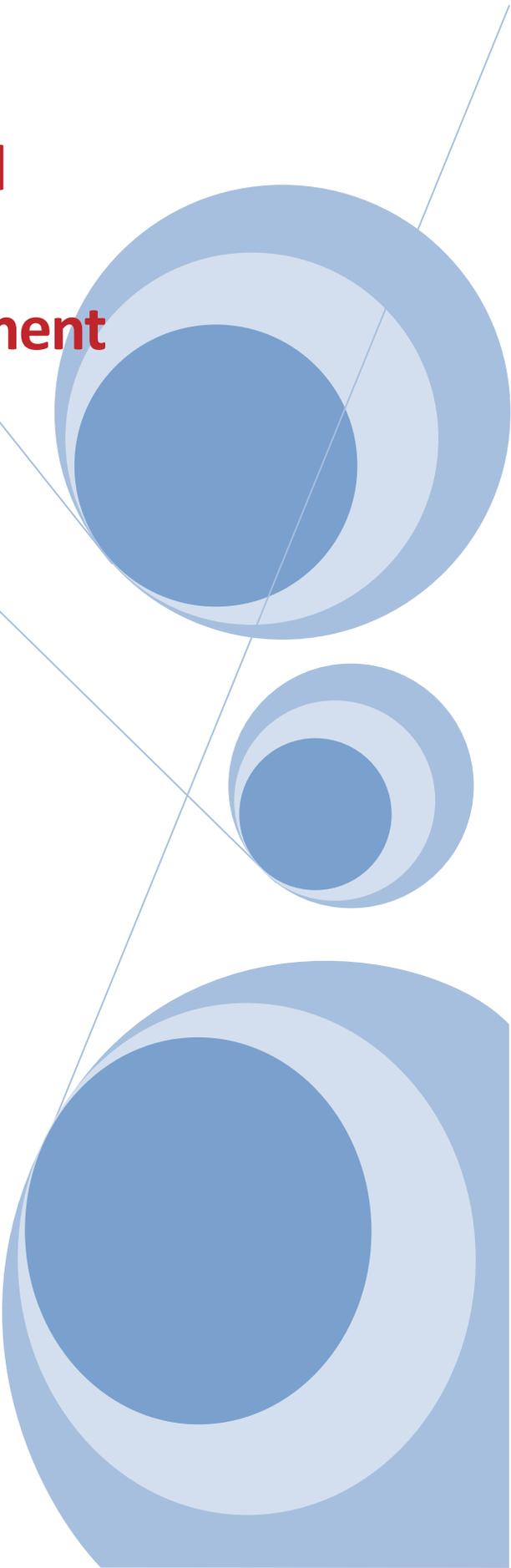


Eleventh International Conference on Digital Information Management



Program

Porto, Portugal
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KEYNOTE SPEAKERS

Title: Client Capabilities as a Tool in IoT Security



Michael W Condry, Ph D

IEEE Industrial Electronics Society AdCom

IEEE Industry Summit Series Chair

Abstract

The Internet of Things (IoT) offers the user seamless interoperability and connectivity between devices, systems, services, disparate networks and control systems. End users expect to connect quickly and transparently via any endpoint client device be it a phone, tablet, wearable, TV, car or other system that is Internet enabled. Smart IoT devices can serve as versatile control system interfaces, allowing for rapid response and potentially ubiquitous access. However, these devices can present significant security challenges. Among many challenges a central factor is the service or control system knowing the user is properly authenticated and has the correct authorization for the activity being done from banking, to retail to operating a control system, such as a power plant.

Today's smart client devices have capabilities that can be utilized by authentication services to greatly assist in the authentication process. All too often these capabilities are not fully utilized. In fact these devices, with proper design and standards, can do much more to help in assuring the identity of the user helping both protect the user and assisting the authentication process. This presentation overviews a concept to achieve this with the goal of motivating deeper research to refine the technology and standardize the interfaces to make this an internationally accepted technology. Seamless, such as WiFi is today. A model proposed that is more secure, scalable, and resilient with real-time performance as compared to traditional approaches.

Bio

Michael was the Chief Technical Officer for Intel Corporation, Global Ecosystem Division. His career has a mixture of academic and industry positions, mostly in industry. Holding teaching and research positions at Princeton and University of Illinois, at Illinois he lead an internet application research team contributing findings to the US Internet committee. His industry roles included AT&T Bell-Labs, Sun Microsystems, and Intel. At Bell Labs he was a co-architect for the Bellmac-32 processor and co-designed the System V Inode File System whose successors are used today. At Sun he led standards for the Solaris/UNIX team founding the Open Group to enable these standards. Michael came to Intel to head up Networking Applications research in Intel Labs. Michael's CTO role drove on customer innovation, design cost reduction, and other technologies and leading technical staff development. Efforts in technical staff development at Intel awarded him and his team the prestigious Intel Quality Award in 2015. His background includes projects in computer architecture, software, firmware, operating systems, networking, IoT, internet applications, standards, and computer security. Michael retired from Intel in June 2015.

Michael is the President-Elect of the IEEE Technology and Engineering Management Society (TEMS). Michael is a senior board member for the IEEE Industrial Electronics Society (IES), he created and chairs the IEEE Industry Forum series that has successfully engaged industry in over 14 conferences. He has conceived and is leading the IEEE Industry Summit that will start in 2016. Michael is also a member of the IEEE Computer Society for over 27 years.

