IAS / HIS'2013 - Program at a Glance

December 4-6, 2013, Laico Hotel, Yassmine Hammamet – Tunisia

	4 Dec. 2013	5 Dec. 2013	6 Dec. 2013
08:30-09:00		#HIS 26,28,29,63 (room A) #HIS 3,33,36,66 (room B)	Plenary Talk 3 (room A) *Farhat Fnaiech (Tunisia)*
09:00-09:30			
09:30-10:00			Tutorial – Part 1 (room A) *Tarek M. Hamdani (KSA)*
10:00-10:30		Plenary Talk 2 (room A) *Imre J. Rudas (Hungary)*	
10:30-11:00			
11:00-11:30		Coffee Break	Coffee Break
11:30-12:00		#IAS 6,8,10,12,28 (room A) #HIS (posters): 2,6,10,11,17,27,35, 38,43,45,46,48,53,54,65,69 (room B)	Tutorial – Part 2 (room A) *Tarek M. Hamdani (KSA)*
12:00-12:30			
12:30-13:00			
13:00-13:30	#IAS & #HIS Registration	Lunch	Lunch
13:30-14:00			
14:00-14:30	Opening Session	#IAS 1,9,15,17,23,29 (room A) #HIS 1,8,40,42,50,68 (room B)	
14:30-15:00	Plenary Talk 1 (room A) *Constantinos S. Pattichis (Cyprus)*		
15:00-15:30			
15:30-16:00	#IAS 5,14,16,18 (room A) #HIS 7,9,49,61 (room B)	Coffee Break	
16:00-16:30			
16:30-17:00		#HIS 4,12,14,23,44,47 (room A) #HIS 18,21,22,32,37,55 (room B)	
17:00-17:30	Coffee Break		
17:30-18:00	#HIS 19,24,25,30,64 (room A) #HIS 15,20,52,56,67 (room B) #IAS (Posters): 7,20,21,22,26,27 (hall)		
18:00-18:30			
18:30-19:00			
19:00-22:00		Gala Dinner & Awards	

Plenary Talk 1

Time: Wednesday, December 04, 2013, 14:30 – 15:30

Location: Room A

Chair: Mounir Ben Ayed (Univ. Sfax, Tunisia)

New Trends in Computational Intelligence in Health Applications

Constantinos S. Pattichis

Department of Computer Science, University of Cyprus, Cyprus

Abstract. Cardiovascular (CV) disease is one of the most common causes of death worldwide and represents a major financial burden for national economies. Effective prediction and prevention of CV disease particularly that which resulted from high-risk asymptomatic atherosclerosis, has now become a top priority. The goal of this lecture will be to give a review of non-invasive ultrasound image processing methods that are used to facilitate the intelligent analysis of carotid plaque morphology for predicting stroke risk. The lecture will begin with a review of clinical methods for visual classification that have led to standardized methods for image acquisition. Methods for ultrasound imaging atherosclerotic plaque denoising, and image segmentation will then be described, followed by an overview of the several multi-scale texture-feature extraction algorithms and classification methods investigated. Risk modeling based on clinical and ultrasonic plaque texture features that enable the assessment of the risk of stroke will be described.

Biography. Constantinos S. Pattichis is currently Professor with the Department of Computer Science of the University of Cyprus. His research interests include ehealth and mhealth, medical imaging, biosignal analysis, life sciences informatics, and intelligent systems. He has published 80 refereed journal and 190 conference papers, and 27 chapters in books in these areas. He is Co-Editor of the books M-Health: Emerging Mobile Health Systems, and of the Ultrasound and Carotid Bifurcation Atherosclerosis, published by Springer in 2006, and 2012 respectively. He was Guest Co-Editor of 11 journal Special Issues including the more recent ones on Atherosclerotic Cardiovascular Health Informatics, and Citizen Centered e-Health Systems in a Global Health-care Environment,, of the IEEE Trans. on Information Technology in Biomedicine. He was General Co-Chairman of the IEEE 12th International Conference on BioInformatics and BioEngineering (BIBE2012), and the IEEE Information Technology in Biomedicine (ITAB09). Moreover, he serves as Distinguished Lecturer of the IEEE EMBS, an Associate Editor of the IEEE Journal of Biomedical and Health Informatics, and on the Editorial Board of the Journal of Biomedical Signal Processing and Control. He is a Fellow of IET, and Senior Member of IEEE.

#IAS **– Information & Assurance Security I**

Time: Wednesday, December 04, 2013, 15:30 – 16:50

Location: Room A

Chair: Markus Graube (Technische Universitat Dresden, Germany)

IAS5	**Trusted Integration of Cloud-based NFC Transaction Players**

Pardis Pourghomi[1], Muhammad Qasim Saeed[2] and Gheorghita Ghinea[1]

[1] *School of Information System, Computing and Mathematics, Brunel University, UK*

[2] *Information Security Group (ISG), Royal Holloway University of London, UK*

IAS14 **A professional view on eBanking Authentication: Challenges and Recommendations**

Jordi Aguilà[1], Jetzabel M. Serna-Olvera[2], Manel Medina[3], Andreas Sfakianakis[3] and **Luis Ángel Fernández**[2]

[1] *CSRIT CaixaBank Barcelona, Spain*

[2] *Security Research Group Barcelona Digital Technology Centre Barcelona, Spain*

