ESORICS

ESORICS 2020 Workshops

Workshops Program
(online event)

17-18 September 2020
Guildford, United Kingdom

Edited by ESORICS 2020 Workshop Chair

Mark Manulis
Surrey Centre for Cyber Security
University of Surrey

Organized by

UNIVERSITY OF SURREY

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Last updated 08 September 2020

Overview All Workshops – Thursday, 17th September 2020

Time (UK)	STM	CBT	DPM	STAST	SECPRE	CyberICPS	DeSECSys	MSTEC
09:00 - 09:15	Welcome	Welcome	Welcome	Welcome	Welcome			Welcome
09:15 - 09:30	Session 1	Keynote 1	Keynote 1	Session 1	Keynote			Session 1
09:30 - 09:45	Session 1	Keynote 1	Keynote 1	Session 1	Keynote			Session 1
09:45 - 10:00	Session 1	Keynote 1	Keynote 1	Session 1	Keynote			Session 1
10:00 - 10:15	Session 1	Keynote 1	Keynote 1	Session 1	Session 1		Welcome	Session 1
10:15 - 10:30	Session 1	Break	Break	Break	Session 1		Keynote 1	
10:30 - 10:45	Session 1	Session 1	Session 1	Keynote	Session 1		Keynote 1	Session 2
10:45 - 11:00	Keynote 1	Session 1	Session 1	Keynote	Session 1		Keynote 1	Session 2
11:00 - 11:15	Keynote 1	Session 1	Session 1	Keynote	Session 1		Session 1	Session 2
11:15 - 11:30	Keynote 1	Session 1	Session 1	Break	Session 1		Session 1	Session 2
11:30 - 11:45	Session 2	Session 1	Session 1	Session 2	Session 1		Session 1	Session 3
11:45 - 12:00	Session 2	Session 1	Session 1	Session 2	Session 1		Session 1	Session 3
12:00 - 12:15	Session 2	Session 1	Session 1	Session 2	Session 1		Session 1	Session 3
12:15 - 12:30	Session 2	Session 1	Session 1	Session 2	Session 1		Session 1	Panel
12:30 - 13:30	Break	Break	Break	Break	Break			Break
13:30 - 13:45		Session 2	Session 2	Session 3	Session 2		Keynote 2	Session 4
13:45 - 14:00		Session 2	Session 2	Session 3	Session 2		Keynote 2	Session 4
14:00 - 14:15		Session 2	Session 2	Session 3	Session 2		Keynote 2	Session 4
14:15 - 14:30		Session 2	Session 2	Break	Session 2		Keynote 3	Session 4
14:30 - 14:45		Session 2	Session 2	Session 4	Session 3		Keynote 3	Session 5
14:45 - 15:00		Session 2	Session 2	Session 4	Session 3		Keynote 3	Session 5
15:00 - 15:15		Break	Break	Session 4	Session 3		Keynote 3	Session 5
15:15 - 15:30		Break	Break	Session 4	Session 3		Keynote 4	Session 5
15:30 - 15:45		Session 3	Session 3	Session 4	Session 3		Keynote 4	Panel
15:45 - 16:00		Session 3	Session 3	Break	Session 3		Break	
16:00 - 16:15		Session 3	Session 3	Session 5	Session 3		Session 2	
16:15 - 16:30		Session 3	Session 3	Session 5	Session 3		Session 2	
16:30 - 16:45		Session 3	Session 3	Session 5	Session 3		Session 2	
16:45 - 17:00		Session 3	Session 3	Closing	Session 3		Closing	