Title: Game-based Approaches to Crowdsourcing Content: Opportunities and Challenges



Dion H. Goh

Wee Kim Wee School of Communication and information

Nanyang Technological University

Abstract

Crowdsourcing has become a major way of getting work done through an online community. Typically, crowdsourcing systems employ volunteers or paid human experts. However, recruiting and retaining volunteers are challenging since volunteerism is dependent on individuals' willingness to devote their time and effort to crowdsourcing projects. Paying for expertise is an alternative but this is potentially costly, and is confined to those projects backed with adequate funding. Therefore, crowdsourcing projects need to consider alternative motivational mechanisms to widen the appeal to a larger group of users.

Here, computer games are a possible means to attract participants for crowdsourcing projects. Such games are seen as a promising approach to crowdsourcing because they capitalize on people's desire for entertainment. In other words, they make crowdsourcing more fun and engaging in order to attract participants.

This talk will introduce game-based approaches for crowdsourcing. A selection of typical game mechanics employed as well as examples of games in various domains will be provided. The talk will illustrate these ideas in a specific context of crowdsourcing mobile media. Applications that share location-based mobile media are fast becoming popular in part due to people's increasing reliance on mobile phones. However, there are limitations of mobile devices such as difficult text entry as well as the lack of sufficient incentives. These may make the creation and sharing of location-based content tedious, possibly resulting in decreased motivation for participation.

By blending games with crowdsourcing of mobile media, such applications provide entertainment and content is created as a result of gameplay. Nevertheless, there are challenges associated with game-based approaches to crowdsourcing since they have to meet the twin goals of entertaining users and producing quality outputs. Through various user studies that will be presented, issues in creating these games as well as design lessons are discussed.

Bio

Dion Goh has a PhD in computer science. He is currently Associate Professor with Nanyang Technological University (Singapore) where is also the Director of the Masters of Information Systems program in the Wee Kim Wee School of Communication and Information. His major areas of research are in mobile information sharing and seeking, social media perceptions and practices, and gamification techniques for shaping user perceptions and motivating behavior. His work has been widely published in over 200 international journals and conference proceedings. Dion has led a number of funded projects in the use of gamification in mobile content sharing, the use of games for mental health interventions, human computation games for data analytics, mobile tagging, and collaborative querying.

Title: An attempt at making the computer to be a cognitive partner to the human being: the role of verbalization of data mining results



Janusz Kacprzyk
Full Member, Polish Academy of Sciences
Member, Academia Europaea
Member, European Academy of Sciences and Arts
Foreign Member, Bulgarian Academy of Sciences
Foreign Member, Spanish Royal Academy of Economic and Financial Sciences (RACEF)
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Abstract

We address an important aspect related to one of big challenges of the modern IT/ICT which boils down to solving an extremely relevant problem of how to make broadly perceived computer systems, and all kinds of tools and techniques that are inherently based on the use of computers, exemplified by data analyses, mining, etc. to be cognitive partners of the human beings. In another words, how to bridge the gap between the human being and the computer in all kinds of systems in which the human being is a crucial element.

There are many different aspects of this still unsolved problem, which are implied by differences in inherent biological, cognitive, information processing, etc. characteristics of the human and the computer, e.g. the human cognitive capabilities are limited and not growing, the human being may be unreliable, prone to fatigue, etc. etc. and they will be briefly considered first.

Our main interest will be in the fact that for the human being the only fully natural means of communication and articulation is natural language which is “strange” to the computer. We consider mainly the problem of a proper, human consistent presentation of results of data mining to be used for, e.g., decision making/support. Traditionally, the most popular approach is the use of computer graphics, i.e. visualization, and this has been successfully applied in many real world problems.

A much less popular form of presentation is verbalization in which the results to be used by the human being are presented in (quasi)natural language. However, in many applications, e.g. in transportation or military applications, voice messages, commands, etc., in natural language, does not distract attention and hence may be preferable to visualization.

We use the conceptually and numerically simple concept of a linguistic data(base) summary boiling down to the derivation of short sentence(s) in natural language that summarize the contents (semantics) of even very large data sets that can be incomprehensible in a raw form to the human being. An example can here be, for (large) personnel database, “most young and inexperienced workers have low salary”. We will use such forms of linguistic summaries introduced by Yager (1982), and then developed by, e.g. Kacprzyk, Yager and Zadrozny (2000). We use fuzzy logic to effectively and efficiently represent and process imprecision. Moreover, we show a crucial importance of protoforms, i.e. templates of linguistic summaries, that can reflect interests and intentions of the user, using Kacprzyk and Zadrozny’s (2005 - ...) ideas.

We present the linguistic summaries of the above type, i.e. of a static form, as well as those related to dynamics, i.e. linguistic summaries of time series data, exemplified by “recently, almost all trends are slowly decreasing”, using results of Kacprzyk, Wilbik and Zadrozny (2008, 2010), and also mention extensions to linguistically capture frequent events, exemplified by “almost always, at the end of each week, the sales of product X is high”.

We consider the problem of various quality criteria of linguistic summaries, and the generation of them, first of all by

extending Kacprzyk and Zadrozny's (1989 - ...) new querying system with linguistic quantifiers, and then to indicating potentials of using advanced NLG (natural language generation) systems. We present an implementation for supporting decision making at a computer retailer that makes use of data from local and remote sources of data, and adapts to human information needs.