[3] *Risk & Analysis Research Group Core Operations - ENISA Heraklion, Greece*

IAS16 **How to Grant Less Permissions to Facebook Applications**

Gianpiero Costantino, Fabio Martinelli and Daniele Sgandurra

Istituto di Informatica e Telematica Consiglio Nazionale delle Ricerche, Pisa, Italy

IAS18 **A wavelet network speech recognition system to control an augmented reality object**

Dhekra Bousnina[1], **Ridha Ejbali**[2], Mourad Zaied[2] and Chokri Ben Amar[2]

[1] *Higher Institute of Computer and Multimedia of Gabes, University of Gabes, Tunisia*

[2] *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*

#HIS **– Function Approximation I**

Time: Wednesday, December 04, 2013, 15:30 – 16:50

Location: Room B

Chair: Aboul Ella Hassanien (FCI - Cairo University, Egypt)

HIS7	**Hill-climber Based Fuzzy-Rough Feature Extraction with an Application to Cancer Classification**
	Sujata Dash
	Department of Computer Science, Gandhi Institute for Technology, India
HIS9	**Performance Evaluation of Fuzzy Cluster Validity Indexes for Optimal Data Clustering**
	Mahdi Ouziala and Hacene Habbi
	Applied Automation Laboratory, University of Boumerdès, Algeria
HIS49	**Hybrid Naive Possibilistic Classifier for Heart Disease Detection from Heterogeneous Medical Data**
	Karim Baati[1,2], Tarek M. Hamdani[1,3] and Adel M. Alimi[1]
	[1]*REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*
	[2]*University of Monastir, Higher Institute of Computer Science of Mahdia, Tunisia*
	[3]*Taibah Univ., College of Science and arts at Al-Ula, al-Madinah al-Munawwarah, KSA*
HIS61	**Failure and Power Utilization System Models of Differential Equations by Polynomial Neural Networks**
	Ladislav Zjavka[1] and Ajith Abraham[2]
	[1] *VŠB-Technical University of Ostrava Ostrava, Czech Republic*
	[2] *MIR-Labs: Scientific Network for Innovation and Research Excellence, USA*

#HIS   – Approximate reasoning / Applications

Time: Wednesday, December 04, 17:10 – 18:50

Location: Room A

Chair: Sujata Dash (Gandhi Institute for Technology, India)

HIS19	**Performance Evaluation of Random Forest Regression Model in Tracking Parkinson's Disease Progress**

Tomáš Peterek[1], Maros Šmondrk[1,2], **Pavel Dohnálek**[1,2] and Petr Gajdoš[3]

[1] *IT4innovations, Centre of Excellence, Czech Republic*

[2] *Department of Computer Science, FEECS, Czech Republic*

[3] *VSB - Technical University of Ostrava, Czech Republic*

HIS24	**A new bayesian model for QoS provisioning in DiffServ over MPLS Networks**

Ali El Kamel, Hamdi Eltaief and Habib Youssef

RU PRINCE, ISITCOM Hammem Sousse, University of Sousse, Tunisia

HIS25	**User Behaviour Classification using Fuzzy Rule Based System**

Atta Rahman[1,2], Dur-e-Najaf Zaidi[1], M. Hammad Salam[3] and Shahid Jamil[1]

[1] *PMAS-Arid Agriculture University, Pakistan*

[2] *Institute of signals, systems and softcomputing (ISSS), Islamabad, Pakistan*

[3] *The University of Lahore, Islamabad Campus, Islamabad, Pakistan*

HIS30	**Bayesian networks for user modeling: Predicting the user's preferences**

Rim Rebai, Mohamed Amin Maalej, Adel Mahfoudhi

Computer Embedded System ENIS, University of sfax Tunisia

HIS64	**An Intelligent Recommender system for drinking water quality**

Samar Mahmoud[1,*], **Nashwa El-Bendary**[2,*], Mahmood A. Mahmood[3,*] and Aboul Ella Hassanien[1,*]

[1] *Faculty of Computers and Information, Cairo University, Cairo, Egypt*

[2] *Arab Academy for Science, Technology, and Maritime Transport, Cairo, Egypt*

[3] *ISSR, Computer Sciences and Information Dept., Cairo University, Cairo, Egypt*

[*] *Scientific Research Group in Egypt, (SRGE), Egypt*

#HIS – Intelligent Applications I

Time: Wednesday, December 04, 17:10 – 18:50

Location: Room B

Chair: Nashwa El-Bendary (SRGE, Egypt)

HIS15	**A heuristic multi-agents model to solve the P||Cmax: application to the DDBAP in a container terminal**

Sami Mnasri and Kamel Zidi

Laboratoire SOIE, ISG Tunis, Tunisia

HIS20	**Face recognition based on Beta 2D Elastic Bunch Graph Matching**

Ridha Ejbali, Mourad Zaied and Chokri Ben Amar

REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia

HIS52	**A new System for TV program contents improvement using a semantic matching technique**

Olfa Ben Said, Ali Wali and Adel M Alimi

REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia

HIS56	**Formal concept analysis approach for comparison between mutagenicity and carcinogenicity in Cheminformatics**

Mostafa Salama[1,*], Aboul Ella Hassanien[2,*] and Adel Alimi[3]

[1] *British University in Egypt, Department of Computer Science, Cairo, Egypt*

[2] *Cairo University, Faculty of Computers and Information, Cairo, Egypt*

[3] *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*

[*] *Scientific Research Group in Egypt (SRGE), Egypt*

HIS67	**Design and implementation of a pervasive occupancy displaying system in an academic environment**

