

13th IEEE International Conference on Cognitive Informatics and Cognitive Computing



Keyworth Centre, London South Bank University
Keyworth Street, London SE1 0AA, UK

Monday, August 18, 2014

08:00 - 09:00	Registration	Keyworth Centre
09:00 - 09:30	<p>Welcome Co-chairs and Prof. Phil Cardew, Pro Vice Chancellor, LSBU, UK Room K2 – VG10</p>	
09:30 - 10:10	<p>Keynote 1 Decision-Making Mechanisms in the Brain Prof. Edmund T Rolls, Oxford University, UK Chair: Dilip Patel Room K2 – VG10</p>	
10:10 - 10:30	Coffee Break	Keypoint Café
10:30 - 12:10, Parallel Sessions		
Session A: Room K2 – VG10		Session B: Room K2 – VG06
A1 Cognitive Informatics Chair: Shushma Patel		B1 Autonomous Agents and Symbiotic Computing Chair: Shigeru Fujita
Towards a Differential Diagnostic of PTSD using Cognitive Computing Methods <i>Newton Howard, Louis Jehel, and Romain Arnal (195)</i>		An Application of an Agent Space Connecting Real Space and Digital Space <i>Kenji Sugawara, Yuki Kaeri, Yusuke Manabe, Claude Moulin, and Jean-Paul Barthès (106)</i>
Towards a Theory of Fuzzy Probability for Cognitive Computing <i>Yingxu Wang (216)</i>		Expansion and Evaluation of EAS to Provision Multimedia Communications Services in Heterogeneous Environments <i>Akiko Takahashi, Makoto Oide, Mitsuru Abe, and Tetsuo Kinoshita (105)</i>
An Evaluation of Integer- and Fractional-Order Controllers for Small Satellites <i>Mohamed Temam Nasri, and Witold Kinsner (35)</i>		Design and Production of an Electronic Musical Score System to Reduce the Load of Page Turning for Wind Orchestra <i>Yasue Iijima, Susumu Konno, and Yositemo Fujii (107)</i>
Towards a Formal Theory of Social Roles in Cognitive Computing and Cognitive Informatics <i>Julia Taylor and Victor Raskin (52)</i>		Conversational Labeling Method for Sensor Nodes in a Daily Living Environment <i>Hideki Hara and Kenji Sugawara (123)</i>
Non-Kolmogorov Probability and its use for Constructing a Model of Human Perception Process <i>Yoshiharu Tanaka, Masanari Asano, Andrei Khrennikov, and Masanori Ohya (130)</i>		A Flexible Selection of Internet Connections based on Network Expert Knowledge <i>Jin Ito, Asato Edo, Satoru Izumi, Toru Abe, and Takuo Suganuma (177)</i>
12:10 - 13:30	Lunch	Keypoint Café
13:30 - 14:10	<p>Keynote 2 From Information Revolution to Intelligence Revolution Prof. Yingxu Wang, Univ. of Calgary, Canada Chair: Shushma Patel Room K2 – VG10</p>	
14:15 - 15:55, Parallel Sessions		
Session A: Room K2 – VG10		Session B: Room K2 – VG06
A2 Cognitive Computing Chair: Dilip Patel		B2 Cognitive Vehicles and Driving Chair: Fumio Mizoguchi

Position Update Mechanisms for Enhanced Particle Swarm Classification <i>Nabila Nouaouria, Mounir Boukadoum, and Robert Proulx (7)</i>	Extracting Tendency and Stability from Time Series and Random Forest for Classifying Car Driver's Cognitive Load <i>Yutaka Yoshida, Hayato Ohwada, and Fumio Mizoguchi (30)</i>
Functional Networks of Anatomic Brain Regions <i>Burak Velioglu, Emre Aksan, Itr Önal, Orhan Firat, Mete Ozay, and Fatoş T. Yarman Vural (47)</i>	A New Approach to Detecting Distracted Car Drivers using Eye-Movement Data <i>Fumio Mizoguchi, Hiroyuki Nishiyama, and Hirotoishi Iwasaki (40)</i>
Cognitive Identification of Systems using Nonlinear Dynamics <i>Xiaoxiang Liu, Tarikul Sabbir, and Henry Leung (18)</i>	A Design of the Cognitive Process Model for a Car Driver Considering Quantitatively Expressed Distraction <i>Taku Harada, Kazuaki Mori, Akira Yoshizawa, and Hirotoishi Iwasaki (48)</i>
Psychologically-Based Personalised Modelling of Emotions using Associative Classifiers <i>Aladdin Ayesh, Miguel Arevalillo-Herráez, and Francesc J. Ferri (125)</i>	Effects of Non-visual Secondary Tasks on Driver's Gazing Behavior for Pedestrians <i>Akira Yoshizawa and Hirotoishi Iwasaki (138)</i>
A Bio-Inspired Architecture of the Vestibular System for Body Balance of a Humanoid Robot <i>Ory Medina, Sergio Vargas, Daniel Madrigal, Félix Ramos, and Gustavo Torres (133)</i>	A Cognitive Perspective for Information Processing in Bandwidth-Limited Wireless Communications <i>Xiaoming Tao, Linhao Dong, Shaoyang Li, Yang Li, Ning Ge, and Jianhua Lu (220)</i>