Bio

Janusz Kacprzyk graduated from Warsaw University of Technology, Poland, with M.Sc. in automatic control and computer science, obtained in 1977 Ph.D. in systems analysis and in 1991 D.Sc. in computer science. He is Professor of Computer Science at the Systems Research Institute, Polish Academy of Sciences, and at WIT – Warsaw School of Information Technology, and Professor of Automatic Control at PIAP – Industrial Institute of Automation and Measurements, and Department of Electrical and Computer Engineering, Cracow University of Technology. He is Honorary Foreign Professor at the Department of Mathematics, Yili Normal University, Xinjiang, China, and Visiting Scientist at RIKEN Brain Research Institute, Tokyo, Japan. He is Full Member of the Polish Academy of Sciences, Member of Academia Europaea (Informatics), Member of European Academy of Sciences and Arts (Technical Sciences), Foreign Member of the Spanish Royal Academy of Economic and Financial Sciences (RACEF), and Foreign Member of the Bulgarian Academy of Sciences. He is Fellow of IEEE, IFSA, ECCAI and MICAI.

He has been a frequent visiting professor in the USA, Italy, UK, Mexico, China. His main research interests include the use of modern computation computational and artificial intelligence tools, notably fuzzy logic, in decisions, optimization, control, data analysis and data mining, with applications in databases, ICT, mobile robotics, etc. He authored 5 books, (co)edited more than 80 volumes, (co)authored ca. 500 papers. His bibliographic data are: due to Google Scholar - citations: 19765; h-index: 64, due to Scopus: citations: 4606; h-index: 32; due to WoS: citation: 3821, h-index: 27. He is the editor in chief of 6 book series at Springer, and of 2 journals, and is on the editorial boards of ca. 40 journals. He is a member of the Adcom of IEEE CIS, and was a Distinguished Lecturer of IEEE CIS.

He received many awards: 2006 IEEE CIS Pioneer Award in Fuzzy Systems, 2006 Sixth Kaufmann Prize and Gold Medal for pioneering works on soft computing in economics and management, 2007 Pioneer Award of the Silicon Valley Section of IEEE CIS for contribution in granular computing and computing in words, 2010 Award of the Polish Neural Network Society for exceptional contributions to the Polish computational intelligence community, IFSA 2013 Award for his lifetime achievements in fuzzy systems and service to the fuzzy community, and the 2014 World Automation Congress Lifetime Award for contributions in soft computing. He is President of the Polish Operational and Systems Research Society and Past President of International Fuzzy Systems Association.

Ramiro Sámano Robles, General Chair



Ramiro Sámano Robles obtained his degree in Telecommunications engineering from the national university of Mexico in 2001. He has professional experience as PCB design engineer for high frequency applications and for the design of radio-frequency up-converters for 2.1 GHz communications. He has also professional experience as new technology evaluation engineer for a major cellular operator in Mexico where he was responsible for one of the first trials for 2.5G and 3G CDMA200 networks in Latin-america, and the implementation of several other new technologies such as intelligent network, smart antennas, localization-based services and short message services. He obtained the PhD in signal processing for wireless communications from the University of Leeds in 2007, and MSc in Telecommunications and Information Systems from the University of Essex in 2003. He held a postdoctoral position at the Institute of Telecommunications in Aveiro, Portugal, where he was involved in the management and scientific contribution of several FCT and FP7 European research projects related to distributed MIMO, RFID, Internet of things (IOT), radio-over-fibre distributed antenna systems, cooperative systems, and cognitive radio. Some of these projects were FUTON (www.ict-futon.eu), CODIV (www.ict-codiv.eu), ASPIRE (www.fp7-aspire.eu) and QoS MOS (www.ict-qosmos.eu). His area of contribution in these projects was mainly in the interactions and optimization of MAC, PHY and RRM (Radio resource management) layers, particularly for their integration in system level simulators and testbeds for LTE, EPC and WiMAX standards.

ICDIM 2016 Program

September 19, 2016 - Day I

09:00-09:10- **Opening Ceremony**

09:10-10:10- **Keynote 1**- Michael W. Condry on "Client Capabilities as a tool in IoT security"

10:10-10:30- **Coffee Break**

10:30-11:30- **Keynote 2** - Dion H. Goh on "Game-based Approaches to Crowdsourcing Content: Opportunities and Challenges"

11:30 - 12:30 Sessions

Session I

11:30-11:50 – Churn prediction in the telecom business – **Georgina Esteves, Jfoão Moreira** (Portugal)

11:50-12:10 – Towards Semantic Fusion using Information Quality and the Assessment of Objects and Situations to Improve Emergency Situation Awareness-**Valdir Pereira Junior, Matheus Sanches, Jordan Saran, Caio Coneglian, Leonardo Botega** (Brazil)

12:10-12:30 - The Evolution of C2C Social Commerce Models – **Supattana Sukrat, Pruthikrai Mahatanankoon, Borworn Papisratorn** (Thailand)

LUNCH 12:30-14:00

Session II A

14:00-14:20 - A Quality Metric for BPEL Process under Evolution – **Parimala,N, Rachna Kohar** (India)

14:20-14:40 - Extracting Keyword and Keyphrase From Online Privacy Policies – **Dhiren Audich, Rozita Dara, Blair Nonnecke** (Canada)

