# **Preliminary Program (IFIP SEC 2017)**

#### Monday May 29th 2017

| 08:00 - 08:50 | Registration   |
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| 08:50 - 09:00 | Opening  |
| 09:00 - 10:00 | Keynote: Jan Camenisch, <i>IBM</i> :  Cryptography for People  |
| 10:00 - 10:30 | Coffee Break   |
| 10:30 - 12:35 | SESSION 1 - Network security and cyber attacks (session chair: Javier Lopez)  Wilfried Mayer and Martin Schmiedecker Turning Active TLS Scanning to Eleven  Tulio A. Pascoal, Yuri Gil Dantas, Iguatemi E. Fonseca and Vivek Nigam Slow TCAM Exhaustion DDoS Attack  Gheorghe Hajmasan, Alexandra Mondoc, Radu Portase, Octacian Cret Evasive Malware Detection using Groups of Processes  Michael Denzel, Mark Ryan and Eike Ritter A Malware-Tolerant, Self-Healing Industrial Control System Framework  David Myers, Kenneth Radke, Suriadi Suriadi and Ernest Foo Process Discovery for Industrial Control System Cyber Attack Detection |
| 12:35 - 14:00 | Lunch Break  |
| 14:00 - 15:40 | SESSION 2 - Security and privacy in social applications and cyber attacks defense (session chair: Yazan Boshmaf)  Pablo Picazo-Sanchez, Raul Pardo and Gerardo Schneiderz Secure Photo Sharing in Social Networks  Lin Yuan, Joel Theytaz and Touradj Ebrahimi Context-Dependent Privacy-Aware Photo Sharing based on Machine Learning  Khondker Jahid Reza, Md Zahidul Islam and Vladimir Estivill-Castro 3LP: Three Layers of Protection for Individual Privacy in Facebook  Vasiliki Diamantopoulou, Christos Kalloniatis, Stefanos Gritzalis and Haralambos Mouratidis Supporting Privacy by Design using Privacy Process Patterns       |
| 15:40 - 16:10 | Coffee Break   |
| 16:10 - 17:25 | SESSION 3 - Private queries and aggregations (session chair: Kai Rannemberg)  Ruben Rios, David Nunez and Javier Lopez Query Privacy in Sensing-as-a-Service Platforms  Hafiz Asif, Jaideep Vaidya, Basit Shafiq and Nabil Adam Secure and Efficient k-NN Queries  Stephane Grumbach, Robert Riemann Secure and Trustable Distributed Aggregation based on Kademlia  |
| 18:15         | Bus transfer to the Casina Valadier  |

| 19:30 - 23:00 | Concert and Social Dinner |
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#### Tuesday May 30th 2017

| 09:00 - 10:00 | Keynote (Kristian Beckman Award): Gene Spafford, <i>Purdue University</i> : Reflections on the state of cyber security   |
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| 10:00 - 10:30 | Coffee Break   |
|               | SESSION 4 - Operating system and firmware security (session chair: Bruno Crispo)   |
|               | Warren J. Connell, Massimiliano Albanese and Sridhar Venkatesan A Framework for Moving Target Defense Quantification   |
|               | Mariem Graa, Nora Cuppens, Frederic Cuppens, Jean-Louis Lanet and Routa Moussaileb Detection of Side Channel Attacks based on Data Tainting in Android Systems                             |
| 10:30 - 12:35 | Minsik Shin, JungBeen Yu, Youngjin Yoon and Taekyoung Kwon The Fuzzing Awakens: File Format-Aware Mutational Fuzzing on Smartphone Media Server Daemons                                    |
|               | Andrei Costin, Apostolis Zarras and Aurelien Francillon Towards Automated Classification of Firmware Images and Identification of Embedded Devices   |
|               | Andreas Fuchs, Christoph Krauß and Jürgen Repp Runtime Firmware Product Lines using TPM2.0   |
| 12:35 - 14:00 | Lunch Break  |
|               | SESSION 5 - User authentication and policies (session chair: Frederic Cuppens)   |
|               | Lydia Kraus, Robert Schmidt, Marcel Walch, Florian Schaub and Sebastian Moller On the Use of Emojis in Mobile Authentication   |
| 14:00 - 15:40 | David Lorenzi, Jaideep Vaidya, Achyuta Aich, Shamik Sural, Vijay Atluri and Joseph Calca<br>EmojiTCHA: Using Emotion Recognition to Tell Computers and Humans Apart                        |
|               | Umberto Morelli and Silvio Ranise Assisted Authoring, Analysis and Enforcement of Access Control Policies in the Cloud   |
|               | Joseph Hallett and David Aspinall Capturing Policies for BYOD  |
| 15:40 - 16:10 | Coffee Break   |
|               | SESSION 6 - Applied cryptography and voting schemes (session chair: Joachim Posegga)   |
| 16:10 - 17:50 | Jean-Francois Couchot, Raphael Couturier and Michel Salomon Improving Blind Steganalysis in Spatial Domain using a Criterion to Choose the Appropriate Steganalyzer between CNN and SRM+EC |
|               | Lina Nouh, Ashkan Rahimian, Djedjiga Mouheb, Mourad Debbabi and Aiman Hanna<br>BinSign: Fingerprinting Binary Functions to Support Automated Analysis of Code Executables                  |
|               | Cecilia Pasquini, Pascal Schoettle and Rainer Boehme  Decoy Password Vaults: At Least As Hard As Steganography?  |
|               | Stephan Neumann, Manuel Noll and Melanie Volkamer  Election-Dependent Security Evaluation of Internet Voting Schemes   |
| 18:15 - 21:15 | Tour of Rome by Bus  |