Overview All Workshops – Friday, 18th September 2020

Time (UK)	STM	CBT	DPM	ETAA	SPOSE	ADIoT	DETIPS	MPS	CPS4CIP
09:00 - 09:15		Keynote 2		Session 1	Welcome	Welcome	Welcome		Welcome
09:15 - 09:30	Keynote 2	Keynote 2		Session 1	Keynote	Session 1	Session 1		Keynote 1
09:30 - 09:45	Keynote 2	Keynote 2		Session 1	Keynote	Session 1	Session 1		Keynote 1
09:45 - 10:00	Keynote 2	Keynote 2		Session 1	Session 1	Session 1	Session 1		Session 1
10:00 - 10:15	Session 3	Break		Session 1	Session 1	Session 1	Session 1		Session 1
10:15 - 10:30	Session 3	Break		Session 1	Session 1	Session 1	Session 1		Session 1
10:30 - 10:45	Session 3	Session 4		Break	Session 1	Session 1	Session 1		Break
10:45 - 11:00	Session 3	Session 4		Break	Break		Break		Break
11:00 - 11:15	Session 3	Session 4		Session 2	Session 2		Session 2		Session 2
11:15 - 11:30	Session 3	Session 4		Session 2	Session 2		Session 2		Session 2
11:30 - 11:45	Closing	Session 4		Session 2	Session 2		Session 2		Session 2
11:45 - 12:00		Session 4		Session 2	Session 2		Session 2		Break
12:00 - 12:15		Session 4		Session 2			Session 2		Session 3
12:15 - 12:30		Session 4		Session 2			Session 2		Session 3
12:30 - 13:30	Break	Break	Break	Break	Break	Break	Break	Break	Break
13:30 - 13:45		Panel		Break				Welcome	Keynote 2
13:45 - 14:00		Panel		Break				Keynote 1	Keynote 2
14:00 - 14:15		Panel		Session 3				Keynote 1	Sesssion 4
14:15 - 14:30		Panel		Session 3				Keynote 1	Sesssion 4
14:30 - 14:45		Panel		Session 3				Keynote 2	Sesssion 4
14:45 - 15:00		Panel		Session 3				Keynote 2	Break
15:00 - 15:15		Farewell		Session 3				Break	Session 5
15:15 - 15:30				Session 3				Break	Session 5
15:30 - 15:45				Session 3				Session 1	Closing & Planning
15:45 - 16:00				Session 3				Session 1	Closing & Planning
16:00 - 16:15								Session 1	
16:15 - 16:30								Session 1	
16:30 - 16:45								Session 1	
16:45 - 17:00								Session 1	

DPM: 15th International Workshop on Data Privacy Management

Workshop website: https://deic-web.uab.cat/conferences/dpm/dpm2020/

Thursday, 17th September 2020

09:00 – 10:15
WELCOME & KEYNOTE 1 (joint with CBT, use Webinar of CBT)
Workshop chairs (Guillermo Navarro & Joaquin Garcia-Alfaro)
Title: Design tradeoffs for Bitcoin Watchtowers
Speaker: *Sergi Delgado*, @Talaia Labs

10:15 – 10:30
BREAK

10:30 – 12:40
SESSION 1: Fairness, Differential Privacy & Scalability

- 10:30-11:00 Fairness-Aware Privacy-Preserving Record Linkage
  Abstract video link: https://youtu.be/CIFHUdly5e4
  Dinusha Vatsalan, Joyce Yu, Wilko Henecka and Brian Thorne

- 11:00-11:30 Differential-Private Profiling of Anonymized Customer Purchase Records
  Abstract video link: https://youtu.be/y7XpmFK-aJ8
  Hiroaki Kikuchi

- 11:30-12:00 P-Signature-based Blocking to Improve the Scalability of Privacy-Preserving Record Linkage
  Abstract video link: https://youtu.be/9qveSxn-HNs
  Dinusha Vatsalan, Joyce Yu, Brian Thorne and Wilko Henecka

- 12:00-12:20 Integrating the data protection impact assessment into the software development lifecycle (Short Paper). Abstract video link: https://youtu.be/s3GSW9pd0lc
  Christopher Irvine, Dharini Balasubramaniam and Tristan Henderson

- 12:20-12:40 Citizens as Data Donors: Maximizing Participation through Privacy Assurance (Short Paper) Abstract video link: https://youtu.be/AnHm1zoY9FU
  Mohamad Gharib

12:40 – 13:30
BREAK

13:30 – 15:00
SESSION 2: Utility, Diversity & Leakage Resistance

- 13:30-14:00 Utility Promises of Self-Organising Maps in Privacy Preserving Data Mining
  Abstract video link: https://youtu.be/czGS4Sqralg
  Kabiru Mohammed, Aladdin Ayesh and Eerke Boiten

- 14:00-14:30 Multi-criteria Optimization Using l-diversity and t-closeness for k-anonymization
  Abstract video link: https://youtu.be/yuMlDbHxoaY
  Clémence Mauger, Gael Le Mahec and Gilles Dequen

- 14:30-15:00 ArchiveSafe: Mass-Leakage-Resistant Storage from Proof-of-Work
  Abstract video link: https://youtu.be/cKJcJ7rLdhA
  Moe Sabry, Reza Samavi and Douglas Stebila