14:40-15:00 - Semantic Graph Extraction and Operation - **Antonio F. G. Sevilla, Alberto Fernández-Isabel, Alberto Díaz** (Spain)

15:00-15:20 - Exploiting Response Patterns for Identifying Topical Experts in StackOverflow – **Manish Bhanu, Joydeep Chandra** (India)

15:20-15:40 - Knowledge Discovery on Moving Object Data Points- **Yasen Yakufu, Canan Eren ATAY** (Turkey)

15:40-16:00 - SJSON: A Succinct Representation for JSON Documents- **Edman Anjos, Junhee Lee, Srinivasa Rao Satti** (Korea)

COFFEE BREAK 16:00-16:20

16:20-16:40 - The DEWI High-Level Architecture: Wireless Sensor Networks in Industrial Applications- **Ramiro Sámano-Robles, Tomas Nordström, Salvador Santonja, Werner Rom, and Eduardo Tovar** (Portugal)

16:40-17:00 – An Innovative Mobile Application for M-Learning - **Mohamed Watfa, Nikiforos Rotas, Henna Wadhvani** (UAE)

17:00-17:20 - Information Security and Digital Forensics in the world of Cyber Physical Systems- **Andrew Jones, Stilianos Vidalis, Nasser Abouzakhar** (UK)

17:20-17:40 - eLearning and its Use for Grammar Practicing in Foreign Languages Teaching -**Sarka Hubackova** (Czech Republic)

17:40-18:00 - Analyzing Speech and Music Blocks in Radio Channels: Lessons Learned for Playlist Generation -**Gergely Lukacs, Mátyás Jani** (Hungary)

18:00-18:20 – A Critical Review of Density-based Data Stream Clustering Techniques-**Affan Ahmed Toor, Muhammad Usman, Waseem Ahmad** (Pakistan)

18:20-18:40 - Defining Requirements for Color-Coding Text Software in Teaching of Arabic-**Hend Al-Khalifa, Muna Muhaureq** (Saudi Arabia, Yeman)

18:40-19:00 - Payoff-based Dynamic Segment Replication Policy in Distributed VOD Systems-**Mohamed Beji, Bechir Alaya, Claud Duvallet** (Tunisia, Saudi Arabia)

Session II B

14:00-14:20 - A Proposed Agile Enterprise Architecture Framework-**Mohamed Watfa** (UAE)

14:20-14:40 - S4Q: Searching for QoE in P2P Streaming Neighborhoods - **Peron Sousa, Antonio Rocha, Sidney Lucena, Morganna Diniz, Daniel Menasche** (Brazil)

14:40-15:00 - Adding Quality in the User Requirements Specification: A first approach - **César Guerra-García, Ismael Caballero, Marco Cardenas-Juarez, Ramiro Sámano-Robles** (Portugal)

15:00-15:20 - Systematic Mapping for Big data Stream Processing Frameworks- **Mohammed Alayyoub, Ali Yazici, Ziya Karakaya** (Turkey)

15:20-15:40 - Towards automatic generation of relevance judgments for a test collection – **Mireille Makary, Michael Oakes, Fadi Yamout** (UK, Lebanon)

15:40-16:00 - Wireless Avionics Intra-Communications: Current Trends and Issues- **Ramiro Sámano-Robles, Eduardo Tovar, João Cintra, and Andre Rocha** (Portugal)

16:20-16:40 - On the Structural Properties of eBay's Network-**Cinthya França, Antonio Rocha, Pedro Velloso** (Spain)

16:40-17:00 – Processing of multimedia applications and their use in foreign language teaching -**Sarka Hubackova** (Czech Republic)

17:00-17:20 — Virtual Agents with Personality: Adaptation of Learner-Agent Personality in a Virtual Learning Environment-**Tze Wei Liew, Su-Mae Tan** (Malaysia)

17:20-17:40 - A “Fast Data” Architecture: Dashboard for Anomalous Traffic Analysis in Data Networks-**Miguel Angel López Peña, Carlos Aréa, Sergio Segovia** (Spain)

17:40-18:00 - A Federation model to support semantic SPARQL queries for Enterprise Data Governance-**Antonio Corradi, Luca Foschini, Alessandro Zanni, Mirco Casoni, Stefano Monti, Francesco Sprotetto** (Italy)

18:00-18:20 - Normalizing Digital News-Stories for Preservation-**Muzammil Khan, Arif Ur Rahman, Syed Mehtab Alam, M. Daud Awan** (Pakistan)

18:20-18:40 - A Survey Revealing Path towards Service Life Cycle Management in COBIT 5-**Umara Noor** (Pakistan)

18:40-19:00 - Changes to XML Namespaces in XML Schemas and their Effects on Associated XML Documents under Schema Versioning-**Zouhaier Brahmia, Fabio Grandi, Rafik Bouaziz** (Tunisia)

September 20, 2016 - Day II

09:00-10:00 **Keynote III** Janusz Kacprzyk on An attempt at making the computer to be a cognitive partner to the human being: the role of verbalization of data mining results

10:00 – 10:20 Coffee Break

12:40 – 14:00 Lunch

Session III

10:20 - 10.40 – Attribute Graph Grammar Method for Research Information Collection and Sharing - **Youzou Miyadera, Chiaki Murakami, Koichi Anada, Shoichi Nakamura, Takeo Yaku** (Japan)

10.40 – 11:00 - Using Rate Equation for Modeling Triad Dynamics on Instagram – **Mariusz Kamola** (Poland)