#### Wednesday May 31st 2017

| 09:00 - 10:00 | Keynote Roberto Di Pietro, <i>Nokia Bell Labs:</i> Unleashing e-health potential: security and architectural issues  |
|---------------|--|
| 10:00 - 10:30 | Coffee Break   |
| 10:30 - 12:35 | SESSION 7 - Software security and privacy (session chair: Bart De Decker)  Julian Kirsch, Clemens Jonischkeit, Thomas Kittel, Apostolis Zarras and Claudia Eckert Combating Control Flow Linearization  Jeffrey Avery and Eugene H. Spafford Ghost Patches: Fake Patches for Fake Vulnerabilities  Hongfa Xue, Yurong Chen, Fan Yao, Yongbo Li, Tian Lan and Guru Venkataramani SIMBER: Eliminating Redundant Memory Bound Checks via Statistical Inference  Rene Meis and Maritta Heisel Towards Systematic Privacy and Operability (PRIOP) Studies  Thibaud Antignac, David Sands and Gerardo Schneider Data Minimisation: a Language-Based Approach |
| 12:35 - 14:00 | Lunch Break  |
| 14:00 - 15:40 | SESSION 8 - Privacy (session chair: Yuko Murayama)  Jun Wang and Qiang Tang Differentially Private Neighborhood-based Recommender Systems  Somayeh Taheri, Md Morshedul Islam and Reihaneh Safavi-Naini Privacy-enhanced Profile-based Authentication using Sparse Random Projection  Edoardo Serra, Jaideep Vaidya, Haritha Akella and Ashish Sharma Evaluating the Privacy Implications of Frequent Itemset Disclosure  Roberto Di Pietro, Federico Franzoni and Flavio Lombardi HyBIS: Advanced Introspection for Effective Windows Guest Protection  |
| 15:40 - 16:10 | Coffee Break   |
| 16:10 - 17:50 | SESSION 9 - Digital Signature, risk management, and code reuse attacks  Jihye Kim and Hyunok Oh Forward-Secure Digital Signature Schemes with Optimal Computation and Storage of Signers  Alessio Merlo and Gabriel Claudiu Georgiu RiskInDroid: Machine Learning-based Risk Analysis on Android  Ahmed Seid Yesuf, Jetzabel Serna-Olvera and Kai Rannenberg Using Fraud Patterns for Fraud Risk Assessment of E-services  Liwei Chen, Mengyu Ma, Wenhao Zhang, Gang Shi and Dan Meng Gadget Weighted Tagging: A Flexible Framework to Protect Against Code Reuse Attacks  |
| 17:50 - 18:00 | IFIP SEC Best Student Paper Award and Closing  |

## **WISE 10 Provisional Programme**

#### Monday May 29th 2017

| 08:00 - 08:50 | Registration  |
|---------------|---|
| 08:50 - 10:00 | Joint Program with IFIP SEC   |
| 10:00 - 10:30 | Coffee Break  |
| 10:30 - 12:20 | SESSION 1 - Information Security Training Chair: Lynn Futcher  Lynn Futcher Welcome by IFIP WG 11.8 Chair  Natalia Miloslavskaya and Alexander Tolstoy ISO/IEC Competence Requirements for Information Security Professionals  Lynette Drevin, Hennie Kruger, Anna-Marie Bell and Tjaart Steyn A linguistic approach to information security awareness education in a healthcare environment  Thando Mabece, Lynn Futcher and Kerry-Lynn Thomson South African Computing Educators' Perspectives on Information Security Behaviour  Konstantin Kogos and Sergey Zapechnikov Studying Formal Security Proofs for Cryptographic Protocols |
| 12:35 - 14:00 | Lunch Break   |
| 14:00 - 16:00 | SESSION 2 - Cyberesecurity Training Chair: Natalia Miloslavskaya  Keynote: Louise Yngstrom (Founder of WISE Conference)  Noluxolo Gcaza and Rossouw Von Solms Cybersecurity Culture: An ill-defined Problem  Susanne Wetzel Pathways in Cybersecurity: Translating Theory into Practice  Erik Moore, Dan Likarish and Steven Fulton Evaluating a Multi-Agency Cyber Security Training Program Using Pre-Post event assessment and Longitudinal Analysis   |
| 16:00 - 16:10 | Break   |
| 16:10 - 23:00 | Joint Program with IFIP SEC   |

