



31st International Conference on  
**ICT Systems Security and Privacy Protection - IFIP SEC 2016**  
May 30th till June 1st, 2016, Ghent, Belgium

**KU LEUVEN**

Welcome to the IFIP International Information Security and Privacy Conference. The SEC conferences are a series of well-established international conferences on Security and Privacy. SEC is the flagship event of the International Federation for Information Processing (IFIP) Technical Committee 11 (TC-11).

The IFIP SEC conferences aim to bring together primarily researchers, but also practitioners from academia, industry and governmental institutions to elaborate and discuss IT Security and Privacy Challenges that we are facing today and will be facing in the future.

The IFIP WG11.5 Workshop on IT Assurance & Audit is co-located with IFIP SEC 2016 and takes place on Tuesday May 31st 2016.



---

## Monday 30 May 2016

---

**8:00 Registration**

**9:00 IFIP SEC 2016 Opening**

**Invited Talk: Crazy Time - Exploiting Software Without Bugs - Herbert Bos**

**10:15 Coffee Break**

**10:45 Session 1a: IFIP SEC Cryptographic Protocols (session chair: Frédéric Cuppens)**

Coercion-resistant Proxy Voting

*Oksana Kulyk, Stephan Neumann, Karola Marky, Jurlind Budurushi and Melanie Volkamer*

A Posteriori Openable Public Key Encryption

*Xavier Bultel and Pascal Lafourcade*

Multicast Delayed Authentication For Streaming Synchronphasor Data in the Smart Grid

*Sérgio Câmara, Dhananjay Anand, Victoria Pillitteri and Luiz Carmo*

**10:45 Session 1b: IFIP SEC Human Aspects of Security I (session chair: Rossouw Von Solms)**

Developing a Human Activity Model for Insider IS Security Breaches Using Action Design Research

*Gurpreet Dhillon, Spyridon Samonas and Ugo Etudo*

Evaluating CVSS Base Score Using Vulnerability Rewards Programs

*Awad Younis, Yashwant Malaiya and Indrajit Ray*

Defining Objectives For Preventing Cyberstalking

*Gurpreet Dhillon, Chandrashekar Challa and Kane Smith*

**12:15 Lunch Break**

**13:30 Session 2a: IFIP SEC Cyber Infrastructure (session chair: Indrajit Ray)**

Using Process Invariants to Detect Cyber Attacks on a Water Treatment System

*Sridhar Adepu and Aditya Mathur*

Expression and Enforcement of Security Policy for Virtual Resource Allocation in IaaS Cloud

*Yanhuang Li, Nora Cuppens-Bouahia, Jean-Michel Crom, Frédéric Cuppens and Vincent Frey*

Software Defined Networking Reactive Stateful Firewall

*Salaheddine Zerkane, Frédéric Cuppens, David Espes and Philippe Le Parc*

**13:30 Session 2b: IFIP SEC Human Aspects of Security II (session chair: Gurpreet Dhillon)**

Teaching Phishing-Security: Which Way is Best?

*Simon Stockhardt, Benjamin Reinheimer, Melanie Volkamer, Peter Mayer, Alexandra Kunz, Philipp Rack and Daniel Lehmann*

On Gender Specific Perception of Data Sharing in Japan

*Markus Tschersich, Shinsaku Kiyomoto, Sebastian Pape, Toru Nakamura, Gökhan Bal, Haruo Takasaki and Kai Rannenber*

TORPEDO: TOoltip-poweRed Phishing Email DetectiOn

*Melanie Volkamer, Karen Renaud and Benjamin Reinheimer*

**15:00 Coffee Break**

**15:30 Session 3a: IFIP SEC Social Networks (session chair: Carlos Rieder)**

SybilRadar: A Graph-Structure Based Framework for Sybil Detection in On-line Social Networks

*Dieudonne Mulamba, Indrajit Ray and Indrakshi Ray*

Collateral Damage in Online Social Networks: Apps, Friends and Privacy Interdependence

*Iraklis Symeonidis, Fateme Shirazi, Gergely Biczók, Cristina Perez-Sola and Bart Preneel*

**15:30 Session 3B: IFIP SEC Industrial Track (session chair: Bart De Decker)**

Security Strategy of a Hyperscale Cloud Provider

*Bruno Schroder, Microsoft*

Detecting Crypto Currency Mining in Corporate Environments

*Jan D'Herdt, IBM*

Building a Powerful Capturing and Analysis System based on ELK, Docker and Netflow