11:00 – 11:20 - Anybody Home? Indirect human presence detection in ambient intelligence systems using IoT devices – **Rui Madeira, Luís Nunes** (Portugal)

11:20 – 11:40 - Challenges in Integrating Multiple Heterogeneous and Autonomous Web Services using Mediation Approach – **John Samuel, Christophe Rey** (France, Portugal)

11:40 -12:00 - Combining Recommendation Systems with a Dynamic Weighted Technique – **Pedro Meneses Henriques, João Mendes-Moreira** (Portugal)

12:00 -12:20 - Cloud Computing and E-Learning - Potential Pitfalls and Benefits - **Mohamed Watfa** (UAE)

12:20 -12:40- Enabling OLAP Analyses on the Web of Data – **Franck Ravat, Jiefu Song** (France)

LUNCH 12:40-14:00

Session IV

14:00-14:20 - Methods for Supporting the Understanding of Differences between Search Intentions and Actual Browsing Situations in Collaborative Exploration - **Hiroki Nakayama, Ryo Onuma, Hayato Takagi, Hiroaki Kaminaga, Youzou Miyadera, Shoichi Nakamura** (Japan)

14:20-14:40 - Implications of Virtual Project Management on Project Management Processes - **Mohamed Watfa, Catherine Todd** (UAE)

14:40-15:00 - State-of-the-art, Challenges and Open Issues in Integrating Security and Privacy in P2P Content Distribution Systems- **Amna Qureshi, Helena Rifà-Pous, David Megias** (Spain)

15:00-15:20 - Axioms of Communication in Virtual Learning Environment-**Iiona Semradova** (Czech Republic)

15:20-15:40 - Identifying Prominent Voices: A Corporate Social Responsibility Application – **Carlos Parra, Monica Tremblay, Arturo Castellanos** (United States)

15:40-16:00 - Evaluating Electronic Service Quality for C2C Social Commerce in Thailand: a Pilot Study – **Atchara Leeraphong, Pruthikrai Mahatanankoon, Borworn Papasratorn** (Thailand)

COFFEE BREAK 16:00-16:20

16:20-16:40 - Private Photo Recommendation System for In-person Conversation – **Toki Takeda, Taketoshi Ushiyama** (Japan)

16:40-17:00 - A Web usage prediction and recommendation using a web session clustering - **Vinh-Trung Luu, Germain Forestier, Mathis Ripken, Frédéric Fondement, Pierre-Alain Muller** (France)

17:00-17:20 - Examination of Effective Features for CRF-Based Bibliography Extraction from Reference Strings – **Daiki Matsuoka, Manabu Ohta, Atsuhiko Takasu, Jun Adachi** (Japan)

18:20-18:40 - Exploiting CoDe Modeling for the Optimization of OLAP Queries- **Valentina Indelli Pisano, Michele Risi, Genoveffa Tortora** (Italy)

17:40-18:00 - A Ubiquitous Smart Educational System: Paving the Way for Big Educational Data - **Mohamed Watfa, Aoun Lutfi** (UAE)

18:00-18:20 - HSDD: a Hybrid Sampling Strategy for Class Imbalance in Defect Prediction Data Sets – **Muhammed Maruf Ozturk, Ahmet Zengin** (Turkey)

18:30- 20:30- Conference Banquet and Award Ceremony

SESSION SPEAKERS

HSDD: a Hybrid Sampling Strategy for Class Imbalance in Defect Prediction Data Sets



M. Maruf Öztürk received the computer engineer degree from the University of Pamukkale, Turkey, in 2008, and the master in informatics from the University of Sakarya, Turkey, in 2012. He took a phd from computer engineering in 2016 and he is also a research assistant at Faculty of Computer and Information Sciences, Sakarya University. His research interests include fault tolerance, defect prediction, automated software engineering and web based systems and big data. He is a member of ISTQB Turkey and IEEE.



Ahmet Zengin is Assoc. Professor at Sakarya University, Turkey. His experience with modeling and simulation includes a one-year-stay in ACIMS Lab at the Arizona State University. His research topics include DEVS theory, multi-formalism modeling, parallel and distributed simulation, modeling and simulation of large-scale networks, distributed systems management, biologically-inspired optimization schemes. His main research interest lies in parallel and distributed simulation and the High Level Architecture.

Virtual Agents with Personality: Adaptation of Learner-Agent Personality in a Virtual Learning Environment



Su-Mae Tan is a lecturer at Multimedia University, Melaka, Malaysia. She holds a Bachelor's degree and a Master's degree in Information Technology Management. She has published journals on virtual agents in multimedia learning and is currently researching on agents' role in creating social presence and trust on e-commerce websites. She has successfully secured 3 government research funds related to agent technologies.



Tze Wei Liew is a lecturer in the Faculty of Business, Multimedia University, Malaysia. He is currently pursuing his PhD (Information Science & Technology) at Universiti Kebangsaan Malaysia (UKM). His research interests include human-agent interaction, human-computer interaction, media psychology, motivation and cognition. He has published journals on human-agent interaction in learning and e-commerce systems, and actively contributes in international reviewing committees for International Journal of Human-Computer Interaction, Computers & Education, Education Technology & Society, and The International Review of Research in Open and Distance Learning. He has successfully secured 3 government research funds related to agent technologies.

