

THE 48TH ANNUAL  IEEE
INTERNATIONAL CARNAHAN
CONFERENCE ON
SECURITY TECHNOLOGY



MONDAY 13 OCTOBER 2014

09:00 - 16:00	ICCST Carnahan Cup Golf Tournament	Sheraton Parco de' Medici Golf Club
18:00 - 21:00	Registration and Reception	St Peter Crown Plaza - Conference Centre Registration will be available each day beginning at 7:30am.

TUESDAY 14 OCTOBER 2014

MAIN HALL	Session 1: Welcome and Keynote Addresses	Mr. Fabio Garzia, General Chairman
08:30 - 08:40	Opening Remarks for the 48th Annual ICCST	Mr. Gordon Thomas, ICCST Executive Committee Chairman
08:40 - 08:50	Welcome Address of Professional Engineers Registration Board of Rome	Francesco Marinuzzi, Council Member of Professional Engineers Registration Board of Rome
08:50 - 09:10	The Security of Vatican City State	Domenico Gianì, Director of Security and Civil Protection Services of Vatican City State, Commander of Vatican City State Gendarmerie
09:10 - 09:30	The Cyber Security in the Italian Republic	Tito Lucrezio Rizzo, Holder Adviser - Central Safety&Security of the Presidency of Italian Republic
09:30 - 09:50	Security and Risk Analysis	Massimo Guarascio, Dean of Safety&Security Engineering Degree and Master Degree of SAPIENZA, University of Rome
09:50 - 10:10	Aerial Surveillance and Airborne Remote Sensing Techniques in Guardia di Finanza: An Operational Experience	Flaviano Tessitore, Guardia di Finanza (Italian Finance Guard)
10:10 - 10:30	Space Security	Mariano Bizzarri, Past President of Scientific Committee of Italian Space Agency (ASI) & SAPIENZA – University of Rome
10:30 - 10:50	Refreshment Break	
MAIN HALL	Session 2: Keynote Addresses 2	Dr. Gordon Thomas
10:50 - 11:10	The Security of Italian State Railways	Franco Fiumara, Security Manager of Italian State Railways
11:10 - 11:30	SERIT - The Italian Platform for Security Research in Italy	Cristina Leone, Finmeccanica - Fabio Martinelli, National Research Council (CNR)
11:30 - 11:50	Centralized Security Governance for Air Navigation Services	Francesco Di Maio, ENAV - Italian Provider for Air Navigation Services
11:50 - 12:10	Security Scenarios in Italy and Mediterranean Area	Pietro Finocchio, President of AFCEA (Armed Forces Communications Electronics Association) – Rome Chapter
12:10 - 12:30	Enhancing Security in Public Transportation Services of Roma: The PANDORA System	Pierluigi Pelargonio, Head of Security and Safeguard Department of ATAC S.p.A.
12:30 - 13:30	Lunch	
Salon A	Session 3A: Advanced Biometrics I	Mr. Daniel Pritchard
13:30 - 13:50	An Investigation into Biometric Signature Capture Device Performance and User	Richard Guest, Michael Brockly, Stephen Elliott, Jarron Burdine, Michael Frost and Matthew Riedle
13:50 - 14:10	EMBERS: Ephemeral Biometrically Enhanced Real-Time Location System	Sung Choi, Michael Bierma, Yung Ryn Choe and David Zage
14:10 - 14:30	Bridging Gaps: An Application of Feature Warping to Online Signature Verification	Andreas Nautsch, Christian Rathgeb and Christoph Busch
14:30 - 14:50	Strengths, Weaknesses and Recommendations in Implementing Biometrics in Mobile	Raul Sanchez-Reillo, Daniel Sierra-Ramos, Roberto Estrada-Casarrubios and Jose A. Amores-Duran
14:50 - 15:10	Assessment of the authenticity of Dynamic Biometric Signature: The results of experiments	Vladimir Smejkal and Jindrich Kodl
Salon B	Session 3B: Information Security I	Mr. Adrian Schwaninger
13:30 - 13:50	Investigating Multimedia Contents	Alessia De Rosa, Marco Fontani, Massimo Iuliani and Alessandro Piva
13:50 - 14:10	Privacy Leakages in Smart-Home Wireless Technologies	Gianmarco Baldini, Andrea Ciardulli, Igor Nai Fovino, Ignacio Sanchez, Riccardo Satta, David Shaw and Gary Ster
14:10 - 14:30	Security and Usability of Authentication Process of Online Banking: User Experience Study	Maha Althobaiti and Pam Mayhew
14:30 - 14:50	Supply Chain Lifecycle Decision Analytics	Gio Kao, Han Lin, Brandon Eames, Jason Haas, Alexis Fisher, John Michalski, Jon Blount, Jason Hamlet, Erik Lee, John Gauthier, Gregory
14:50 - 15:10	An Efficient Discrete Cosine Transform (DCT)-Singular Value Decomposition (SVD)-Based Algorithm for Digital Image Watermarking	Justin Varghese, Saudia Subash, Omer Bin Hussain, Mohamed Ramadan Saadi, Mohamed Samiulla Khan, Bijoy Babu and Jamshid M Basheer
15:10 - 15:30	Refreshment Break	
Salon A	Session 4A: Advanced Biometrics II	Mr. Rick Lazarick
15:30 - 15:50	The use of Hyperspectral Analysis for Ink Identification in Handwritten Documents	Aythami Morales, Miguel A. Ferrer, Moises Diaz-Cabrera, Cristina Carmona and Gordon L. Thomas
15:50 - 16:10	Evaluation of Wavelet Measures on Automatic Detection of Emotion in Noisy and Telephony Speech Signals	Juan Camilo Vasquez Correa, Nicanor Garcia, Jesus Francisco Vargas Bonilla, Juan Rafael Orozco Arroyave, O. Luda Quintero M. and Julián David Arias Londoño
16:10 - 16:30	Liveness Detection for Biometric Authentication in Mobile Applications	Zahid Akhtar, Christian Micheloni and Gian Luca Foresti
16:30 - 16:50	Low Computational Cost Multilayer Graph-Based Segmentation Algorithms for Hand Recognition on Mobile Phones	Daniel de Santos-Sierra, Miguel F. Arriaga-Gómez, Gonzalo Bailador and Carmen Sánchez-Ávila
16:50 - 17:10	RHU Keystroke: A Mobile-based Benchmark for Keystroke Dynamics Systems	Mohamad El-Abed, Mostafa Dafer and Ramzi El Khayat
Salon B	Session 4B: Information Security II	Mr. Massimo Guarascio