*Pieter Van Goethem, Cronos Security*

**18:00 Welcome Reception at Town Hall Ghent**

---

## Tuesday 31 May 2016

---

**8:30 Registration**

**9:15 IFIP SEC Kristian Beckman Award**  
**The Post-Snowden Threat Landscape - Bart Preneel**

**10:15 Coffee Break**

**10:45 Session 4a: IFIP SEC Software Vulnerabilities (session chair: Philippos Peleties)**  
Automated Source Code Instrumentation for Vulnerability Discovery  
*Hongzhe Li, Jaesang Oh, Hakjoo Oh and Heejo Lee*  
An Information Flow-based Taxonomy to Understand the Nature of Software Vulnerabilities  
*Daniela Oliveira, Jedidiah Crandall, Harry Kalodner, Nicole Morin, Megan Maher, Jesus Navarro and Felix Emiliano*  
Dissecting the XSS Exploitation Techniques and Fuzzing Mechanisms of Blackbox Scanners  
*Enrico Bazzoli, Claudio Criscione, Federico Maggi and Stefano Zanero*

**10:45 Session 4b: IFIP WG11.5 workshop on IT Assurance and Audit**  
Vision on the Future of IT Assurance  
*Abbas Shahim, chairman*  
The Soft Side of IT Project Management  
*René Hombergen*  
Controls for Digital Payment Services  
*Arne de Boer*

**12:15 Lunch Break**

**13:30 Session 5a: IFIP SEC TPM and Internet of Things (session chair: Yuko Murayama)**  
A Utility-based Reputation Model for the Internet of Things  
*Benjamin Aziz, Alvaro Arenas, Paul Fremantle and Rui Wei*  
Advanced Remote Firmware Upgrades Using TPM 2.0  
*Andreas Fuchs, Christoph Krauß and Jürgen Repp*

**13:30 Session 5b: IFIP WG11.5 workshop on IT Assurance and Audit**  
A View on Assurance within Digital Information Chains  
*René Matthijsse*  
Information Assurance in the Modern Age  
*Stef Schinagl*  
IT Assurance Trends 2016  
*Barry Derksen*

**15:00 Coffee Break**

**15:30 Session 6a: IFIP SEC Sidechannel Analysis (session chair: Jerzy Nawrocki)**

RegRSA: Using Registers as Buffers to Resist Memory Disclosure Attacks

*Yuan Zhao, Jingqiang Lin, Wuqiong Pan, Cong Xue, Fangyu Zheng and Ziqiang Ma*

Uncertainly? No, it's very certainly! Recovering the Key from Guessing Entropy enhanced side channel distinguishers

*Changhai Ou, Wang Zhu, Degang Sun, Xinping Zhou and Juan Ai*

**15:30 Session 6b: IFIP WG11.5 workshop on IT Assurance and Audit**

The CIO in the Boardroom versus the Three Lines of Defense

*Aart van der Vlist*

Assessing the Security of Cyber-Physical Systems - a Logic-Based Approach

*Laurens Lemaire*

How to avoid fraudulent IT products violating Ethical Principles? Code of Conduct should order IT Audits

*Sebastiaan Paans*

**18:30 Boat Trip through City Centre**

**20:00 Gala Dinner @ Salons Carlos Quinto**

---

## Wednesday 1 June 2016

---

**8:30 Registration**

**9:00 Session 7a: IFIP SEC Software Security (session chair: Nora Cuppens)**

Advanced or not? A comparative study of the use of anti-debugging and anti-VM techniques in generic and targeted malware

*Ping Chen, Lieven Desmet, Christophe Huygens and Wouter Joosen*

NativeProtector: Protecting Android Applications by Isolating and Intercepting Third-Party Native Libraries

*Yu-Yang Hong, Yu-Ping Wang and Jie Yin*

A progress-sensitive flow-sensitive inlined information-flow control monitor

*Andrew Bedford, Stephen Chong, Josee Desharnais and Nadia Tawbi*

**9:00 Session 7b: IFIP SEC Privacy (session chair: Kai Rannenberg)**

Deducing User Presence From Inter-Message Intervals in Home Automation Systems

*Frederik Möllers and Christoph Sorge*

Privacy by design principles in design of new generation cognitive assistive technologies