15:55 – 16:20	Coffee Break	Keypoint Café
16:20 – 18:00		

A3 Cognitive Systems Chair: Witold Kinsner	B3 Cognitive Text Understanding and Web Wisdom Chair: Xing Wu
Rank Level Fusion of Multimodal Cancelable Biometrics <i>Padma Polash Paul and Marina Gavrilova (136)</i>	Reducing Problem Space using Bayesian Classification on Semantic Logs for Enhanced Application Monitoring and Management <i>Omair Shafiq, Reda Alhaj, and Jon Rokne (54)</i>
On Efficient Quantum Algorithm using Classical Amplification Process <i>Satoshi Iriyama and Masanori Ohya (87)</i>	The Dynamics Model of Public Opinion Diffusion in Online Social Network <i>Zuqin Chen and Jike Ge (93)</i>
A Cognitive Approach for Texture Analysis using Neighbors-Based Binary Patterns <i>Izem Hamouchene and Saliha Aouat (113)</i>	Distributed Image File System Based on Human Cognition <i>Xing Wu, Haitao Lv, Fangyi Chen, Xiangfeng Luo, and Shaojian Zhuo (41)</i>
A Chaotic Measure for Cognitive Machine Classification of Distributed Denial of Service Attacks <i>Muhammad Salman Khan, Ken Ferens, and Witold Kinsner (45)</i>	An Overview about Extracting Static Properties of Vehicle in the Video <i>Xu Zheng (192)</i>
Analyzing Medical Contexts in Ubiquitous Computing Home Environments with Denotational Mathematics <i>John Sarivougioukas and Aristides Vagelatos (112)</i>	Semantic Annotation of Traffic Video Resources <i>Xu Zheng (5)</i>

Tuesday, August 19, 2014

09:10 - 9:50	Keynote 3 Synthetic Intelligence Meets Medical Needs Prof. Newton Howard, MIT, USA Chair: Witold Kinsner Room K2 – VG10
--------------	---

9:55 - 10:20	Coffee Break	Keypoint Café
10:20 - 12:00, Parallel Sessions		

Session A: Room K2 – VG10	Session B: Room K2 – VG06
A4 Cognitive Learning Chair: Victor Raskin	B4 Computational Intelligence (I) Chair: Henry Leung
Modeling Self-Efficacy using the Computational-Unified Learning Model (C-ULM): Implications for Computational Psychology and Cognitive Computing <i>Duane Shell, Leen-Kiat Soh, and Vlad Chiriacescu (49)</i>	Your Privacy Information are Leaking When You Surfing on the Social Networks: A Survey of the Degree of Online Self-Disclosure (DOSD) <i>Jike Ge, Jun Peng, and Zuqin Chen (20)</i>
Learning Algorithm and Neurocomputing Architecture for NDS Neurons <i>Mario Aoun and Mounir Boukadoum (17)</i>	A Cognitive Architecture for Virtual Entities with Attentional Modulation of Pain Perception <i>Cynthia Avila-Contreras, Daniel Madrigal, Gustavo Torres,</i>