15:30 - 15:50	A Probabilistic Framework for Improved Password Strength Metrics	Javier Galbally, Iwen Coisel and Ignacio Sanchez
15:50 - 16:10	Transparent Cut Detection Sensor - Proposal of the Security Device That Makes Information Leakage by Photo/Video Shooting Difficult	Masaki Fujikawa, Ryosuke Kamai, Sou Tsunetsugu and Michiko Ogawa
16:10 - 16:30	Surrogate Techniques for Testing Fraud Detection Algorithms in Credit Card Operations	Addisson Salazar, Gonzalo Safont and Luis Vergara
16:30 - 16:50	Instruction Set Extensions of AES Algorithms for 32-bit Processors	Wajih Elhadjyoussef, Noura Benhadjyoussef, Mohsen Machhout, Khouldour Torki and Rached Tourki
16:50 - 17:10	Secret Key Sharing by Means of Reconfigurable Antenna Systems	Daniele Pinchera and Marco Donald Migliore
20:30 - 23:30	After-dinner evening tour of the city by bus with English guide	

WEDNESDAY 15 OCTOBER 2014

Salon A	Session 5A: Advanced Biometrics III	Mr. Francisco Vargas
08:50 - 09:10	Security Monitoring Based on Joint Automatic Speaker Recognition and Blind Source Separation	Michele Scarpiniti and Fabio Garzia
09:10 - 09:30	Effectiveness in Open-Set Speaker Identification	Rawand Karadaghi, Aladdin Ariyaeinia and Heinz Hertlein
09:30 - 09:50	Biometrics Within the SuperIdentity Project: A New Approach to Spanning Multiple Identity Domains	Richard Guest, Oscar Miguel-Hurtado, Sarah V. Stevenage, Greg J. Neil and Sue Black
09:50 - 10:10	A Comparative Study on Texture and Surface Descriptors for Ear Biometrics	Anika Pflug, Pascal Paul and Christoph Busch
10:10 - 10:30	Gait Biometrics with a Microsoft Kinect Sensor	Joanna Putz-Leszczynska and Miroslaw Granacki
Salon B	Session 5B: Information Security III	Mr. Alfonso Bilbao
08:50 - 09:10	Towards Security as a Service (SecaaS): on the Modeling of Security Services for Cloud Computing	Angelo Furfaro, Alfredo Garro and Andrea Tundis
09:10 - 09:30	Security Challenges in Building Automation and SCADA	Alessio Antonini, Alessandro Barenghi, Gerardo Pelosi and Saman Zonouz
09:30 - 09:50	An electrical grid and its SCADA under cyber attacks: Modelling versus a Hybrid Test Bed	Ester Ciancamerla, Benedetto Fresilli, Michele Minichino, Tatiana Patriarca and Serguei Iassinovski
09:50 - 10:10	Characteristics of Buffer Overflow Attacks Tunneled in HTTP Traffic	Ivan Homoliak, Daniel Ovsonka, Karel Koranda and Petr Hanacek
10:10 - 10:30	Security Issues for Data Sharing and Service Interoperability in eHealth Systems: the Nu.Sa. Test Bed	Emanuele Frontoni, Marco Baldi, Primo Zingaretti, Vincenzo Landro and Paolo Misericordia
10:30 - 10:50	Refreshment Break	
Salon A	Session 6A: Transportation Security	Mr. Milos Klima
10:50 - 11:10	Enhancing Transport Security: Characterization and Identification of the Main Security Challenges in Five Transport Subsectors	Simona Cavallini, Francesca D'Onofrio, Sara Bouchon and Claudia Giusto
11:10 - 11:30	A multi-method approach towards identifying situational factors and their relevance for X-ray screening	Stefan Michel, Nicole Hättenschwiler, Milena Kuhn, Nadine Strebler and Adrian Schwaninger