Systematic Mapping for Big data Stream Processing Frameworks



Dr. Ali YAZICI is the Chairperson of the Software Engineering Department at Atilim University, Ankara, Turkey. He received BS (1972), and MS (1974) degrees in Mathematics from the Middle East Technical University (METU), Ankara, Turkey. He has completed his PhD dissertation (1983) at the Computer Science Department, Waterloo University, Canada. His research interests include Parallel and Distributed Computing, Cloud Computing, Big Data Programming, Database Systems, Symbolic Computing and e-Topics. In the last 30 years he has been affiliated as a full-time academic staff with Middle East Technical University, TOBB University of Economics and Technology, and Atilim University (Turkey), Yarmouk University (Jordan), and Sultan Qaboos University, (Oman). During his academic career, he acted as thesis supervisor of about 30 MS and PhD students. He is the writer of more than 120 scientific articles, books and research reports in the field of Computing and Informatics. He is a founding member of Turkish Mathematics Foundation (1990-), an associate member and Honorary Board Member of Turkish Informatics Society (1985-), and a founding member of Turkish Informatics Foundation (1990-).



The Evolution of C2C Social Commerce Models

Supattana Sukrat is a doctoral candidate from School of Information Technology, King Mongkut's University of Technology Thonburi (KMUTT), Thailand.



Enabling OLAP Analyses on the Web of Data

Franck Ravat is currently a full professor of computer science at the University of Toulouse, France. He is also a research staff member at the IRIT research centre (CNRS UMR 5505). His research interests cover many aspects of the next generation of data management systems, including new OLAP (*OnLine Analytical Processing*) models, algebra and graphical languages for analyses of business data (e.g., documents, tweets, data with constraints, missing data, reduced data and *Linked Open Data*). His publications appear in major national and international journals and conference proceedings, for which he also serves as a reviewer.



Jiefu Song is a PhD student at the IRIT research centre (CNRS UMR 5505), France, under supervision of Professor Franck Ravat. He received a B.Sc degree in mathematics and economy from the Beijing University of Chemical Technology, China (2011) and a M.Sc degree in computer science from the University of Toulouse, France (2014). His thesis work spans the database and semantic web communities, with a focus on conceptual modeling of warehoused data enriched with *Linked Open Data*. His research interests concern selective deletion of information over time and efficient multidimensional analyses of data from multiple sources.



Towards automatic generation of relevance judgments for a test collection

Mireille Makary is a PhD student in Computational Linguistics at the University of Wolverhampton. The main research area is in information retrieval. For the past five years, she has been teaching programming courses to undergraduate students in the Computer Science Department at the Lebanese International University. Mireille has also worked as a software engineer and provided technical support for different educational systems running Oracle databases, in addition to working as a freelance programmer for web and standalone applications.



Dr. Michael Oakes (<http://pers-www.wlv.ac.uk/~in4326/>) is a Reader in Computational Linguistics in RGCL. He was appointed to the post 3 years ago, having previously worked for 13 years as a Senior Lecturer in Computing at the University of Sunderland. He was the Principal Investigator at Sunderland for the EU-funded VITALAS project (<http://vitalas.ercim.eu>), which produced a multimedia search engine to help people find pictures of interest to them in the BELGA News Agency collection. Sunderland's responsibility was to perform the necessary text processing. Dr. Oakes' doctoral thesis was in the area of information retrieval, and he has successfully acted as the main supervisor for seven doctoral students of his own in this area. His most recent book, "Literary Detective Work on the Computer" (2104) was published by John Benjamins, and included chapters on disputed authorship, plagiarism and spam, stylometry (computer studies of the writing style) of Shakespeare and religious texts, and they ways in which computers can help to decipher lost languages. Michael's first book was "Statistics for Corpus Linguistics" which came out in 1998.



Dr. Fadi Yamout is a PhD holder in Computer Sciences from the University of Sunderland, United Kingdom, in the area of Information Retrieval and Search Engines. Worked as Chairman of Computer Science for the past 10 years and have extensive teaching experience in Computer Science courses at all different levels. Have also worked for Middle East Airlines as Head of planning and control department and provided technical support for Mainframe and PCs operating systems for several years and in the capacity of System Analyst and Programmer for Société de Service d'Informatique in Lebanon and for Somapro in Canada on a Robotic project and also in producing Printer' drivers.

Challenges in Integrating Multiple Heterogeneous and Autonomous Web Services using Mediation Approach



John Samuel is a Post-doctoral researcher in LIRIS, Université de Lyon, France. He obtained his PhD in Computer Science from Université Blaise Pascal, France in 2014. Prior to that he worked as software engineer in Yahoo!, Bangalore. His research interests include data integration, analysis and visualization, web services, knowledge representation and geographical information systems.



Christophe Rey obtained his PhD in Computer Sciences in 2004, at Blaise Pascal University, France. Since 2005, he is associate professor in the same university. His main research topics are relational databases and knowledge representation and reasoning (using description logic), applied to data integration, and especially the mediation approach with LAV mappings.

Combining Recommendation Systems with a Dynamic Weighted Technique



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Private Photo Recommendation System for In-person Conversation



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Axioms of Communication in Virtual Learning Environment



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Attribute Graph Grammar Method for a Support System for Research Information Collection and Sharing



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Grafeno: Semantic Graph Extraction and Operation



Antonio F. G. Sevilla Majored in Mathematics and in Computer Engineering at Universidad Autónoma de Madrid, went on to study Computational Linguistics at Charles University in Prague and in Malta University. Currently at Universidad Complutense de Madrid, his main interest lies in the intersection between knowledge-based and empirical approaches in AI and specially in Computational Linguistics. He likes to combine scientific research with the development of computational solutions, some of which can be found as open-source online.