*Ella Kolkowska and Annica Kristoffersson*

A trustless privacy-preserving reputation system

*Alexander Schaub, Omar Hasan, Rémi Bazin and Lionel Brunie*

**10:30 Coffee Break**

**11:00 IFIP SEC Invited Talk**

**The risk-based approach to privacy: prospects and challenges - Daniel Le Métayer**

**12:00 OSA Award, IFIP SEC Best Student Paper Award and Closing**

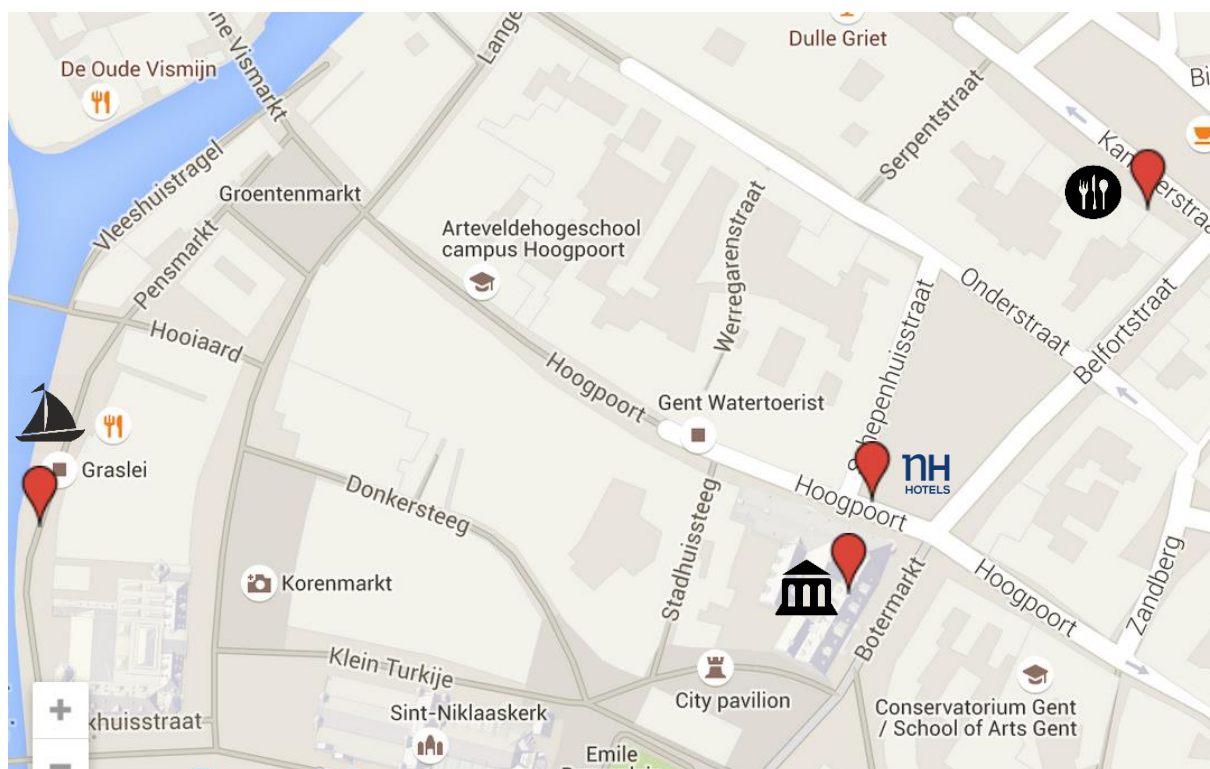
**14:00 Optional Social Event - Ghent Clip Walk**

**16:30 End of Optional Social Event**

---

## Social Events

---



### **Welcome Reception in Ghent's Town Hall (May 30th 2016, 18.00 – 20.30)**



The welcome reception will take place in the Austrian Salon of Ghent's Town Hall. The latter is a building with many faces. The flamboyant Gothic style of the facade in Hoogpoort contrasts sharply with the rather sober Renaissance style of the Botermarkt side.

### **Boat Trip through the city centre (May 31st 2016, 18.30 – 19.30)**



It will be our pleasure to take you on an informative boat trip throughout the city of Ghent and to let you discover the period of the Middle Ages. See the witnesses of the prestigious and glorious past.

### **Gala Dinner @ Salons Carlos Quinto (May 31st 2016, 20.00 – 24.00)**



The gala dinner will take place at [Salons Carlos Quinto](#), a restaurant located near Sint-Jacobs and Vrijdagmarkt, a five minute's walk away from the conference location (Kammerstraat 20, Gent).

### **Ghent Clip Walk (June 1st 2016, 14.00 – 16.30 [After conference closing - optional])**



The participants are split in teams. This contest leads you to the twelve most beautiful locations in the city centre, where you can make visual links. Start at the conference hotel.