11:30 - 11:50	Energy-Resolving Photon-Counting Detectors in CT Based Explosive Detection Systems (EDS)	Sondre Skatter and Stephan Olesinski
11:50 - 12:10	Screening Technology Based on DMS as an Effective Tool to Help Protect Public and Vital Infrastructure from Threats	Anna Zalewska, Tomasz Sikora and Anna Buczkowska
12:10 - 12:30	Simulating the Impact of Remote Screening on Search Comb Capacity	Andrew Belyavin
12:30 - 12:50	Certification of Airport Security Officers Using Multiple-Choice Tests - A Pilot Study	Diana Hardmeier, Catharina Müller and Adrian Schwaninger
12:50 - 13:10	Rapid Inspection of General Aviation Aircraft for Security Threats and Contraband	Dan Cristian Dinca and Jeffrey Schubert
Salon B	Session 6B: Advanced Technologies and Simulation	Mr. Brian Rich
10:50 - 11:10	A Model for Development, Transition and Technology Transfer for Commercialization of Security Technology	Ed Rao, Jim Remer and Doug Bauer
11:10 - 11:30	A Fidelity Framework for Small Arms Combat	Mark Murton, Paul Johnston, Russel Waymire and Deborah Belasich
11:30 - 11:50	A Reasoning Approach for Modelling and Predicting Terroristic Attacks in Urban Environments	Francesco Archetti, Divna Djordjevic, Ilaria Giordani, Francesco Tisato and Raul Sormani
11:50 - 12:10	Advanced Portal-Based Multistatic Millimeter-Wave Radar Imaging for Person Security Screening	Carey Rappaport, Borja Gonzalez Valdes and Jose A. Martinez Lorenzo
12:10 - 12:30	The Multisensory Integrated Modules for Training	Roberto Mugavero, Giovanni Saggio, Mariano Bizzarri and Valentina Sabato
12:30 - 12:50	Temporal Analysis Of Intrusion Detection	Mofreh Hogo
12:50 - 13:10	TARGI - A Novel Tool and Method for Target Identification	Tereza Malachova, Jindrich Malach and Zdenek Vintr
13:10 - 14:10	Lunch	
Salon A	Session 7A: Sensing Technologies and Techniques in Real and Cyber Domain	Mr. Pu Chang En
14:10 - 14:30	Revealing Fire Survivors Hidden Behind Smoke and Flames by IR Active Imaging Systems	Vittorio Bianco, Melania Paturzo, Andrea Finizio, Lisa Miccio and Pietro Ferraro
14:30 - 14:50	An Anti-Intrusion Protection Barrier Based on 2D Radar Technology	Sara Marina Salvador, Daniele Milanese, Giorgio Rodighiero and Riccardo Maggiora
14:50 - 15:10	Machine Actionable Indicators of Compromise	Doug Rhoades
15:10 - 15:30	The Art of the False Alarm in the Game of Deception: Leveraging Fake Honeypots for Enhanced Security	Apostolis Zarras
15:30 - 15:50	Real-Time Security & Dependability Monitoring: Make it a Bundle	Luigi Romano, Luigi Coppolino, Salvatore D'Antonio and Valerio Formicola
Salon B	Session 7B: System Engineering and Implementation	Mr. William Claycomb
14:10 - 14:30	Security Risk Assessment of Process Plants: The Role of Layout	Roberto Bubbico and Barbara Mazzarotta
14:30 - 14:50	Developing an Industry Standard for the Transaction of Data Between Proprietary Security Sensor Buses and Third Party Systems	Jeremy Weese

