



BLISS 2008

4-6 August, Edinburgh, Scotland, UK

LAB-RS 2008

6-8 August, Edinburgh, Scotland, UK



Monday August 4, 2008

DAY 1

BLISS

(Playfair Library Hall - Old College)

08:00	Registration	BLISS Registration
09:00	Opening	Organizational remarks
09:10	Keynote 1	Security v Business: A Balancing Act <i>Nigel Stinton, Howden Group Ltd</i>
09:55	Break 1	Coffee Break (Playfair Library Hall)
		Session A: Biometrics
10:15	A1	Effecting an improvement to the fitness function. How to evolve to a more identifiable face <i>Charlie Frowd, Joanne Park, Alex McIntyre, Vicki Bruce, Melanie Pitchford, Steve Fields, Mary Keniron and Peter J.B. Hancock, University of (Central Lancashire, Stirling, Edinburgh, Leicester), UK</i>
10:40	A2	Biometric-Based Decision Support Assistance in Physical Access Control Systems <i>S. Chague, B. Droit, France, O. Boulanov, S. N. Yanushkevich, V. P. Shmerko, Canada and A. Stoica, USA</i>
11:05	A3	Evaluating Biometric Encryption Key Generation using Handwritten Signatures <i>Sanaul Hoque, Michael Fairhurst, Gareth Howell, University of Kent, UK</i>
11:30	Keynote 2	CHLAC Approach to Flexible and Intelligent Vision Systems <i>Nobuyuki Otsu, AIST/University of Tsukuba, Japan</i>
12:15	Lunch	Lunch provided (Playfair Library Hall)
		Session B: CHLAC Pattern Recognition (Invited)
13:15	B1	Development of Software for Real-time Unusual Motions Detection by Using CHLAC <i>Kenji Iwata, Yutaka Satoh, Katsuhiko Sakaue, Takumi Kobayashi and Nobuyuki Otsu, AIST, Japan</i>
13:40	B2	HLAC Approach to Automatic Object Counting <i>Takumi Kobayashi, Tadaaki Hosaka Shu Mimura, Takashi Hayashi Nobuyuki Otsu, AIST, UTI, NARC, Japan</i>
14:05	B3	Object Detection by Selective Integration of HLAC Mask Features <i>Akinori Hidaka, University of Tsukuba, Takio Kurita, Nobuyuki Otsu, AIST, Japan</i>
14:30	B4	Motion Recognition by Higher Order Local Auto Correlation Features of Motion History Images <i>Kenji WATANABE, University of Tsukuba, and Takio KURITA AIST, Japan</i>
14:55	Break 2	Coffee Break (Playfair Library Hall)
15:10	B5	The Cow Gait Recognition using CHLAC <i>Shu Mimura and Keichi Itoh, United Technology Institute, and Takumi Kobayashi and Nobuyuki Otsu, AIST, Tomohiro Takigawa and Atsushi Tajima, University of Tsukuba, Atsushi Sawamura, National Institute of Livestock and Grassland Science, Japan</i>
		Session G: Models, Algorithms (I)
15:35	G1	Stochastic Interpolation: A Probabilistic View <i>Joseph Kolibal, University of Southern Mississippi, USA, Daniel Howard, QinetiQ, UK</i>

16:00	G2	A Securable Autonomous Generalised Document Model (SAGENT) <i>Gareth Howells, Hossam Selim, Michael Fairhurst, Farzin Deravi, Sanaul Hoque, University of Kent, UK</i>
16:25	G3	Granular Association Analysis <i>Yun Shen and Trevor Martin, University of Bristol, UK</i>
16:50	G6	Bioinspired Constructive Simulation (<i>Invited</i>) <i>Daniel Howard, QinetiQ, UK</i>
17:15	Close	End of Day 1

Tuesday August 5, 2008
BLISS
(Playfair Library Hall)