	<i>and Félix Ramos (42)</i>	
Learning through Explaining Observed Inconsistencies <i>Du Zhang (194)</i>	A Chaos-Based Block Cipher with Feistel Structure <i>Jun Peng, Liang Lei, Qi Han, and Rong Jia (103)</i>	
Using Storytelling Methods to Improve Emotion, Motivation and Attitude of Students Writing Scientific Papers and Theses <i>Marcus Birkenkrahe (141)</i>	HCN Production Process Modeling and Optimization Based on Artificial Neural Networks and Genetic Algorithm <i>Yi Jun, Rui Zhang, Huang Di, Li Taifu, Peng Jun, and Su Yingying (92)</i>	
Design of a Human Interaction Proof (HIP) using Human Cognition in Contextual Natural Conversation <i>Mir Tafseer Nayeem, Md Mamunur Rashid Akand, Nazmus Sakib, and Md. Wasi Ul Kabir (132)</i>	Formal Verification for Embedded Software with Environment Modeling <i>Qingdi Meng, Lianyi Zhang, and G.M Luo (14)</i>	
12:00 - 13:30	Lunch	Keypoint Café
13:30 - 14:10	Keynote 4	
	Technology Support for Healthy Living and Minimising Cognitive Impairment Prof. Dilip Patel, LSB University, UK Chair: Witold Kinsner Room K2 – VG10	
	14:15 - 16:15, Parallel Sessions	
	Session A: Room K2 – VG10	Session B: Room K2 – VG06
	A5 Computational Psychoanalysis Chair: Fionn Murtagh	B5 Computational Intelligence (II) Chair: Du Zhang
Determining Vestiges of the Subconscious through Ultrametric Component Analysis <i>Fionn Murtagh (96)</i>	Modeling Two Effects of Superlative Expressions in eWOM Messages on Consumer Evaluative Inferences <i>Kazunori Fujimoto (134)</i>	
The Grounding of Computational Psychoanalysis: A Comparative History of Culture Overview of Matte Blanco Biologic <i>Giuseppe Iurato (102)</i>	A New Biological Visual Cognitive Behavioural Modeling for Video Energy Computing <i>Li Zuojin, Chen Liukui, Ren Zhiyong, and Sreenivas S. Tirumala (186)</i>	
Body Boundary Changes in Person-Centered Psychotherapy <i>Laura Cariola (126)</i>	Optimizing Symbolic Model Checking of Component-Based Systems by Variable Information <i>Lianyi Zhang, Qingdi Meng, and Guiming Luo (13)</i>	
The Operationalization of the Unconscious — From Matte Blanco's Bi-Logic to Computation <i>Marco Tonti (131)</i>	Image Retrieval based on 4096-Tree and Memetic Algorithm <i>Liang Lei, Jun Peng, and Bo Yang (182)</i>	
Formal Approaches in the Age of Mirror Neurons: Hints from Psychoanalytic Theories and Practice <i>Rosapia L. Grotto (110)</i>	A Kind of Topology Control Algorithm Aimed at Extending the Life Cycle of the WSN <i>Xiang Yi, Ying Wu, and Jun Peng (188)</i>	
Correlates of Overt and Covert Attention in Visual Search <i>Ulrich Engelke, Anthony Zeater, and Andreas Duenser (33)</i>	Enhanced Particle Swarm Optimization Algorithm with Reuse Guided Retrieval Capabilities <i>Nabila Nouaouria, Mounir Boukadoum, and Robert Proulx (8)</i>	
16:15 - 16:40	Coffee Break	Keypoint Café
16:40 - 17:40	Poster Session Co-Chairs: Félix Ramos and Xing Wu	
RBAC Role-Permission Assignment with Conflicting Constraints Based on The E-CARGO Model <i>Zhang Wei, Zhu Jingxin, Liu Dongning, Teng Shaohua, and Zhu Haibin (3)</i>	Experiment on Japanese- Uighur Statistical Machine Translation with Increased Corpus <i>Maimitili Nimaiti and Izumi Yamamoto (121)</i>	
Prediction of Magnetic Remanence of NdFeB Magnets by using Novel Machine Learning Intelligence Approach- Support Vector Regression <i>Wende Cheng (4)</i>	Proposal of Voice Control-based Interactive Design Method of Agent System <i>Takahiro Uchiya, Daisuke Yamamoto, Ryota Nishimura, Ichi Takumi, and Tetsuo Kinoshita (139)</i>	
Research on Forecasting Method of Natural Gas Demand Based on GM (1,1) Model and Markov Chain <i>Xi Wan, Qinqin Zhang, and Guoqing Dai (21)</i>	Proposal of Snapshot Management Mechanism for DASH Agent Framework <i>Yuki Kishigami, Takahiro Uchiya, Ichi Takumi, and Tetsuo Kinoshita (140)</i>	
Research on Screening Model of Large High-tech Enterprises Product Innovation Idea <i>Yan Xu and Xi Wan (22)</i>	Lag Synchronization of Two Different Delay Chaotic Systems <i>You Mingying, Han Qi, and Peng Jun (178)</i>	
Evaluating the Probabilistic side of Proactive Computing using Cognitive Modelling Methodology and the Statistical Inference of User's Cognitive States	The Overview of Big Data Storage and Management <i>Xu Zheng (181)</i>	
	Penetration Overload Signal Adaptive Cognitive Filtering Model	