14:50 - 15:10	Evacuation Study by Crowd Dynamics Micro-Simulation to Support Disaster Prevention and Management: the Case of SIMULATOR Projec	Sara Manzoni and Simone Sterlacchini
15:10 - 15:30	Dependencies Analysis in Emergency Scenarios	Roberto Setola, Maria Carla De Maggio and Domenico Lorusso
15:30 - 15:50	Secure Faults Detection for Preventing Fire Risk in PV Systems	Maria Carmen Falvo and Simona Capparella
15:50 - 16:10	Refreshment Break	
Salon A	Session 8A: Advanced Video Imaging	Mr. Juan Yen Pan
16:10 - 16:30	A Novel Background Subtraction Method Based on Colour Invariants and Grayscale Levels	Lorena Guachi, Giuseppe Cocorullo, Pasquale Corsonello, Fabio Frustaci and Stefania Perri
16:30 - 16:50	Automatic Security System for Recognizing Unexpected Motions Through Video Surveillance	Flavia Demarinis, Antonella Accettura, Fabio Garzia and Roberto Cusani
16:50 - 17:10	System on Chip (SoC): New Generation of Video Surveillance Systems	Josep Aguilera, Fernando Gallego and Carles Silva
17:10 - 17:30	Video Compression Technique Impact on Efficiency of Person Identification in CCTV Systems	Stanislav Vitek, Milos Klima and Lukas Krasula
17:30 - 17:50	GPU: Application for CCTV Systems	Victori Bautista and Fernando Gallego
Salon B	Session 8B: Insider and Cyber Threat Detection	Mr. Roberto Cusani
16:10 - 16:30	Insider Threats: Portraits of The Good, The Bad, and The Ugly in Your Organization	William Claycomb
16:30 - 16:50	A Machine Learning Approach for Twitter Spammers Detection	Claudia Meda, Federica Bisio, Paolo Gastaldo and Rodolfo Zunino
16:50 - 17:10	A Framework along with Guidelines for Designing Secure Mobile Enterprise Applications	Basel Hasan, Viktor Dmitriyev, Joachim Kurzhöfer and Jorge Marx Gómez
17:10 - 17:30	Preventing Real-World Relay Attacks on Contactless Devices	Martin Henzl, Petr Hanáček and Matej Kacic
17:30 - 17:50	Securing Software Cryptographic Primitives for Embedded Systems against Side Channel Attacks	Giovanni Agosta, Alessandro Barenghi and Gerardo Pelosi
18:30 - 23:00	48th ICCST Conference Banquet and Social Event at the Crystal Lounge of Splendid Royal Hotel. Meeting point and time: Conference hotel hall at 18:30. Buses leave at 18:45 from the conference hotel.	