Andrzej Romanowski[1], Pawel Wozniak[2], Zbigniew Chaniecki[1], Krzysztof Grudzień[1], Hela Garbaa[1], Lidia Jackowska-Strumiłło[1] and Dominik Sankowski[1]

[1] *Institute of Applied Computer Science, Lodz University of Technology Lodz, Poland*

[2] *Department of Applied IT, Chalmers University of Technology Gothenburg, Sweden*

#IAS – Poster Session

Time: Wednesday, December 04, 17:10 - 18:50

Location: Hall

Chair: Gianpiero Costantino (IIT-CNR, Italy)

IAS7	**Developing ECC Applications in Java Card**
	Víctor Gayoso Martínez and Luis Hernández Encinas
	Spanish National Research Council (CSIC), Spain

IAS20 **The State of the Art of Risk Assessment and Management for Information Systems**

Lulu Liang, Ren Wang, Song Jing, Hu Huaming, He Qiang and Fang Shuo

China Information Technology Security Evaluation Center, China

IAS21 **Enhanced P2P Botnets Detection Framework Architecture with Hybrid Analyzer: Host-based and Network-based**

Raihana Syahirah Abdullah, Faizal M.A., Zul Azri Muhamad Noh, **Mohd Zaki Mas'ud**, Siti Rahayu Selamat and Shahrin Sahib

Universiti Teknikal Malaysia Melaka (UTeM), Malaysia

IAS22 **Profiling Mobile Malware behaviour through Hybrid Malware analysis Approach**

Mohd Zaki Mas'ud, Shahrin Sahib, Mohd Faizal Abdollah, Siti Rahayu Selamat, Robiah Yusof and Rabiah Ahmad

Universiti Teknikal Malaysia Melaka (UTeM), Malaysia

IAS26 **Privacy Preserving Processing of Data Decision Tree Based on Sample Selection and Singular Value Decomposition**

Priyank Jain[1], Neelam Pathak[1], Pratibha Tapashetti[2] and A.S. Umesh[3]

[1] *Dept of CSE, AISECT University, India*

[2] *NIMS University, India*

[3] *Dept of CSE, TIT & Science, India*

IAS27 **A Secured Model for Indian E-Health System**

Shilpa Srivastava[1], Namrata Agarwal[2], Millie Pant[3] and Ajith Abraham[4]

[1] *RKGIT, MCA Department, Ghaziabad, India*

[2] *NIFM, Faridabad, India*

[3] *Indian Institute of Technology Roorkee, India*

[4] *MIR-Labs, USA*

#HIS   – Pattern Recognition

Time: Thursday, December 05, 2013, 08:30 – 09:50

Location: Room A

Chair: Chokri Ben Amar (University of Sfax, Tunisia)

HIS26	**AVAS: Speech Database for Multimodal Speech Recognition Applications**
	Samar Antar[1], **Alaa Sagheer**[1,2], Saleh Aly[1,3] and Mohamed Tolba[4]
	[1] *Center for Artificial Intelligence and Robotics (CAIRO), Egypt*
	[2] *Department of Mathematics, Faculty of Science, Egypt*
	[3] *Faculty of Engineering Aswan University, Aswan, Egypt*
	[4] *Faculty of Computers and Information, Ain Shams University Cairo, Egypt*
HIS28	**Vocabulary Tree Schema Based on SURF Descriptor for Real Time Object Detection and Recognition in Video**
	Imen Masmoudi, Maher El'arbi and Chokri Ben Amar
	REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia
HIS29	**Vision system for licence plate recognition based on neural networks**
	Eva Volna and **Martin Kotyrba**
	Department of Computer Science, University of Ostrava, Czech Republic
HIS63	**Video Summarization Using Viewer Affective Feedback**
	Majdi Dammak, Ali Wali and Adel Alimi
	REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia

#HIS **– Function Approximation II**
Time: Thursday, December 05, 2013, 08:30 – 09:50
Location: Room B
Chair: Alexandre Ramos (UNIFEI, Brazil)

HIS3   **Efficient Link Adaptation in OFDM Systems using a Hybrid Intelligent Technique**

Atta Rahman[1,2], Ijaz Mansoor[2,3], M. Hammad Salam[4] and Muhammad Tahir Naseem[1,2]

[1]Barani Institute of Information Technology, Rawalpindi, Pakistan
[2]Institute of Signals, Systems and Soft-computing (ISSS), Islamabad, Pakistan
[3]Department of Electrical Engineering, Air University, Islamabad, Pakistan
[4]The University of Lahore, Islamabad Campus, Islamabad, Pakistan

HIS33   **A Novel Recommendation System Approach Utilizing Social Network Profiles**

Timo Kähärä, Keijo Haataja and Pekka Toivanen
University of Eastern Finland, School of Computing, Finland

HIS36   **An Intelligent Approach for Galaxies Images Classification**

Mohamed Abd Elfattah[1,5], **Nashwa Elbendary**[2,5], Mohamed Abu Elsoud[1,5], Aboul Ella Hasssanien[3,5] and Mohamed Tolba[5]

[1] Faculty of Computers and Information System, Mansoura University, Egypt
[2] Arab Academy for Science, Technology, and Maritime Transport, Cairo, Egypt
[3] Faculty of Computers and Information, Cairo University, Cairo, Egypt
[4] Faculty of Computers and Information, Ain Shams University, Egypt
[5] Scientific Research Group in Egypt (SRGE), Egypt