<p><i>Denis Shirnin and Denis Zampunieris (31)</i></p> <p>Study of Variable Spray Control System based on Machine Vision <i>Rui Zhang and Lepeng Song (36)</i></p> <p>Towards a Social Interaction-based Cognition Model: An Analysis of Spatial Data Infrastructure <i>Luis Reynoso, Eduardo Grosclaude, Laura Sánchez, and Mabel Álvarez (39)</i></p> <p>Photoelectricity Property of Micro Device Based on Carbon Nanotubes <i>Ying Wu and Junjie Bai (95)</i></p> <p>The Application of Distributed and Cooperation Computing in Logistics Transportation <i>Huang Guibin and Teng Shaohua (109)</i></p> <p>AIR-space: Cognitive Cooperation Space for Active Information Resources based Network Management System <i>Kazuto Sasai, Hideyuki Takahashi, Gen Kitagata, and Tetsuo Kinoshita (117)</i></p>	<p>Based on Wavelet Analysis <i>Haifeng Zhao, Yan Guo and Ya Zhang (184)</i></p> <p>A Software Frame of Elevator Signal Amplifier Network with Self-Diagnosis <i>Guorong Chen, Juli Deng, and Jianxiang Yi (185)</i></p> <p>A Pattern Recognition for Group Abnormal Behaviors Based on Markov Random Fields Energy <i>Li Zuojin, Chen Liukui, Ren Zhiyong, and Sreenivas S. Tirumala (187)</i></p> <p>Symmetry in Sequent Calculus and Matte Blanco's Bi-logic <i>Giulia Battilotti (190)</i></p> <p>Chinese Text Sentiment Analysis Based on Fuzzy Semantic Model <i>Shaojian Zhuo, Xing Wu, Haitao Lu, and Xiangfeng Luo (191)</i></p>
---	---

19:00 - 21:30

Banquet and Award

(TBD)

Wednesday, August 20, 2014

9:00 - 9:40

Keynote 5

Polyscale Analysis and Fractional Operators for Cognitive Systems

Prof. Witold Kinsner, University of Manitoba, Canada

Chair: Gabriele Fariello

Room K2 – VG10

9:40 - 10:40, Parallel Sessions

Session A: Room K2 – VG10	Session B: Room K2 – VG06
<p>A6 Fuzzy Cognitive Systems</p> <p>Chair: Virendrakumar C. Bhavsar</p>	<p>B6 Cognitive Granular Computing</p> <p>Chair: Shusaku Tsumoto</p>
<p>A Fuzzy Structure Similarity Algorithm for Attributed Generalized Trees <i>Mahsa Kiani, Virendrakumar C. Bhavsar, and Harold Boley (90)</i></p>	<p>Category Evaluation Method for Business Intelligence using a Hierarchical Bayes Model <i>Natsuki Sano, Katsutoshi Yada, and Tomomichi Suzuki (28)</i></p>
<p>α-cut-Based Backward Fuzzy Interpolation <i>Shangzhu Jin, Ren Diao, and Qiang Shen (101)</i></p>	<p>Incremental Rule Induction based on Updates of Statistical Indices <i>Shusaku Tsumoto and Shoji Hirano (50)</i></p>
<p>A Rough-Fuzzy Perception-Based Computing for a Vision-Based Wall-Following Robot <i>Tong Duan and Witold Kinsner (6)</i></p>	<p>Formal Analysis of Leave-One Out Method based on Incremental Sampling Scheme <i>Shusaku Tsumoto and Shoji Hirano (116)</i></p>

10:40 - 10:55

Coffee Break

Keypoint Café

10:55 - 11:50

Plenary Panel
Room K2 – VG10

Perspectives on Cognitive Computing and Cognitive Systems

Chair: Yingxu Wang

Panelists

Virendra Bhavsar, Gabriele Fariello, Newton Howard, Giuseppe Iurato, Witold Kinsner, Henry Leung, Fumio Mizoguchi, Fionn Murtagh, Dilip Patel, Shushma Patel, Victor Raskin, Edmund Rolls, Duane Shell, Kenji Sugawara, and Du Zhang

11:50 - 12:00

Introduction to ICCI*CC'15, Tsinghua University, Beijing, China

Prof. Ning Ge
Room K2 – VG10