THURSDAY 16 OCTOBER 2014

Salon A	Session 9A: Advanced Biometrics IV	Ms. Virginia Espinosa Durò
08:30 - 08:50	Supervised Classification Methods Applied to Keystroke Dynamics Through Mobile Devices	Ignacio De Mendizabal-Vázquez, Daniel de Santos-Sierra, Javier Guerra-Casanova and Carmen Sánchez-Ávila
08:50 - 09:10	Best Practices for the Security Evaluation of Biometric Systems	Belen Fernandez-Saavedra, Raul Sanchez-Reillo, Judith Liu-Jimenez and Jorge Gutierrez-Ruiz
09:10 - 09:30	On the Effect of Time Efficiency in DSV under Stress	Ramon Blanco-Gonzalo, Norman Poh and Raul Sanchez-Reillo
09:30 - 09:50	A Comparative Survey on Supervised Classifiers for Face Recognition	Miguel F. Arriaga-Gómez, Ignacio de Mendizabal-Vázquez, Rodrigo Ros-Gómez and Carmen Sánchez-Ávila
09:50 - 10:10	Face Image Abstraction by Ford-Fulkerson Algorithm and Invariant Feature Descriptor for Human Identification	Dakshina Ranjan Kisku, Debanjan Chatterjee, S. Trivedy and Massimo Tistarelli
Salon B	Session 9B: Advanced Technologies and Modeling	Mr. Pietro Finocchio
08:30 - 08:50	Impact of Character Spacing on the Performance of Automatic Number Plate Recognition (ANPR) Systems Through Simulation	Soodamani Ramalingam, Mike Rhead and Robert Gurney
08:50 - 09:10	An On-Line Intrusion Detection Approach to Identify Low-Rate DoS Attacks	Maurizio Aiello, Enrico Cambiaso, Maurizio Mongelli and Gianluca Papaleo
09:10 - 09:30	Quantitative Evaluation of Attack/Defense Scenarios Through Decision Network Modelling and Analysis	Daniele Codetta-Raiteri, Luigi Portinale and Roberta Terruggia
09:30 - 09:50	Automatic Optical Reading of Passport Information	Fernando Martín-Rodríguez
09:50 - 10:10	The Safer Way to Share a Car Based on Social Networking Service (SNS) to Increase a Use Efficiency of Released Vehicles	Myunghee Son, Okgee Min, Jonghyun Kim and Sung Hoon Baek
10:10 - 10:30	Refreshment Break	
Salon A	Session 10A: Information Security, Encryption and Privacy	Mr. Francesco Di Maio
10:30 - 10:50	Skype Traffic Detection: A Decision Theory Based Tool	Mario Di Mauro and Maurizio Longo
10:50 - 11:10	A Low-Resource 32-bit Datapath Elliptic Curve Digital Signature Algorithm (ECDSA) Design for Embedded Applications	Noura Ben hadj yousef, Wajih El hadj yousef, Mohsen Machhout, Kholdoun Torki and Rached Tourk
11:10 - 11:30	Partial Crypto-Reconfiguration of Nodes Based on FPGA for Wireless Sensor Networks (WSN)	Luis Andrés Cardona, Bibiana Lorente and Carles Ferrer
11:30 - 11:50	A Framework for Internet Data Real-Time Processing: A Machine-Learning Approach	Mario Di Mauro and Cesario Di Sarno
Salon B	Session 10B: Information Security, Encryption, Privacy and Reliability Analysis	Dr. Gordon Thomas
10:30 - 10:50	Leakage-Resilient Memory-based Physical Unclonable Function Using Phase Change Material	Le Zhang, Zhi Hui Kong, Chip-Hong Chang, Alessandro Cabrini and Guido Torelli
10:50 - 11:10	Sensitivity Analysis and Countermeasures for Transformation-Based Location Obfuscation	Liliana Gonzalez, Mayra Zurbaran, Pedro Wightman, Daladier Jabba, Miguel Jimeno and Eduardo Zurek
11:10 - 11:30	Web-Based Interface for Real-Time Movement Monitoring	Ondrej Kainz and František Jakab
11:30 - 11:50	Automated Dependability Analysis of a HDPE Reactor	Mounira Rouainia and Elarkam Mechhoud
Salon A		Mr. Fabio Garzia
11:50 - 12:10	Conference Closing	
13:00 - 16:00	Executive Committee Luncheon and Annual Meeting	Conference Hotel

FRIDAY 17 OCTOBER 2014

09:00 - 13:00	Visit of Vatican Gardens and Vatican Museums with private guides (For those who have reserved within 27 September)	Vatican City State
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