HIS66   **Contextual processing of ECT measurement information towards detection of process emergency states**

Andrzej Romanowski[1], Krzysztof Grudzień[1], Zbigniew Chaniecki[1] and Paweł Woźniak[2]
[1] Institute of Applied Computer Science, Lodz University of Technology Lodz, Poland
[2] Department of Applied IT, Chalmers University of Technology Gothenburg, Sweden

Plenary Talk 2

Time: Thursday, December 05, 2013, 09:50 – 10:50

Location: Room A

Chair: Farhat Fnaiech (Univ. Tunis, Tunisia)

Cloud Computing with Special Emphases on Intelligent Robotics

Imre J. Rudas
Óbuda University, Budapest, Hungary

Abstract. Cloud Computing as an emerging technology is a new paradigm in Information Technology and has dramatically changed our everyday life. The presentation summarizes the basics of cloud computing, namely the main idea, the definition, the cloud model composed of essential characteristics, service models and deployment models. In the second part of the presentation the possible applications of cloud computing in robotics are outlined with special emphases to robots as a service in cloud computing. Finally some cloud robotics projects are discussed. The last part of the presentation summarizes the results and ideas of a new generation internet and Cloud Technology based Virtual Collaboration Arena (VirCA) developed in Hungary and some of its application possibilities in Intelligent Robotics.

VirCA provides a platform where users can build, share and manipulate 3D content, and collaboratively interact with real-time processes in a 3D context, while the participating hardware and software devices can be spatially and/or logically distributed and connected together via IP network. The 3D content and processes in VirCA can be synchronized with the real world, which allows the combination of reality and virtual world in the collaboration arena.

Biography. Imre J. Rudas graduated from Bánki Donát Polytechnic, Budapest in 1971, received the Master Degree in Mathematics from the Eötvös Loránd University, Budapest, the Ph.D. in Robotics from the Hungarian Academy of Sciences in 1987, while the Doctor of Science degree from the Hungarian Academy of Sciences in 2004. He received his first Doctor Honoris Causa degree from the Technical University of Košice, Slovakia and the second one from "Polytechnica" University of Timişoara, Romania. He is active as a full university professor. He served as the President of Budapest Tech from 2003 till 2010. He was elected in 2010 as the President of Óbuda University, the successor of Budapest Tech for a period of five years. He is the treasurer of IFSA (International Fuzzy System Association), he had been the President of Hungarian Fuzzy Association for ten years, he is the Vice-President of the Hungarian Academy of Engineering.

He has been an active member of IEEE. He was a member of IEEE Board of Directors RAB, TAB Section/Chapter Support Committee in 1998. He is a Fellow of IEEE, Senior AdCom member of IES, he was a Vice-President of IEEE Industrial Electronics Society in 2000-2001, and he is a Distinguished Lecturer of IES. He was elected as the Chair of IEEE Hungary Section for the period 2008-1012. He has been the founding chair of IEEE Hungary Chapter of Systems, Man, and Cybernetics Society since 2003; he was the Region 8 Chapter Coordinator for SMC during the period 2002-04. He has been serving as a Technical Program Committee member the annual SMC conferences for many years. He served as a BoG member of SMC in the period 2007-2010 and 2012, he has been a Distinguished Lecturer of the Society since 2009.

His present areas of research activities are Computational Cybernetics, Intelligent Robotics with special emphasis on Robot Control, Soft Computing, Computed-aided Process Planning, Fuzzy Control and Fuzzy Sets. He has published books, more than 700 papers in books, scientific journals and peer reviewed international conference proceedings.

#IAS — Information & Assurance Security II
Time: Thursday, December 05, 11:10 – 12:50
Location: Room A
Chair: Chokri Ben Amar (University of Sfax, Tunisia)

IAS6	**Flexibility vs. Security in Linked Enterprise Data Access Control Graphs**
	Markus Graube[1], Patricia Ortiz[2], Manuel Carnerero[3], Oscar Lázaro[2], Mikel Uriarte[3] and Leon Urbas[1]
	[1] Technische Universitat Dresden, Germany
	[2] R&D, ICT Unit, Innovalia Association S.A., Bilbao, Spain
	[3] R&D, Nextel S.A., Bilbao, Spain
IAS8	**Information Flow Policies vs Malware**
	Radoniaina Andriatsimandefitra, Thomas Saliou and **Valérie Viet Triem Tong**
	[1] SUPELEC/INRIA/CNRS/University of Rennes, France
IAS10	**Detecting Stepping-Stones under the Influence of Packet Jittering**
	Wei Ding, Khoa Le and **Shou-Hsuan Stephen Huang**
	Department of Computer Science, University of Houston, USA
IAS12	**ARMLCC: Adaptive and Recovery-based Multi-Layer Connected Chain Mechanism for Multicast Source Authentication**
	Hamdi Eltaief, Ali El Kamel and Habib Youssef
	Research Unit PRINCE, ISITCom, University of Sousse, Tunisia
IAS28	**A System of Abnormal Behaviour Detection in Aerial surveillance**
	Ahlem Walha, Ali Wali and Adel M. Alimi
	REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia

#HIS   – Poster Session

Time: Thursday, December 05, 11:10 – 12:50

Location: Room B

Chair: Atta Rahman (Barani Institute of Information Technology, Pakistan)

