA

Using Parallel Processing to Reduce the Computation Time of a Digital Media Similarity Measure

Myeong Lim and James Jones

George Mason University, Fairfax, Virginia, USA

Insider Threat Detection Using Variational Graph Encoding

Yichen Wei, Kam-Pui Chow and Siu-Ming Yiu

University of Hong Kong, Hong Kong, China

Malicious Login Detection Using Long Short Term Memory with an Attention Mechanism

Yanna Wu, Fucheng Liu and Yu Wen

Chinese Academy of Sciences, Beijing, China

04:00pm - 04:20pm: Break

04:20pm - 05:50pm: Session 3

Chair: Suryadiptra Majumdar, Concordia University, Montreal, Canada

Threat Intelligence Relation Extraction Using Distant Supervision and Neural Networks

Yali Luo

Chinese Academy of Sciences, Beijing, China

February 1, 2021 (Monday) (continued)

Political Movement Location Topicality Analysis Using Web Forum Data

Shengzhi Qin, Qiaokun Wen and Kam-Pui Chow

University of Hong Kong, Hong Kong, China

A Semi-Supervised Method for Detecting Malicious PDF Files

Jianguo Jiang, Nan Song, Min Yu, Kam-Pui Chow, Gang Li, Chao Liu and Weiqing Huang

Chinese Academy of Sciences, Beijing, China

University of Hong Kong, Hong Kong, China

Deakin University, Geelong, Australia

February 2, 2021 (Tuesday)

12:00pm - 01:00pm: Keynote Lecture

Technology as the Next Generation Insider

Nicole Beebe, Chair, Department of Information Systems and Cyber Security and Melvin Lachman Distinguished Professor in Entrepreneurship, University of Texas at San Antonio, San Antonio, Texas, USA

01:00pm - 02:00pm: Session 4

Chair: Stefan Axelsson, Halmstad University, Halmstad, Sweden

Enhancing Industrial Digital Forensics Analysis via Replication-Based Digital Twins

Marietheres Dietz, Ludwig Englbrecht and Günther Pernul

University of Regensburg, Regensburg, Germany

A Comparison of Attacks on Servers in the Darknet and the Clearnet

York Yannikos, Quang Anh Dang and Martin Steinebach

Fraunhofer Institute for Secure Information Technology, Darmstadt, Germany

Technical University of Darmstadt, Darmstadt, Germany

02:00pm - 02:20pm: Break

02:20pm - 03:50pm: Session 5

Chair: York Yannikos, Fraunhofer Institute for Secure Information Technology, Darmstadt, Germany

Leveraging the USB Power Delivery Implementation for Digital Forensic Acquisition

Gunnar Alendal, Geir Olav Dyrkolbotn and Stefan Axelsson

Norwegian University of Science and Technology, Gjøvik, Norway

Halmstad University, Halmstad, Sweden

Security Auditing of Smart Home Devices

Suryadipta Majumdar, Daniel Bastos and Anoop Singhal

Concordia University, Montreal, Canada

Bosch Security Systems, Ovar, Portugal

National Institute of Standards and Technology, Gaithersburg, Maryland, USA

Indian Currency Database for Forensic Investigations

Saheb Chhabra, Gaurav Gupta, Garima Gupta and Monika Gupta

Indraprastha Institute of Information Technology Delhi, New Delhi, India

Ministry of Electronics and Information Technology, New Delhi, India

University of Delhi, New Delhi, India

03:50pm - 04:10pm: Break

04:10pm - 05:10pm: Session 6

Chair: Sujeet Shenoj, University of Tulsa, Tulsa, Oklahoma, USA

A Survey of Security Issues Related to Quick Response Codes

Pulkit Garg, Saheb Chhabra, Gaurav Gupta, Garima Gupta and Monika Gupta

University of Delhi, New Delhi, India

Indraprastha Institute of Information Technology Delhi, New Delhi, India

Ministry of Electronics and Information Technology, New Delhi, India

A Taxonomy of iCloud Forensic Tools

Anand Kumar Mishra, Emmanuel Pilli and Mahesh Govil

Malaviya National Institute of Technology, Jaipur, India