

52nd Annual IEEE Carnahan Conference on Security Technology - Final Program - Montréal October 22-25, 2018

Monday, 22 October			
	09:00 - 14:00		Carnahan Cup Golf Tournament - Golf de la Côte des Isles, Montréal
Jasmin Meeting Room	18:00 - 20:00	2:00	Registration Reception at the Holiday Inn

Hibiscus A/B Room	Time	Duration	Authors	Topic / Title
Tuesday, 23 October				
Session 1	08:00 - 09:50	1:50	Plenary Session	
	08:00 - 08:10	10	Assembly in Ballroom	
	08:10 - 08:20	10	Conference Opening - Mr. Brian Rich, 2018 General Chairman, and Dr. Gordon Thomas, ICST Executive Committee Chairman	
	08:20 - 08:50	30	Keynote Address Dr. Réjean Plamondon, École Polytechnique, Université de Montréal	Personal Digital Bodyguards for e-Security, e-Health and e-Learning
	08:50 - 09:20	30	Keynote Address Joey St. Jacques, Security and Facilities - Senior Management, Hydro Ottawa	Protecting the Electrical Grid in North America - From a Physical and Cyber Security Perspective
	09:20 - 09:50	30	Keynote Address Hayder Kadhim, Global Delivery Lead - Justice and Public Safety, Genetec Inc.	Securing Cities Through Collaboration and Community Engagement

Break	09:50 - 10:10	0:20	
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Session 2	10:10 - 12:10	2:00	Selected Papers. Moderator: Rick Lazarick	
	10:10 - 10:30	20	Nicole Hättenschwiler, Sarah Merks and Adrian Schwaninger	Airport security X-ray screening of hold baggage: 2D versus 3D imaging and evaluation of an on-screen alarm resolution protocol
	10:30 - 10:50	20	Vincent Urias, Brian Van Louven, William Stout and Han Lin	Applying a Threat Model to Cloud Computing
	10:50 - 11:10	20	Fabio Garzia, Roberto Cusani, Francesco Borghini, Benedetta Saltini, Mara Lombardi and Soodamani Ramalingam	Perceived risk assessment through Open-Source Intelligent Techniques for Opinion Mining and Sentiment Analysis: the case study of the Papal Basilica and Sacred Convent of Saint Francis in Assisi, Italy
	11:10 - 11:30	20	Fatma Maqbali and Chris Mitchell	Email-based password recovery — risking or rescuing users?
	11:30 - 11:50	20	Ines Goicochea-Telleria, Ana Garcia-Peral, Raul Sanchez-Reillo and Anas Hussein	Presentation Attack Detection Evaluation on Mobile Devices: Simplest Approach for Capturing and Lifting a Latent Fingerprint
	11:50 - 12:10	20	Miguel Ferrer, Moises Diaz, Cristina Carmona-Duarte and Réjean Plamondon	A Biometric Attack Case based on Signature Synthesis

Lunch	12:10 - 13:10	1:00	
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Session 3	13:10 - 14:50	1:40	Biometrics 1. Moderator: Fabio Garzia	
	13:10 - 13:30	20	Nicanor Garcia-Ospina, Juan-Rafael Orozco-Arroyave and Jesus-Francisco Vargas-Bonilla	Speaker verification system for online education platforms
	13:30 - 13:50	20	Attallah Buriro, Rutger Van Acker, Bruno Crispo and Athar Mahboob	AirSign: Gesture-based Smartwatch User Authentication
	13:50 - 14:10	20	Vladimír Smejkal, Jindrich Kodl, František Hortai and Petr Tesar	About the Abuse Options of the Dynamic Biometric Signature
	14:10 - 14:30	20	Paloma Tirado-Martin, Jongwon Park and Raul Sanchez-Reillo	Effects of Data Reduction when Using Gaussian Mixture Models in Unidimensional Biometric Signals
	14:30 - 14:50	20	Jalil Khiaarak and Andrzej Pacut	An Ear Anti-spoofing Database With Various Attacks