HIS2	**DSP based Embedded Fingerprint Recognition System**
	Maddu Kamaraju and **P Anil kumar**
	E.C.E Department, Gudlavalleru Engineering College, Gudlavalleru, India

HIS6	**A Rough-fuzzy C-means Using Information Entropy for Discretized Violent Crimes Data**
	Chao Yang[1,2], Shiyuan Che[1], Xueting Cao[2], Yeqing Sun[2], Ajith Abraham[3]
	[1] *School of Information Science and Technology, Dalian Maritime University, China*
	[2] *Institute of Environmental Systems Biology, Dalian Maritime University, China*
	[3] *Machine Intelligence Research Labs (MIR Labs), USA*

HIS10	**An Artificial Neural Network approach to Text Summarization for the South Indian Language of Kannada**
	Jayashree R[1], Srikantamurthy K[1] and Basavaraj S Anami[2]
	[1] *Department of Computer, Science PES Institute of Technology Bangalore, India*
	[2] *Department of Computer, Science PES School of Engineering Bangalore, India*

HIS11	**Kernel-Based Object Tracking Using Particle Filter with Incremental Bhattacharyya Similarity**
	Mohammad Mahdi Dehshibi[1], Amir Vafanezhad[2] and Jamshid Shanbehzadeh[3]
	[1] *Dept. of Computer Engineering, I.A.U., Science and Research Branch Tehran, Iran*
	[2] *Department of Mechatronics, I.A.U., Science and Research Branch Tehran, Iran*
	3 Department of Computer Engineering, Kharazmi University Tehran, Iran

HIS17	**Fuzzy Modeling System based on Hybrid Evolutionary Approach**
	Yosra Jarraya[1], Souhir Bouaziz[1], Adel M. Alimi[1] and Ajith Abraham[2,3]
	[1] *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*
	[2] *Machine Intelligence Research Labs, WA, USA*
	[3] *IT4Innovations, VSB-Technical University of Ostrava, Czech Republic*

HIS27	**Kernel-Based Persian Viseme Clustering**
	Mohammad Mahdi Dehshibi, Meysam Alavi and Jamshid Shanbehzadeh
	[1] *Dept. of Computer Engineering, I.A.U., Science and Research Branch Tehran, Iran*
	[2] *Computer Engineering Department, University of Science & Culture Hamedan, Iran*
	3 Department of Computer Engineering, Kharazmi University Tehran, Iran

HIS35	**Ant-based clustering algorithm for magnetic resonance breast image segmentation**
	Hossam Moftah[1,5], **Aboul Ella Hassanien**[2,5], Adel Alimi[3], Hichem Karray[3] and Mohamed Tolba[4]
	[1] *Faculty of Computers and Information, Beni Suef University, Egypt*
	[2] *Faculty of Computers and Information, Cairo University, Cairo, Egypt*
	[3] *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*
	[4] *Faculty of Computers and Information Science, Ain Shams University, Egypt*
	[5] *Scientific Research Group in Egypt (SRGE), Egypt*

HIS38	**State and fault estimation of linear stochastic discrete time systems**
	Bessaoudi Talel, Fayçal Ben Hmida
	Research Unit C3S ESSTT, University of Tunis, Tunisia

HIS43　　**Repeated Reselling Permission Multi-Reselling Approach for a License in DRM Environment**

Taker Gaber[1,4], **Aboul Ella Hassanien**[2,4] and Mohamed Tolba[3]

[1] *Faculty of Computers and Informatics, Suez Canal University, Ismailia, Egypt*

[2] *Faculty of Computers and Information, Cairo University, Cairo, Egypt*

[3] *Faculty of Computers and Information Science, Ain Shams University, Egypt*

[4] *Scientific Research Group in Egypt (SRGE), Egypt*

HIS45　　**Community Detection in Social Networks by using Bayesian network and Expectation Maximization technique**

Ahmed Ibrahem Hafez[1,*], **Aboul Ella Hassanien**[2,*], Aly Fahmy[2] and Mohamed Tolba[3]

[1] *CS Dept., Faculty of Computer and Information, Minia University, Egypt*

[2] *Faculty of Computers and Information, Cairo University, Egypt*

[3] *Faculty of Computer and Information Science, Ain Shams University, Egypt*

[*] *Scientific Research Group in Egypt (SRGE), Egypt*

HIS46　　**Multi-layer hybrid machine learning techniques for anomalies detection and classification approach**

Amira Sayed A. Aziz[1], **Aboul Ella Hassanien**[2], Sanaa El-Ola Hanafy[3] and Mohamed Tolba[4]

[1] *Universite Francaise d'Egypte (UFE), Cairo, Egypt*

[2] *Scientific Research Group in Egypt (SRGE), Egypt*

[3] *Faculty of Computers and Information, Cairo University, Egypt*

[4] *Faculty of Computers and Information, Ain Shams University, Egypt*

HIS48　　**Decision Support System for Customer Churn Reduction Approach**

Soumya Banerjee[1,5], **Nashwa Elbendary**[2,5], Aboul Ella Hassanien[3,5] and Mohamed Tolba[4]

[1] *Department of Computer Science, Birla Institute of Technology, Mesra, India*

[2] *Arab Academy for Science, Technology, and Maritime Transport, Cairo, Egypt*

[3] *Faculty of Computers and Information, Cairo University, Egypt*

[4] *Faculty of Computers and Information, Ain Shams University, Egypt*

[5] *Scientific Research Group in Egypt (SRGE), Egypt*

HIS53　　**Fuzzy Ant Supervised by PSO and Simplified Ant Supervised PSO Applied to TSP**