09:00	Opening	Organizational remarks
09:10	Keynote 3	Computational Intelligence in Cyber Security <i>Dipankar Dasgupta, The University of Memphis, USA</i>
09:55	Break 1	Coffee Break (Playfair Library Hall)
Session C: Cyber security		
10:10	C1	Using A Cognitive Architecture to Automate Cyberdefense Reasoning <i>D. Paul Benjamin, Pace University, Partha Pal, Franklin Webber, Paul Rubel and Mike Atigetchi, BBN Technologies, USA</i>
10:35	C2	Network Intrusion Detection by Using Cellular Neural Network with Tabu Search <i>Zhongxue Yang and Ning Yang, Nanjing Xiaozhuang University, China, Adem Karahoca, Ning Yang, Nizamettin Aydina, Bahcesehir University, Turkey</i>
Session D : Device and Embedded Systems Security		
11:00	D1	Fuzzy Vault Fingerprint Smartcard Implementation Using an Orientation-Based Feature Vector <i>K. Harmer, W. Sheng, G. Howells, M. Fairhurst & F. Deravi, University of Kent, UK</i>
11:25	D2	Detecting Voltage Glitch Attacks on Secure Devices <i>Asier GOIKOETXEA YANCI, ISLI, Stephen PICKLES, Atmel, Tughrul ARSLAN, University of Edinburgh, UK</i>
11:50	D3	Towards Embedded Artificial Intelligence Based Security for Computer Systems <i>A.B.T. Hopkins, P. Sartain, K.D. McDonald-Maier, University of Essex, and W.G.J. Howells, University of KENT UK</i>
12:15	Lunch	Lunch provided (Playfair Library Hall)
13:15	D4	Effects of Feature Trimming on Encryption Key Stability for an ICmetric System <i>Evangelos Papoutsis, Gareth Howells, University of Kent, and Andrew Hopkins and Klaus McDonald-Maier, University of Essex, UK</i>
13:40	D5	Tamper Protection for Security Ddevices <i>Philip Paul and Simon Moore, University of Cambridge, and Simon Tam, TAM consulting, UK</i>
Session G: Models, Algorithms (II)		
14:05	G4	Clone-Resistant DNA-Like Dynamic Secured Identity <i>Wael Adi, Technical University of Braunschweig, Germany</i>
14:30	G5	The Re-emission Side Channel <i>Andrew Burnside, ISLI, Ahmet Erdogan and Tughrul Arslan, The University of Edinburgh, UK</i>
14:55	Break 2	Coffee Break (Playfair Library Hall)
Session E: Sensing Systems		
15:10	E1	Analytical Modelling: An Investigation into the use of Smart Biosensors as Stealth Countermeasures <i>H J Kadim, LJMU, UK</i>
15:35	E2	Partially Observable Markov Decision Process for Transmitter Power Control in Wireless Sensor Networks <i>Adrian Udenze and Klaus McDonald-Maier, University of Essex, UK</i>
16:00	E3	High-level functional architecture for sensor management system <i>Isabella Panella, Thales, UK</i>
16:25	Panel	Panel Discussion
16:50	Closing	End of Day 2

Wednesday August 6, 2008**DAY 3****BLISS and LAB-RS Joined Sessions
(Playfair Library Hall)****08:00 Registration****LABRS Registration****09:00 Opening****Organizational remarks****Session F: From Biometrics to Space and Airborne Security****09:10 1A**

Mixture Model Segmentation for Gait Recognition

*Matthew Field, David Stirling, Fazel Naghdy, Zengxi Pan, University of Wollongong, Australia***09:35 F1**

Toward Recognition of Humans and their Behaviors from Space/Airborne Platforms

*Adrian Stoica, Jet Propulsion Laboratory, USA***10:00 F2**

Artificial intelligence methodologies applicable to support the decision-making capability on board Unmanned Aerial Vehicles

*Isabella Panella, Thales, UK***10:25 F3**

WLAN for Earth Observation Satellite Formations in LEO

*Tanya Vladimirova and Kawsu Sidibeh, University of Surrey, UK***10:50 Break 1****Coffee Break (Playfair Library Hall)****11:10 Keynote A****Space Robotics: Challenges to Learning and Adaptive Systems***Paul S. Schenker, Jet Propulsion Laboratory, California Institute of Technology, USA***12:00 Lunch****Lunch provided (Playfair Library Hall)****Session 1: Human-Robot Interaction (LAB-RS)****13:15 1B**What is an Appropriate Theory of Imitation for a Robot Learner? *(Invited)**Joe Saunders, Chrystopher L. Nehaniv and Kerstin Dautenhahn, University of Hertfordshire, UK***13:40 1C**Drumming with a Humanoid Robot: Results from Human-Robot Interaction Studies *(Invited)**Hatice Kose-Bagci, Kerstin Dautenhahn, and Chrystopher L. Nehaniv, University of Hertfordshire, UK***14:05 1D**

Movement Times in Inter- and Intrapersonal Human Coordination

*Cordula Vesper, Sonja Stork and Anna Schubö, Ludwig-Maximilians-University, Germany***14:30 Panel 1**

Human-robot interaction in education: learning with robots

Panel led by *Jinpeng Jiang and Qing Huo, P.R. China* and *A. Stoica, USA***14:55 Break 2****Coffee Break (Playfair Library Hall)****15:10 Video**