15:00 – 15:30
BREAK

15:30 – 17:30
SESSION 3: Obfuscation, Contact Tracing & Privacy Loss
- 15:30-16:00 Joint Obfuscation for Privacy Protection in Location-Based Social Networks
  Abstract video link: https://youtu.be/DRO06gP85Cg
  Behnaz Bostanipour and George Theodorakopoulos

- 16:00-16:30 Modeling and analyzing the Corona-virus warning app with the Isabelle framework
  Abstract video link: https://youtu.be/SdGjqOYixwQ
  Florian Kammueller and Bianca Lutz

- 16:30-16:50 Tracking the Invisible: Privacy-Preserving Contact Tracing to Control the Spread of a Virus
  (Short Paper) Abstract video link: https://youtu.be/kWRaQ75HcBU
  Didem Demirag and Erman Ayday

- 16:50-17:10 Privacy Policy Classification with XLNet
  (Short Paper) Abstract video link: https://youtu.be/4CZi6cHbVyk
  Majd Mustapha, Katsiaryna Krasnashchok, Anas Al Bassit and Sabri Skhiri

- 17:10-17:30 Every Query Counts: Analyzing the Privacy Loss of Exploratory Data Analyses
  (Short Paper) Abstract video link: https://youtu.be/xrJH8a6BmX4
  Saskia Nuñez von Voigt, Mira Pauli, Johanna Reichert and Florian Tschorsch

Friday, 18th September 2020

09:00 – 10:00
KEYNOTE 2 (joint with CBT, use Webinar of DPM)
Title: Is Website Fingerprinting Actually Practical?
Speaker: *Marc Juarez* (University of Southern California).

10:00 – 10:30
BREAK

10:30 – 12:30
SESSION 4: AI, Engineering & Authentication
- 10:30-11:00 Extracting speech from motion-sensitive sensors
  Abstract video link: https://youtu.be/WLPiONkwL38
  Safaa Azzakhnini and Ralf C. Staudemeyer

- 11:00-11:30 A Lightweight Approach for the Elicitation of Privacy and Data Protection Requirements
  Abstract video link: https://youtu.be/HdqqBa-VqWo
  Nicolás E. Díaz Ferreyra, Patrick Tessier, Gabriel Pedroza and Maritta Heisel

- 11:30-12:00 Towards Multiple Pattern type Privacy Protection in Complex Event Processing
  Abstract video link: https://youtu.be/XopvpbdoYYg
  Saravana Murthy Palanisamy

- 12:00-12:30 GPS-based Behavioral Authentication Utilizing Distance Coherence
  Abstract video link: https://youtu.be/SgMHRv5Jx-Q
  Tran Phuong Thao and Rie Shigetomi Yamaguchi

12:30 – 13:30
BREAK

13:30 – 15:00
PANEL (joint with CBT, use Webinar of DPM)
- **Title:** How cryptocurrency and blockchain technology will become a trust foundation for the New Normal while ensuring data privacy management?
  Panel Moderator: Shin'ichiro Matsuo (Georgetown University)
  Panelists: *Pindar Wong (VeriFi limited)*
  Nat Sakimura (OpenID foundation)
  Julien Bringer (Convenor of ISO TC307/WG2)
  Florian Kammueller (Middlesex University London)
  Patrick McCorry (PISA Research)

15:00 – 15:10
CLOSING (joint with CBT, use Webinar of DPM)

KEYNOTE 2 TALK (check CBT Program for KEYNOTE 1 TALK)

Marc obtained his PhD in 2019 from the University of Leuven, Belgium. During his PhD he studied traffic analysis attacks and protocols that are resistant to it, with a focus on website fingerprinting attacks. He has also worked on censorship circumvention, privacy web search, and tracking in the web. Since October 2019, he is a Postdoc researcher in the University of Southern California where he is working on problems related to algorithmic bias and algorithmic fairness.

Title: Is Website Fingerprinting Actually Practical?

Abstract: Website fingerprinting is a traffic analysis technique that allows a local eavesdropper to learn information about the web pages visited over an encrypted channel. For the past two decades, the evaluations of website fingerprinting attacks presented in the academic literature have shown an ever-increasing accuracy. The consequences of such results, if they were to hold in practice, are alarming because they imply diminished privacy guarantees for web encryption protocols such as TLS and anonymity networks such as Tor. In the research community, there is a tension between works that show that the attacks are devastating, and others that show that such claims are inflated and that minimal defenses are required. In this talk, we will go through the dialogue between these two sides of the field and discuss the actual threat that website fingerprinting attacks pose to the privacy of web user.