Nizar Rokbani[1], Adel M. Alimi[1] and Ajith Abraham[2]

[1] *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*

[2] *Machine Intelligence Research Labs, WA, USA*

HIS54　　**LS^{2}R: A Local Search Algorithm to solve Scheduling Radiotherapy Problems**

Maria Cristina Riff, **Juan Pablo Cares** and Ignacio Araya

Universidad Técnica Federico Santa Maria, Computer Science Department, Chile

HIS65　　**A New Approach of Preprocessing with SVM Optimization Based on PSO for Bearing Fault Diagnosis**

T. Thelaidjia and S. Chenikher

Tebessa University, Algeria

HIS69　　**Emotion Recognition by Analysis of EEG Signals**

Hayfa Blaeich, Mohamed Neji, Ali Wali and Adel M. Alimi

REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia

#IAS – **Information & Assurance Security III**

Time: Thursday, December 05, 14:00 – 16:00

Location: Room A

Chair: Shou-Hsuan Stephen Huang (University of Houston, USA)

IAS1	**Fingerprint Verification Using SVD Features**
	Ala Balti, Mounir Sayadi
	SIME Laboratory, ENSIT, University of Tunis, Tunisia
IAS9	**Hierarchical object log format for normalisation of security events**
	Andrey Sapegin, David Jaeger, Amir Azodi, Marian Gawron and Feng Cheng
	Hasso Plattner Institute (HPI), University of Potsdam, Germany
IAS15	**Quantitative Penetration Testing with Item Response Theory**
	Florian Arnold, Wolter Pieters and Marielle Stoelinga
	University of Twente, The Netherlands
IAS17	**Towards Enforcing On-The-Fly Policies in BYOD Environments**
	Gianpiero Costantino[1], Fabio Martinelli[1], Andrea Saracino[1,2] and Daniele Sgandurra[1]
	[1] *Istituto di Informatica e Telematica Consiglio Nazionale delle Ricerche, Pisa, Italy*
	[2] *Dipartimento di Ingegneria dell'Informazione Universit`a di Pisa, Italy*
IAS23	**A survey on digital tracing traitors schemes**
	Faten Chaabane, Maha Charfeddine and Chokri Ben Amar
	REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia
IAS29	**An intelligent System for New Event Detection**
	Yassine Aribi, Ali Wali and Adel M. Alimi
	REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia

#HIS — Function Approximation III

Time: Thursday, December 05, 14:00 – 16:00

Location: Room B

Chair: Osmar Zaiane (University of Alberta, Canada)

HIS1	**Using ANN and UAV for Terrain Surveillance: A Case Study for Urban Areas Observation**

Luiz F. Felizardo[1], Rodrigo L. Mota[1], Elcio H. Shiguemori[2], Marcos T. Neves[1], **Alexandre B. Ramos**[1] and Felix Mora-Camino[3]

[1] *Institute of Mathematics and Computing, Federal University of Itajubá, Brazil*

[2] *Institute of Advanced Studies, Brazil*

[3] *Ecole Nationale de l'Aviation Civile, France*

HIS8	**Measure optimized cost-sensitive neural network ensemble for multiclass imbalance data learning**

Peng Cao[1], Dazhe Zhao[1] and **Osmar Zaïane**[2]

[1] *Northeastern University Shenyang, China*

[2] *Computing Science, University of Alberta Edmonton, Canada*

HIS40	**Kekre's Transform for Protecting Fingerprint Template**

Kareem Kamal A.Ghany[1,5], Hesham Hefny[3], Aboul Ella Hassanien[2,5] and Mohamed Tolba[4]

[1] *Faculty of Computers and Information, BeniSuef University, Egypt*

[2] *Faculty of Computers and Information, Cairo University, Cairo, Egypt*

[3] *Department of Computer Sciences and Information, ISSR, Cairo University, Egypt*

[4] *Faculty of Computers and Information Science, Ain Shams University, Egypt*

[5] *Scientific Research Group in Egypt (SRGE), Egypt*

HIS42	**Hajj Human Event Classification System using Machine Learning Techniques**

Hossam M. Zawbaa[1,4], **Eid Emary**[2,4], Aboul Ella Hassanien[2,4] and Mohamed Tolba[3]

[1] *Faculty of Computers and Information, BeniSuef University, Egypt*

+ *Faculty of Computers and Information, Cairo University, Egypt*

[3] *Faculty of Computers and Information, Ain Shams University, Egypt*

[4] *Scientific Research Group in Egypt (SRGE), Egypt*

HIS50	**Combined Local Features Selection for Face Recognition Based on Naïve Bayesian Classification**

Wael Ouarda, Hanene Trichili, Adel M. Alimi and Basel Solaiman

[1] *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*

[2] *ITI Department Telecom Bretagne, Brest, France*

HIS68	**Blind Separation of Underdetermined Mixtures with Additive White and Pink Noises**

Ossama S. Alshabrawy[1,3], **Aboul ella Hassanien**[2,3], W. A. Awad[4], A. A. Salama[4]