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Examination of Effective Features for CRF-Based Bibliography Extraction from Reference Strings



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Churn prediction in the telecom business



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Evaluating Electronic Service Quality for C2C Social Commerce in Thailand: a Pilot Study



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A Quality Metric for BPEL Process under Evolution



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Web usage prediction and recommendation using web session clustering



Trung -"I have always been attracted to Information Technology topics which have influenced me to learn novel stuffs. After many years working as a software developer as my graduate career, I drifted away towards lecturer position of Software Project Management and Software Engineering researcher. Since my passion in web user's behaviour resulted from search engine and e-commerce experience, I have been focusing on web usage mining during my PhD study. From a novice who noticed the changeable web recommendations corresponding to his browsing activities, I have got to know what lies beneath and suggested to improve that personalization by my papers."

Identifying Prominent Voices: A Corporate Social Responsibility Application



Carlos M. Parra is a Clinical Professor at the Department of Information Systems and Business Analytics in the College of Business at the Florida International University, US. Dr. Parra has seven years of experience in designing and executing corporate sustainability and business development strategies as well as in overseeing the continuous improvement of processes and metrics in the financial and manufacturing industries. As Head of Community Development for Citi in Latin America, he developed a regional strategy - executed it in 19 countries - and oversaw a 32 percent budget increase. He also instituted an ecosystem build-up approach to engage with business units in advancing microfinance, sustainable supply chain finance and mobile banking solutions in the region. As KAIZEN leader for Komatsu Latin America Corp, he was in charge of promoting, monitoring and assessing continuous improvement processes internally and throughout the distributor network (i.e. zero inventory programs and HANSEI planning). Dr. Parra developed Key Performance Indicators that facilitated forecasting/planning decisions for reducing costs, enhancing delivery times and increasing profits.

Anybody Home? Indirect human presence detection in ambient intelligence systems using IoT devices



Rui Nuno Neves Madeira has finished the Computer Engineering Bachelor's Degree in 2014 at ISCTE-IUL. Since then he has been working on his Master Degree at the same institution. He also did an Erasmus programme in 2015 at Sapienza in Rome. Since the Bachelor's he has been interested in Artificial Intelligence doing several projects related to this area and then related to machine learning in the Master's degree. He is now finishing his thesis on Indirect Human Presence Detection Using IOT Devices.



Luís Miguel Martins Nunes received his PhD in Computer Engineering from Faculdade de Engenharia da Universidade do Porto. In 1997 entered Instituto Universitário de Lisboa (ISCTE-IUL) where he coordinates and lectures several courses, mainly in the areas of Programming and Machine Learning (ML). He created in 2007 the ML course for the MSc in Computer Engineering. He is a researcher at Instituto de Telecomunicações and has participated in several national and international projects related to ML and Learning in Multiagent Systems.

State-of-the-art, Challenges and Open Issues in Integrating Security and Privacy in P2P Content Distribution Systems



Amna Qureshi received the PhD in Network and Information Technologies from the Universitat Oberta de Catalunya (UOC) in 2014. In 2015, she joined Internet Interdisciplinary Institute (IN3) at UOC as a researcher. Her research interests include intellectual property protection of multimedia content in peer-to-peer networks (content distribution, real-time communication), privacy preservation of the users of these networks, security of the cloud infrastructure operations for the purpose of achieving an end-to-end confidentiality, and privacy and trust between the cloud service provider and its clients.



Helena Rifà-Pous is an Associate Professor at the Computer Science Department of the Universitat Oberta de Catalunya (UOC) from 2007. She received her PhD in Telecommunications Engineering from the Universitat Politècnica de Catalunya in 2008. Her research interests include network security & privacy in distributed and mobile networks, key management, information hiding, and security & privacy in multimedia content distribution. She is the director of the Master programme in security of information and communication technologies at UOC since 2011. From 2000 to 2007, she was with Safelayer Secure Communications as a research project manager, focused on PKI projects mainly for the public administration.



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Normalizing Digital News-Stories for Preservation



Muzammil Khan Muzammil Khan is a PhD student of Department of Computer Science, Preston University Islamabad, Pakistan. He is currently working in Web Preservation and News archival systems. His research interests are Human Computer Interaction (Web usability, readability), Digital preservation (Web preservation and related aspects like metadata, archival structure, recommender systems etc), Mobile information visualization etc.

A Critical Review of Density-based Data Stream Clustering Techniques



Affan Ahmad Toor is currently doing his MS degree in computer sciences from Shaheed Zulfikar Ali Bhutto Institute of Science & Technology of Islamabad, Pakistan. Before that he received his M.Sc. degree in computer sciences from the Quaid-i-Azam University of Islamabad, Pakistan, in 2006. His main areas of interest are data mining, data clustering, stream mining, stream clustering and data classification. He has worked on implementation of agricultural data warehouse with collaboration of FAST University of Islamabad, Pakistan and Govt. of Pakistan.



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SJSON: A Succinct Representation for JavaScript Object Notation Documents



Junhee Lee is currently a graduate student studying for Ph.D degree in Department of Computer Science and Engineering at Seoul National University. He got his BEng degree from Yonsei University in 2013. His research interests include succinct data structures, database indexing, big data systems and algorithm engineering.