Break	14:50 - 15:10	0:20	
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Session 4	15:10 - 16:50	1:40	Aviation, Cargo Security. Moderator: Gordon Thomas	
	15:10 - 15:30	20	Sarah Merks, Nicole Hättenschwiler, Melina Zeballos and Adrian Schwaninger	X-ray Screening of Hold Baggage: Are the Same Visual-cognitive Abilities Needed for 2D and 3D Imaging?
	15:30 - 15:50	20	Christer Wilkinson	Airport Staff Access Control: Biometrics at last?
	15:50 - 16:10	20	Robin Riz À Porta, Yanik Sterchi and Adrian Schwaninger	Examining Threat Image Projection Artifacts and Related Issues: A Rating Study
	16:10 - 16:30	20	Jimmy Florez and Jesus Francisco Vargas Bonilla	Radar Error Calculation and Correction System Based on ADS-B and Business Intelligent Tools
	16:30 - 16:50	20	Jack Glover, Praful Gupta, Zeina Sinno, Alan Bovik and Nicholas Paulter	Measuring and predicting detection performance as a function of image quality

Hibiscus A/B Room	Time	Duration	Authors	Topic / Title
Wednesday, 24 October				
Session 5	08:00 - 10:00	2:00	Physical Security 1. Moderator: Francisco Vargas Bonilla	
	08:00 - 08:20	20	Keith Harman	MIMO Cable Guided Radar
	08:20 - 08:40	20	Shailesh Singh, Chaofan Wang, Michael Olson, Benjamin Sherman, Nyambu Dorjkhand and Joseph Mehr	Reliable leak detection in pipelines using integrated temperature and acoustic fiber-optic sensors
	08:40 - 09:00	20	Meghan Galiardi, Stephen Verzi, Gabriel Birch, Jaclynn Stubbs and Bryana Woo	Physical Security Assessment Using Temporal Machine Learning
	09:00 - 09:20	20	Ann Speed, Bryana Woo, Camron Kouhestani, Jaclynn Stubbs and Gabriel Birch	Human Factors in Security
	09:20 - 09:40	20	David Luong, Bhashyam Balaji, Chung Wai Sandbo Chang and Christopher Wilson	Microwave Quantum Radar: an Experimental Validation
	09:40 - 10:00	20	William Stout, Brian Van Leeuwen, Vincent Urias, Julian Tuminaro, Spencer Schrock and Norma Dossaji	Leveraging Live, Virtual, Constructive Testbed for Evaluation of Moving Target Defenses

Break	10:00 - 10:20	0:20	
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Session 6	10:20 - 12:00	1:40	Physical Security 2. Moderator: Adrian Schwaninger	
	10:20 - 10:40	20	Shailesh Singh, Chaofan Wang, Michael Olson, Benjamin Sherman, Nyambuu Dorjkhand and Joseph Mehr	Enhanced buried perimeter protection using a fiber-optic target classification sensor
	10:40 - 11:00	20	Tomáš Loveček, Anton Šiser, David Řehák and Witalis Pellowski	The use of expert judgement as the method to obtain delay time values of passive barriers in the context of the physical protection system
	11:00 - 11:20	20	Jaclynn Stubbs, Camron Kouhestani, Bryana Woo and Gabriel Birch	CUAS Security Education
	11:20 - 11:40	20	Bhashyam Balaji	Quantum Radar: Snake Oil or Good Idea?
	11:40 - 12:00	20	Bhashyam Balaji	Quantum Illumination: A Laboratory investigation

Lunch	12:00 - 13:00	1:00		
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Session 7	13:00 - 14:40	1:40	Biometrics 2. Moderator: Miguel Ángel Ferrer	
	13:00 - 13:20	20	Jorge Sanchez-Casanova, Ines Goicoechea-Telleria, Judith Liu-Jimenez, Raul Sanchez-Reillo	Performing a presentation attack detection evaluation on voice biometrics
	13:20 - 13:40	20	Soodamani Ramalingam and Fabio Garzia	Facial Expressions Recognition Using Transfer Learning
	13:40 - 14:00	20	R. Blanco Gonzalo, B. Corsetti, I. Goicoechea-Telleria, A. Husseis, J. Liu-Jimenez, R. Sanchez-Reillo, et al.	Attacking a Smartphone Biometric Fingerprint System: a Novice's Approach
	14:00 - 14:20	20	Pablo Fernandez-Lopez, Kiyoshi Kiyokawa, Yang Wu, Judith Liu-Jimenez and Raul Sanchez-Reillo	Influence of walking speed and smartphone position on gait recognition
	14:20 - 14:40	20	Chiara Lunerti, Richard Guest, Jon Baker, Pablo Fernandez-Lopez and Raul Sanchez-Reillo	Sensing Movement on Smartphones to Assess User Interaction for Face Verification