[1] *Faculty of Science, Damietta University, Damietta, Egypt*

[2] *Faculty of Computers & Information, Cairo University, Cairo, Egypt*

[3] *Scientific Research Group in Egypt (SRGE), Egypt*

[4] *Faculty of Science, Port Said University, Egypt*

#HIS   – Optimization

Time: Thursday, December 05, 16:20 – 18:20

Location: Room A

Chair: Eva Volna (Univ. Ostrava, Czech Republic)

HIS4	**Improved solution based on Bat Algorithm to Vehicle Routing Problem in a Caravan Range Community**

Alberto Ochoa[1], Lourdes Margain[2], Julio Arreola[1], Alejandro De Luna[2], Geovani García[1], Erika Soto[1], Saúl González[1], Kyrk Haltaufoerhyde[2] and Vinicius Scarandangotti[3]

[1] *Juarez City University, México*

[2] *Universidad Politécnica de Aguascalientes, México*

[3] *Cardiff Technological University, Wales*

[4] *Sassari University, Italy*

HIS12	**A Contribution to the Resolution of Stochastic Dynamic Dial a Ride Problem with NSGAII**

Brahim Issaoui[1], Lazhar Khelifi[1], Issam Zidi[1,2], Kamel Zidi[1,2] and Khaled Ghedira[1]

[1] *Laboratoire SOIE, University of Tunis, Tunisia*

[2] *University of Gafsa, Faculty of Sciences of Gafsa, Tunisia*

HIS14	**A multi-objective BCRC-NSGAII algorithm to resolve the VRPTW**

Sami Mnasri, Fatma Abbes, Kamel Zidi and Khaled Ghedira

Laboratoire SOIE, ISG Tunis, Tunisia

HIS23	**Hybridization of Fuzzy PSO and Fuzzy ACO Applied to TSP**

Walid Elloumi[1], Nesrine Baklouti[1], Ajith Abraham[2,3] and Adel Alimi[1]

[1] *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*

[2] *Machine Intelligence Research Labs, WA, USA*

[3] *IT4Innovations, VSB-Technical University of Ostrava, Czech Republic*

HIS44	**Hierarchical design for distributed MOPSO using sub-swarms based on a population Pareto fronts analysis for the grasp planning problem**

Raja Fdhila[1], Chiraz Walha[1], Tarek M. Hamdani[1,2] and Adel M. Alimi[1]

[1]*REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*

[2]*University of Monastir, Higher Institute of Computer Science of Mahdia, Tunisia*

[3]*Taibah Univ., College of Science and arts at Al-Ula, al-Madinah al-Munawwarah, KSA*

HIS47	**New Global Update Mechanism of Ant Colony System for Retinal Vessel Segmentation**

Ahmed Hamza Asad[1,4], **Eid Emary**[2,4], Aboul Ella Hassanien[2,4] and Mohamed Tolba[3]

[1] *Institute of Statistical Studies and Researches (ISSR), Cairo University, Egypt*

[2] *Faculty of Computers and Information, Cairo University, Egypt*

[3] *Faculty of Computers and Information, Ain Shams University, Egypt*

+ *Scientific Research Group in Egypt (SRGE), Egypt*

#HIS   - Intelligent Applications II
Time: Thursday, December 05, 16:20 – 18:20
Location: Room B
Chair: Kamel Zidi (University of Gafsa, Tunisia)

HIS18	**MPC based on NBPSO for Nonlinear Process with constraints** **Adel Taeib**, Moez Soltani and Abdelkader Chaari *Research Unit C3S ESSTT, University of Tunis, Tunisia*
HIS21	**Using visualization techniques in knowledge discovery process for decision making** Emna Benmohamed, Hela Ltifi and **Mounir Ben Ayed** *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*
HIS22	**PSO based adaptive learning Fuzzy Logic Controller for the Irobot Create robot** **Nesrine Baklouti**, Hachem Lamti, Khaled Salhi and Adel M. Alimi *REGIM-Lab.: Research Groups on Intelligent Machines, University of Sfax, Tunisia*
HIS32	**An Empirical Analysis of Cancellable Transformations in a Behavioural Biometric Modality** **Marcelo Damasceno** and Anne Canuto *Federal University of Rio Grande do Norte (UFRN) Natal, Brazil*
HIS37	**Automatic Nile Tilapia Fish Classification Approach using Machine Learning Techniques** Mohamad Mostafa M. Fouad[1,4], Hossam Zawbaa[2,4], **Nashwa El Bendary**[1,4] and Aboul Ella Hasssanien[3,4] [1] *Arab Academy for Science, Technology, and Maritime Transport, Cairo, Egypt* [2] *BeniSuef University, Faculty of Computers and Information, BeniSuef, Egypt* [3] *Cairo University, Faculty of Computers and Information, Cairo, Egypt* [4] *Scientific Research Group in Egypt (SRGE), Egypt*
HIS55	**Fuzzy clustering and categorization of text documents** **Heba Ayeldeen**[1,2], Aboul Ella Hassanien[1,2] and Aly Fahmy[1] [1] *Cairo University, Faculty of Computers and Information, Egypt* [2] *Scientific Research Group in Egypt (SRGE), Egypt*

Plenary Talk 3
Time: Friday, December 06, 2013, 08:30 – 09:00
Location: Room A
Chair: Imre J. Rudas (Óbuda University, Hungary)

New Trends in Research in Neural Networks and Applications
Farhat Fnaiech
University of Tunis, Tunisia

Abstract. In this presentation, the feedforward neural network (FNN) is presented and reviewed; many algorithms for the training of the FNN are also presented. The new trends in research of efficient training algorithms are proposed. A couple of trends are to be presented and developed such as the fast training algorithms and the optimal search of NN structure.
Pruning algorithms are discussed and new statistical based algorithms are presented. These FNN pruned structure are then applied on real world applications to control medical devises, image processing of medical imaging, fault diagnosis etc.