Analyzing Speech and Music Blocks in Radio Channels: Lessons Learned for Playlist Generation

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Exploiting CoDe Modeling for the Optimization of OLAP Queries



Valentina Indelli Pisano received her University degree in Computer Science in 2012 from the University of Salerno. Her research interests include business intelligence, data mining, big data and the human-computer interaction area with a specific focus on information visualization and visual analytics.



Michele Risi received his University degree in Computer Science in 2001 and his Ph.D. degree in Computer Science from the University of Salerno, Italy, in 2005. His research interests include grammar formalisms and parsing techniques for visual languages for software engineering, sketch understanding, architecture and design pattern recovery from object-oriented code, reverse engineering of web applications and human-computer interaction in 3D visualization, data-warehouse and data visualization, and mobile development and applications.



Genoveffa Tortora is a full professor in Computer Science at the University of Salerno, since 1990, where she has been Department Chair, and then Dean of the Faculty of Sciences. She has co-authored more than 250 papers published in scientific journals or proceedings of refereed conferences, and has co-edited three books. Her research interests are in the software engineering and information systems areas, and include human-computer interaction, visual languages, databases, data-warehouses, geographic information systems, image processing and biometric systems.

Exploiting Response Patterns for Identifying Topical Experts in Stack Overflow



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Payoff-based Dynamic Segment Replication Policy in Distributed VOD Systems

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Extracting Keyword and Keyphrase From Online Privacy Policies



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Dr. Rozita Dara is an Assistant Professor at the School of Computer Science, where she has established an interdisciplinary research program in the area of data management and privacy governance. Prior to her academic appointment, she was with the Office of Information Privacy Commissioner/Ontario (IPC). In this role, she led a research project in collaboration with the University of Toronto in building autonomous agents to protect data online. Before joining IPC, Dr. Dara worked at BlackBerry as a research scientist where she initiated and led several projects in mobile-health, electronic commerce, and software informatics.

Processing of multimedia applications and their use in foreign language teaching



Dr. Sarka Hubackova is the Assistant Professor at the University of Hradec Kralove, in Czech Republic. Her research interest includes eLearning, didactic technology, German language and Russian language processing. She authored in more than 70 publications in the areas of didactic technology, eLearning, and computational linguistics. She has received 61 citations in the Web of Science.

Adding Quality in the User Requirements Specification: A first approach



Ramiro Sámano Robles obtained his degree in Telecommunications engineering from the national university of Mexico in 2001. He has professional experience as PCB design engineer for high frequency applications and for the design of radio-frequency up-converters for 2.1 GHz communications. He has also professional experience as new technology evaluation engineer for a major cellular operator in Mexico where he was responsible for one of the first trials for 2.5G and 3G CDMA200 networks in Latin-america, and the implementation of several other new technologies such as intelligent network, smart antennas, localization-based services and short message services. He obtained the PhD in signal processing for wireless communications from the University of Leeds in 2007, and MSc in Telecommunications and Information Systems from the University of Essex in 2003. He held a postdoctoral position at the Institute of Telecommunications in Aveiro, Portugal, where he was involved in the management and scientific contribution of several FCT and FP7 European research projects related to distributed MIMO, RFID, Internet of things (IOT), radio-over-fibre distributed antenna systems, cooperative systems, and cognitive radio. Some of these projects were FUTON (www.ict-futon.eu), CODIV(www.ict-codiv.eu), ASPIRE (www.fp7-aspire.eu) and QoS MOS (www.ict-qosmos.eu). His area of contribution in these projects was mainly in the interactions and optimization of MAC, PHY and RRM (Radio resource management) layers, particularly for their integration in system level simulators and testbeds for LTE, EPC and WiMAX standards.

**Eighth International Conference on the Applications of
Digital Information and Web Technologies (ICADIWT 2017)**
Universidad Autónoma de Ciudad Juárez, Juarez City, Mexico
March 29-31, 2017



<http://www.socio.org.uk/icadiwt>

The Eighth International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2017) is a forum for scientists, engineers, and practitioners to present their latest research results, ideas, developments and applications in the areas of Computer Communications, Communication networks, Communication Software Communication Technologies and Applications, and other related themes.

This conference (ICADIWT Edition VIII) will include presentations of contributed papers and state-of-the-art lectures by invited keynote speakers.

Topics

This conference welcomes papers address on, but not limited to, the following research topics:

Internet Communication

Internet Technologies

Web Applications

Internet Software

Data Access and Transmission

Digital Communication Software

Digital Networks

Web Communication Interfaces

Internet Content Processing

Internet of Things

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Data Communication

Databases and applications

Web Systems Engineering Design

Intelligent Agent Systems

Semantic Web Studies

Adaptive Web applications and personalization

Navigation and hypermedia

The accepted full papers will be published in the IOS series (Frontiers in Artificial Intelligence and Applications (FAIA)) and submitted for inclusion in many indexes. Accepted full papers will be submitted for indexing to multiple abstract and indexing partners. The papers will be indexed in many databases as given at <http://www.frontiersinai.com/?q=indexing>

Important Dates

Submission of papers- February 08, 2017

Notification- February 15, 2017

Camera ready -February 28, 2017

Registration- February 28, 2017

Conference Dates- March 29-31, 2017