Break	14:40 - 15:00	0:20		
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Session 8	15:00 - 16:40	1:40	Threat Detection. Moderator: Yen Hsiang Chu	
	15:00 - 15:20	20	Pierpaolo Napolitano, Giuliano Rossi, Giuseppe Forino, Fabio Garzia, Massimo Ilariucci and Mara Lombardi	Threats analysis and security analysis for Critical Infrastructures: Probabilistic Risk Analysis vs. Game theory.
	15:20 - 15:40	20	George D. O. Mahony, Philip J. Harris and Colin C. Murphy	Analyzing the Vulnerability of Wireless Sensor Networks to a Malicious Matched Protocol Attack
	15:40 - 16:00	20	Zahid Akhtar, João Monteiro and Tiago H. Falk	Adversarial Examples Detection Using No-Reference Image Quality Features
	16:00 - 16:20	20	Fabio Garzia, Mara Lombardi, Mario Fagnoli and Soodamani Ramalingam	PSA-LOPA - A novel method for physical security risk analysis based on Layers Of Protection Analysis
	16:20 - 17:00	20	Krystyna Ljubymenko and Milan Adamek	Security personnel of new generation

Banquet Celebration	18:00 - 21:30		Holiday Inn - Orchidee A/B Room	
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Hibiscus A/B Room				
Thursday, 25 October			Authors	Topic / Title
Session 9	08:00 - 10:10	1:40	Threat Detection and Information Security. Moderator: Han Lin	
	08:00 - 08:20	20	Mark Lowney, Hong Liu and Eugene Chabot	Trust Management in Underwater Acoustic MANETs based on Cloud Theory using Multi-Parameter Metrics
	08:20 - 08:40	20	Alessandro Di Federico, Pietro Fezzardi and Giovanni Agosta	rev.ng: a multi-architecture framework for reverse engineering and vulnerability discovery
	08:40 - 09:00	20	Armanas Povilionis, Franco Arcieri, Maurizio Talamo, Indirajith Vijai Ananth, Christian H. Schunck, Peter Rosengren, Jesper Thestrup, Jutta Richter, Agostino Chiaravalotti, Orazio Schillaci, Henrike Gappa and Carlos A Velasco	Identity management, access control and privacy in integrated care platforms: the PICASO project
	09:00 - 09:20	20	Omar Gutierrez, Jeffreys Saavedra, Mayra Zurbaran, Augusto Salazar and Pedro Wightman	User-Centered Differential Privacy Mechanisms for Electronic Medical Records
	09:20 - 09:40	20	Dongwan Shin and Jiangfeng Sun	An Empirical Study of SSL Usage in Android Apps

Break	09:40 - 10:00	0:20		
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Session 10	10:00 - 11:20	1:20	Information Security. Moderator: Gordon Thomas	
	10:00 - 10:20	20	Ana Ferreira and Joana Muchagata	TagUBig - Taming Your Big Data
	10:20 - 10:40	20	Rima Rana, Razieh Nokhbeh Zaeem and K. Suzanne Barber	US-Centric vs. International Personally Identifiable Information: A Comparison Using the UT CID Identity Ecosystem
	10:40 - 11:00	20	Joana Muchagata and Ana Ferreira	Translating GDPR into the mHealth Practice
	11:00 - 11:20	20	Ana Ferreira	Why ransomware needs a human touch

Break	11:20 - 11:40	0:20		
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Session 11	11:40 - 13:20	2:00	Cyber Security. Moderator: Soodamani Ramalingam	
	11:40 - 12:00	20	Arash Habibi Lashkari, Andi Fitriah A. Kadir, Laya Taheri and Ali A. Ghorbani	Toward Developing a Systematic Approach to Generate Benchmark Android Malware Datasets and Classification
	12:00 - 12:20	20	Basirudin Djameluddin, Ahmed Alnazeer and Farag Azzedin	Web Deception Towards Moving Target Defense
	12:20 - 12:40	20	Saeed Shafee Hasanabadi, Arash Habibi Lashkari and Ali Ghorbani	The next generation of robust Linux memory acquisition technique via consequential timestamp dumps
	12:40 - 13:00	20	Vincent Urias	Cyber Range Infrastructure Limitations and Needs Of Tomorrow: A Position Paper
	13:00 - 13:20	20	Andreas Walz and Axel Sikora	Maximizing and Leveraging Behavioral Discrepancies in TLS Implementations using
	13:20 - 13:40	20	William M. S. Stout	Toward a Multi-Agent System Architecture for Insights & Cybersecurity in Cyber-Physical Networks
	13:40		Close of Conference - Mr. Brian Rich, Dr. Gordon Thomas	