Video Competition

17:00 Closing**End of Day 3 Sessions****19:00 Banquet****Symposia Dinner (South Hall - Pollock Halls)****BLISS Best paper and LAB-RS Best Video Awards****Thursday August 7, 2008****DAY 4****LAB-RS****(Raeburn Room)****09:00 Opening****Organizational remarks****09:05 Keynote B****How to Evolve Controllers for Truly Cooperative Robots***Dario Floreano, Ecole Polytechnique Federale de Lausanne, Switzerland***09:50 Break 1****Coffee Break (Carstares Room)****Session 2: Neuro-Robotics****10:10 2A**

Improving Robotic System Robustness via a Generalised Formal Artificial Neural System

*Gareth Howells, Konstantinos Sirlantzis, University of Kent, UK***10:35 2B**

Scalable Biologically Inspired Neural Networks with Spike Time Based Learning

*Lyle N. Long, The Pennsylvania State University and The California Institute of Technology, USA***11:00 2C**

Recurrent neural autoassociative learning of forward and inverse kinematics for movement generation of the redundant PA-10 robot

R. Felix Reinhart and Jochen J. Steil, Bielefeld University, Germany

11:25	2D	Evolvability of Neuromodulated Learning for Robots <i>Peter Dürr, Claudio Mattiussi and Andrea Soltoggio, University of Birmingham, UK and Dario Floreano, EPFL, Switzerland</i>
Session 3: Learning		
11:50	3A	Learning Vision Algorithms for Real Mobile Robots with Genetic Programming <i>Renaud Barate and Antoine Manzanera, ENSTA – UEI, France</i>
12:15	Lunch	Lunch provided (Carstares Room)
13:15	3B	Towards Object Classification using 3D Sensor Data <i>S Ören Schwertfeger, Jann Poppinga, Max Pfingsthorn and Andreas Birk, Jacobs University, Germany</i>
13:40	3C	Learning Robot Dynamics for Computed Torque Control using Local Gaussian Processes Regression <i>Duy Nguyen-Tuong and Jan Peters, Max Planck Institute for Biological Cybernetics, Germany</i>
14:05	3D	Surprise-Based Learning for Developmental Robotics <i>Nadeesha Ranasinghe and Wei-Min Shene, University of Southern California, USA</i>
14:30	3F	Continuous Adaptation in Robotic Systems by Indirect Online Evolution <i>Marcus Furuholmen, Mats Hovin, Jim Torresen and Kyrre Glette, University of Oslo, Norway</i>
14:55	Break 2	Coffee Break (Carstares Room)
Session 4: Behavior Design and Integration		
15:10	4A	Using Cognitive Semantics to Integrate Perception and Motion in a Behavior-based Robot <i>D. Paul Benjamin Deryle Lonsdale, Brigham Young University, and Damian Lyons, Fordham University and Siddharth Patel, Pace University, USA</i>
15:35	4B	A Constraint-Based Behavior Fusion Mechanism on Mobile Manipulator <i>Shu Huang, Erwin Aertbelien, Hendrik Van Brussel, Katholieke Universiteit Leuvene, Belgium</i>
16:00	Closing	End of Day 4

Friday August 8, 2008		
DAY 5	LAB-RS (Raeburn Room)	
09:00	Opening	Organizational remarks
09:10	Panel 2	Learning and adaptation: Robots Vs Biological systems
11:05	Break 1	Coffee Break (Carstares Room)
Session 5: Adaptive Designs		
11:25	5A	Adaptive communication promotes sub-system formation in a multi agent system with limited resources <i>Di Prodi Paoloi and Bernd Porr, University of Glasgow, UK, and Florentin Wörgötter, University of Göttingen, Germany</i>
11:50	5B	Dual Robust Controller Design for High Power AC Servo drive <i>Stone Cheng, Yuan-Yong Huang, Hsin-Hung Chou, National Chiao-Tung University and MSL/ITRI, Taiwan, ROC</i>
12:15	Lunch+Awards	Lunch provided (Carstares Room) + LABRS Best Paper Award
Session 6: Autonomous Mobile Platforms		
13:15	6A	Simultaneous Localization And Mapping Based On PF-MDS <i>Hongmo Je and Daijin Kim, Pohang University of Science and Technology, South Korea</i>
13:40	6B	Autonomous Navigation of an Unmanned Ground Vehicle in Unstructured Forest Terrain <i>Joel Alberts, Dean Edwards, Terence Soule, Mike Anderson, Michael O'Rourke, University of Idaho, USA</i>
14:05	Open Discussion and Conclusion	
15:00	Closing	Symposium Conclusion

BLISS: Bio-inspired, Learning and Intelligent Systems for Security
LAB-RS: Learning and Adaptive Behavior in Robotic Systems

BLISS 2008 <http://www.see.ed.ac.uk/bliss08/>
LABRS 2008 <http://www.see.ed.ac.uk/~labrs08/>