Biography. Farhat Fnaiech (M'85- SM'01) born in 1955 in la Chebba (Tunisia), he received the BSc degree in Mechanical Engineering in 1978 from the ENSET High school of sciences and techniques of Tunis and the master degree in 1980, the Doctorate of 3 cycle degree from the same school in Electrical Engineering in 1983, and the Doctorate Es Science in Physics from Faculte des Sciences of Tunis in 1999. He is currently Professor at the Ecole Superieure des Sciences et Techniques de Tunis.
Pr Fnaiech has published More than 250 research papers in many journals and international conferences. He has organized many national and international conferences and has been the general chairman and member of the international Board committee of many International Conferences, ICIT 2004, ICELIE 2006-2012, ISIE 2006-2012, IECON 2005-2012. His is Associate Editor of IEEE Transactions Industrial Electronics. He has served as IEEE Chapter committee coordination sub-committee delegate of Africa Region 8 and Vice Chair of IEEE Tunisia Section. He has been appointed as an AdCom member in IEEE Industrial Electronics Society. He is the head of a big research laboratory in Signal Image and Energy Mastery in the University of Tunis (100 researchers). His main interest research areas are nonlinear adaptive Signal processing, nonlinear control of power electronic.

Tutorial

Time: Friday, December 06, 2013, 09:30 – 11:00 & 11:30 – 13:00

Location: Room A

Chairs: Aboul Ella Hassanien (FCI - Cairo University, Egypt), Mounir Ben Ayed (University of Sfax, Tunisia)

What's going on with Machine Intelligence and Human being?

Tarek M. Hamdani

Taibah University, Saudi Arabia

Talk 1: Machine vs. Human Intelligence: Are we in front of a new causality dilemma?

Abstract. It's certain that the human is inventing the machines to bring him assistance and help him to do things easily and effectively. However, intelligent machines can't be anything more than a kind of machine that human intelligence made to have further services.

Nowadays, intelligent machines are more and more developed and the machine intelligence is extremely developed in such manner that researchers now think about a "Machine Ethics" that can protect the human from the machine.

Moreover, men takes their intelligence progressively from intelligent machines so that one can ask "Which comes first, the human or the machine intelligence"?

This talk proposes to start a debate that can be firstly related to the impressive development of intelligent machines and the effect of this development on human intelligence.

Some issues are presented and questions are asked to focus on solutions and guidance from and to intelligence developers to think on the first hand about developing tools for more efficient intelligent machines and in the second hand on tools to assist people to be more intelligent.

It's time is to ask; Should we have an ethical frontiers from and to the human intelligence in developing machine?

Plan:

- Introduction
- Intelligent Machine: Unfulfilled promises
- Intelligent Machine: Impressive development
- Machine vs. Human Intelligence: Where to stop?
- Human Intelligence "Lost"
- Machine Intelligence orientation and guidance
- Conclusions and debate

Talk 2: Why should we make human based intelligent machines Hybrid?

Abstract. Intelligence was permanently related to the human being and men considered themselves as the most intelligent element in the world. Therefore, man intelligence was the first source of inspiration to make intelligent machines.

If we focus on human decision making process, we can easily notice that it's always reflecting his experience (argued and not). Decision can be done respectively to different objectives (multi-objective), individually as well as in group (social behavior).

This talk speaks about neuro-fuzzy based systems that are presented as human based intelligent machines. The decision making process is tackled from the human brain process at the highest and the lowest level to do classification tasks. Therefore, we present different steps of the human decision making process and their corresponding concepts using neuro-fuzzy methods.

Some hybrid methods are presented to resolve architectural and adaptive problems and a parallel study is made with the original human brain model to understand the necessity of using such hybridization in the intelligent machine design process.

19

Certainly, hybrid systems are very helpful to integrate multiple aspects of various intelligent machines to provide more and more efficient machines.

However, we concluded that in the human based intelligent machines, our mis-understanding of the human intelligence optimal method requires us to use hybrid systems to fill the gap and perform as well as humans.

Plan:

- Introduction
- Social Decision
- Multi-objective Decision
- Structured Individual decision
- Structure identification (Feature effect and Data effect)
- Structure optimization
- Structure continues adaptation
- Conclusions and perspectives

Biography. Tarek M. Hamdani (SM'13) was born in Tunis, Tunisia, in 1979. He received the Ph.D. degree in 2011 and his M.S. degree in 2003, in Computer Science Engineering from the University of the Sfax, Tunisia. He is currently pursuing the PostDoc. degree in Computer Science Engineering in the National School of Engineers, Sfax, Tunisia. He is teaching computer science at the Taibah University since 2012 as an Assistant professor, and was teaching at the University of Monastir and the University of Sfax since 2003. He focuses his research on intelligent pattern recognition, learning, and analysis of large scale complex systems. His research interest includes applications of intelligent methods, neural networks, fuzzy logic, and genetic algorithms to pattern recognition. He is a Reviewer of the Neural Networks, IEEE Transactions on, Pattern Recognition Letters, the Neurocomputing journal, the Soft Computing journal and others. He is an IEEE member of CIS and SMC societies.