

PROGRAMME
2010 INTERNATIONAL CONFERENCE ON EMERGING SECURITY TECHNOLOGIES
EST 2010 - ROBOSEC 2010 - LAB-RS 2010

Day 1

08:30-09:00 **Registration**

09:00-09:10 **Welcome / Introduction**

09:10-10:10 **Keynote 1: Policy Based Authorisation**
Prof David Chadwick, University of Kent, UK

10:10-10:40 **Coffee**

10:40:12:00 **Session 1A: Information Security and Biometrics**

**Session 1B: Tutorial on Unmanned Systems in
Security Application:** *Isabella Panella, Selex Galileo, UK*

On the Role of Biosignals for User Authentication:
The Foundations of Cognitive Biometrics
Kenneth Revett, Farzin Deravi, and Konstantinos Sirlantzis

Behaviour Profiling on Mobile Devices.
Fudong Li, Nathan Clarke, Maria Papadaki and Paul Dowland

Password Security through Negative Filtering
Dipankar Dasgupta and Sudip Saha

Audio-based Indoor Health Monitoring System
Using FLAC Features
Jiaxing Ye, Takumi Kobayashi, Tetsuya Higuchi

12:00-13:00 **Lunch**

13:00-14:00 **Keynote 2: Secured Robot Identity and Mechatronic Security**
Prof. Wael Adi, Technical University of Braunschweig, Germany

14:00-14:30 **Coffee**

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14:30-16:30

Session 2A: Nomad Biometric Authentication

Nomad Biometric Authentication (NOBA): Towards Mobile and Ubiquitous Person Identification

K. Sirlantzis, G. Howells, F. Deravi, S. Hoque, P. Radu, G. McConnon, X. Savatier, J.-Y. Ertaud, N. Ragot, Y. Dupuis, A. Iraqui

Are Two Eyes Better than One?. An Experimental Investigation on Dual Iris Recognition

P. Radu, K. Sirlantzis, G. Howells, S. Hoque, Farzin Deravi

A Survey of Point-Source Specular Reflections in Noisy Iris Images

G. McConnon, Farzin Deravi, S. Hoque, Konstantinos Sirlantzis, G. Howells

Fusion of Omnidirectional and PTZ cameras for face detection and tracking

Amine Iraqui, Yohan Dupuis, Rémi Boutteau, Jean-Yves Ertaud, Xavier Savatier

A Segmentation Method of Catadioptric Images for Gait Recognition in Unconstrained Environment

Yohan Dupuis, Xavier Savatier, Jean-Yves Ertaud, Ghaleb Hoblos

Person Identification from Spatio-Temporal 3D Gait

Yumi Iwashita, Ryosuke Baba, Koichi Ogawara, Ryo Kurazume

Session 2B: Modelling and Simulation

Optimal Strategy: Domain-specific Modelling of Dynamically Evolving Multi-dimensional Events

H.J. Kadim

Utilising Mobile Wireless Network Technologies to Support an Intelligent Sensor Information System for Public Transport Safety

Kieran McLaughlin, Sakir Sezer

A Systems Engineering Approach for Security System Design

Ian Alston, Simon Campbell

Aiding designers, operators & regulators to deal with legal & ethical considerations in the design & use of lethal autonomous systems

M.J. de C. Henshaw, C.E. Siemieniuch, M.A. Sinclair

Principled Electronic Consent Management: A Preliminary Research Framework

Christian J. Bonnici, Lizzie Coles-Kemp

Learning the Consequences of Actions: Representing Effects as Feature Changes

Mathias Rudolph, Manuel Mühlig, Michael Gienger, Hans-Joachim Böhme

16:45-17:30

Panel Session: Emergent requirements of defence and security in the UK

Dr Helen Almey, Centre for Defence Enterprise, Ministry of Defence, UK

19:30

Conference Dinner

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Day 2

- 9:00-10:00** **Keynote 3: Mini-hopping robots for search and rescue and security**
Prof. Paolo Fiorini, University of Verona, Italy
- 10:00-10:30** **Coffee**
- 10:30-11:50** **Session 3: Symposium on Robotics and Security (ROBOSEC)**
- A Game Theoretical Model for Patrolling and its Application to an Active Camera
Nicola Basilico, Davide Rossignoli, Nicola Gatti, Francesco Amigoni
- Multi-agent Teams for Underwater Surveillance
F. Ehlers
- Supporting Search and Rescue Operations with UAVs
Sonia Waharte, Niki Trigoni
- Security concepts for underwater production control systems
Heinz Wörn, Igor Tchouchenkov, Günther Reimann, Daniel Braun
- 12:00-13:00** **Lunch**
- 13:00-14:00** **Keynote 4: Embedded Ethics and Robotic Deception: Implications for Security**
Professor Ronald C. Arkin, Georgia Institute of Technology, USA.
- 14:00-14:30** **Coffee**

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14:30-16:30

Session 4A: Identity detection and verification using human faces

Giving crime the 'evo': catching criminals using EvoFIT facial composites

Charlie D. Frowd, Peter J.B. Hancock, Vicki Bruce, Alex H. McIntyre, Melanie Pitchford, Rebecca Atkins, Andrew Webster, John Pollard, Beverley Hunt, Emma Price, Sandra Morgan, Adrian Stoika, Romeo Dughila, Sergiu Maftei, Gabriel Sendrea

Facial Composite Production using EFITV

Agnieszka M. Lech, Robert A. Johnston

Seeing More Clearly With Glasses?: the Impact of Glasses and Technology on Unfamiliar Face Matching and Identification of Familiar Facial Composites

Alex H. McIntyre, Peter J.B. Hancock, Charlie D. Frowd, Vicki Bruce

A Comparison of Individual and Morphed Facial Composites Created Using Different Systems

Josh P. Davis, Lucy Sulley, Chris Solomon, Stuart Gibson

Prototyping Perceptions of Health for Inclusion in Facial Composite Systems

David Clarke, Marianne Riggs, Stuart Gibson

Evaluating the application of simple weightless networks to complex patterns

B. McElroy, G. Howells

Session 4B: Symposium on Learning and Adaptive Behaviours for Robotic Systems (LAB-RS)

Attentive Monitoring Strategies in a Behavior-based Robotic System: an Evolutionary Approach

Ernesto Burattini, Alberto Finzi, Silvia Rossi, Mariacarla Staffa

Emergent Behaviours Driven by Chaotic Dynamics

Lorenzo Riano, Martin McGinnity

Learning Arm Motion Strategies for Push Recovery of Bipedal Robots

Masaki Nakada, Brian Allen, Shigeo Morishima, Demetri Terzopoulos

Learning Flexible Full Body Kinematics for Humanoid Tool Use

Matthias Rolf, Jochen J. Steil, Michael Gienger

Tacking reduces bow-diving of high-speed unmanned sea surface vehicles

R. Felix Reinhart, Jochen J. Steil, Terrance L. Huntsberger, Adrian Stoica

Vision-Based Landing of a Simulated Unmanned Aerial Vehicle with Fast Reinforcement Learning

Marwan Shaker, Mark N.R. Smith, Shigang Yue, Tom Duckett

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Day 3

9:30-13:00 **Social and Networking Event (Includes a walking tour of Canterbury Cathedral)**