#### Tuesday May 30th 2017

| 09:00 - 10:00 | Joint Program with IFIP SEC  |
|---------------|--|
| 10:00 - 10:30 | Coffee Break   |
| 10:30 - 12:35 | SESSION 3 - Education and Training Chair: Lynette Drevin  Odwa Yekela, Kerry-Lynn Thomson and Johan van Niekerk Assessing the Effectiveness of the Cisco Network Academy Program in Developing Countries |

|               | Matt Bishop, Melissa Dark, Ida Ngambeki, Jun Dai, Phillip Nico and Minghua Zh Evaluating Secure Programming Knowledge  Elmarie Kritzinger, Maria Bada and Jason Nurse A study into the cybersecurity awareness initiatives for school learners in South Africa and the UK  Natalia Miloslavskaya and Alexander Tolstoy Designing Degree Programmes for Bachelors and Masters in Information Security  Matt Bishop, Diana Burley, Scott Buck, Joseph Ekstrom, Lynn Futcher, David Gibson, Elizabeth Hawthorne, Siddharth Kaza, Yair Levy, Herbert Mattord and Allen Parrish Cybersecurity Curricular Guidelines |
|---------------|--|
| 12:35 - 14:00 | Lunch Break  |
| 14:00 - 16:00 | SESSION 4 - Network Security Education Chair: Erik Moore  Stig Mjolsnes and Ruxandra F. Olimid Introducing Mobile Network Security Experiments to Communication Technology Education  Natalia Miloslavskaya, Alexander Tolstoy and Anton Migalin "Network Security Intelligence" Educational and Research Center  Matt Bishop, Diana Burley and Lynn Futcher Workshop on the ACM Joint Task Force Cybersecurity Curricular Guidelines – Phase 1  |
| 16:00 - 17:50 | Joint Program with IFIP SEC  |
| 19:00 - 23:00 | Informal Wise Dinner   |

#### Wednesday May 31st 2017

| 09:00 - 10:00 | Joint Program with IFIP SEC   |
|---------------|---|
| 10:00 - 10:30 | Coffee Break  |
| 10:30 - 11:30 | Matt Bishop, Diana Burley and Lynn Futcher Workshop on the ACM Joint Task Force Cybersecurity Curricular Guidelines – Phase 2 |
| 11:30 - 11:40 | Closing of WISE10   |
| 11:40 - 13:00 | IFIP WG 11.8 AGM and Strategic Planning Workshop (IFIP WG11.8 members)  |
| 13:00 - 14:00 | Lunch Break   |

### iNetSec 2017 Program

The following is the iNetSec program.

Wednesday May 31st 2017

| 12:35 - 14:00 | Lunch Break   |
|---------------|---|
| 14:00 - 15:40 | Vladimir Oleshchuk Trust-Aware Security for Disruption-Tolerant Networks  Sadaf Momeni, Tooska Dargahi and Hossein Shafiei Post Disaster Resilient Networks: Design Guidelines for Rescue Operations  Alfonso de La Rocha and Panos Papadimitratos Blockchain-based Public Key Infrastructure for Inter-Domain Secure Routing |
| 15:40 - 16:10 | Coffee Break  |
| 16:10 - 17:15 | Stig F. Mjolsnes and Ruxandra F. Olimid The Challenge of Private Identification  Yudhistira Nugraha and Andrew Martin Understanding Security-related SLAs as Trust-Enhancing Instruments: Concepts, Approaches and Open Research Issues   |

### **NeCS Program**

The following is the NeCS program.

#### Monday May 29th 2017

| 08:00 - 08:50 | Registration   |
|---------------|--|
| 08:50 - 10:00 | Joint Program with IFIP SEC  |
| 10:00 - 10:30 | Coffee Break   |
| 10:30 - 12:35 | SESSION 1 - Risk management for Cyber-security  Ganbayar Uuganbayar Risk assessment for cyber-insurance  Salman Manzoor Security risk measurement & SLAs  Sandeep Gupta Attack vectors & cyber-threats  Oleksii Osliak Dynamic threat assessment & prediction  Wagner Medeiros dos Santos Risk Metrics for vulnerabilities |
| 12:35 - 14:00 | Lunch Break  |

| 14:00 - 15:00 | Invited Talk: Afonso Ferreira: Strategic thinking in information security   |
|---------------|---|
| 15:00 - 15:40 | SESSION 2 - Cyber-security Operations Systems & Services  Davide Ferraris Trust metrics for cyber-security  Imad Mahaini Modelling and analysing trust and influence in social networks   |
| 15:40 - 16:10 | Coffee Break  |
| 16:10 - 17:30 | SESSION 3 - Cyber-security intelligence and information sharing  Mario Faiella Intelligence & incident information sharing  Athanasios Rizos Usage control for information sharing  Martin Kolar Trustworthy information exchange  Adham Albakri Privacy - and Secrecy - preserving, Secure Processing of Big-Data / EU policy compliance |
| 17:30 - 18:00 | Final Discussion  |