

Welcome Message

Dear Delegates and Friends,

We very pleased to welcome you to Kaiserslautern in the heart of Rhineland-Palatinate for the 15th Annual Conference on Knowledge-Based and Intelligent Information & Engineering Systems. The conference is organized by the German Research Center for Artificial Intelligence (DFKI) and the University of Kaiserslautern (Institute of Integrated Sensor Systems, ISE), in conjunction with KES International.

Kaiserslautern is located at the edge of the Palatinate Forest and home to about 100,000 inhabitants. It received its name from the favorite hunting retreat of Frederick Barbarossa who ruled the Holy Roman Empire from 1155 until 1190. The historic city center dates back to the 9th century. Today, Kaiserslautern is a modern hub of information and communications technology and home to a well-known university, a technical college and many internationally renowned research institutes.

Please enjoy the typical late summer in September with moderate weather. We hope that you have planned some extra days to benefit from the many historical places and sightseeing opportunities available in the Palatinate region, including the historical castles, the excellent vineyards and the beautiful villages along the Rhine valley. We made arrangements for two sightseeing tours to Hambach Castle including wine tasting on Sunday, September 11, and Heidelberg Castle including a cruise on the Neckar River on Thursday, 15th September.

On Monday evening we have organized a reception at the University of Kaiserslautern as an exclusive event for our delegates. On Tuesday night we will meet for the conference dinner at the historical Fruchthalle in the city center of Kaiserslautern. Shuttle buses will bring you downtown after the end of the sessions.

KES 2011 provides an international scientific forum for the presentation of high-quality research results on a broad range of intelligent systems topics. The conference attracted contributions from 32 countries and 5 continents: Australia, Canada, China, Colombia, Croatia, Czech Republic, Finland, France, Germany, Greece, Indonesia, Iran, Italy, Japan, Jordan, Korea, Latvia, Malaysia, Mexico, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, Taiwan, Thailand, Tunisia, Turkey, United Kingdom, and USA. We have organized the conference into six parallel sessions providing broad and interesting insights into the various fields of knowledge-based and intelligent information and engineering systems. Highlights of the programme are the six plenary invited talks from distinguished researchers, which do not overlap with any other session. We are very glad that our outstanding colleagues Keiji Yamada, Peter Schütt, Nikhil Pal, Ansgar Bernardi, Knut Manske, and Ulrich Reimer accepted our invitation. The programme is complemented by a lab tour to DFKI on Thursday morning. If you are interested in joining the tour please sign the list at the conference registration desk.

We are delighted that the field of knowledge-based and intelligent information and engineering systems is experiencing unprecedented growth worldwide in the past few years. From the large amount of submissions, our Program, Track, and Invited Session Chairs had assembled a team of about 120 program committee members who diligently worked under severe time constraints to provide their reviews in a timely fashion. The chairs carefully reviewed the comments of the reviewers to recommend the papers for acceptance into 244 oral presentations. Despite our best efforts, we realize that no review system is perfect and sometimes good contributions are not appropriately recognized. We apologize to authors of such contributions. The program chairs accepted papers into 57 oral sessions. Extended versions of selected papers will be considered for publication in the International Journals in the field, e.g., the International Journal of Knowledge-Based and Intelligent Engineering Systems.

Organizing a conference of this magnitude is only possible with an extraordinary organizing committee of dedicated and enthusiastic volunteers. We are indebted to our program chairs, Knut Hinkelmann and Koichi Kise for their outstanding planning and execution that resulted in the smoothest paper submission and review process. They, along with the track and invited session chairs as well as the program committee, completed the single-blind review process. Special care was taken during the review process for papers authored by track chairs, program chairs, and general chairs so that the confidentiality of the review process is maintained. We are deeply indebted to all those involved in the review process for their diligence and professionalism.

We gratefully acknowledge the sponsorship of the Center for Computational and Mathematical Modeling (CM)², DFKI, ISE, and the City of Kaiserslautern. Of course, no conference can be successful without outstanding contributions from authors and the participation of researchers and practitioners as registered delegates. We thank all authors and delegates for their contributions and for their cooperation throughout the process. We are especially grateful to the editorial team of Springer led by Alfred Hofmann.

Hosting KES 2011 in Kaiserslautern would not have been possible without professional cooperation and commitment that we received from KES International and its administrators. In particular, we would like to thank Peter Cushion for his strong support.

We hope that you would find the conference intellectually stimulating and its ambiance particularly relaxing. We wish you a very memorable KES 2011.

Andreas Dengel, Andreas König, Lakhmi C. Jain, Robert J. Howlett, and Stefan Zinsmeister

Organisers



Andreas Dengel,
General Co-Chair,
University of Kaiserslautern &
DFKI GmbH, Germany



Andreas König,
General Co-Chair,
University of Kaiserslautern,
Germany



Lakhmi C. Jain,
General Co-Chair,
University of South Australia,
Australia



Robert J. Howlett,
Executive Chair,
Bournemouth University,
UK



Koichi Kise,
Program Co-Chair,
Osaka Prefecture University,
Japan



Knut Hinkelmann,
Program Co-Chair,
University of Applied Sciences
North- western Switzerland,
Switzerland



Stefan Zinsmeister,
Organizing Committee Chair,
DFKI GmbH,
Germany

Organization

KES 2011 is hosted and organized by the Chairs Knowledge-based Systems, Computer Science department, and Integrated Sensor Systems, Electrical and Computer Engineering department at the University of Kaiserslautern, the German Research Center for Artificial Intelligence (DFKI) GmbH, Germany, and KES International. The conference is being held at the University of Kaiserslautern, September 12 — 14, 2011.

Executive Committee

General Co-Chairs:	Andreas Dengel, University of Kaiserslautern & DFKI GmbH, Germany Andreas König, University of Kaiserslautern, Germany Lakshmi C. Jain, University of South Australia, Australia
Executive Chair	Robert J. Howlett, Bournemouth University, UK
Program Co-Chairs:	Knut Hinkelmann, University of Applied Sciences Northwestern Switzerland, Switzerland Koichi Kise, Osaka Prefecture University, Japan
Organizing Committee Chair:	Stefan Zinsmeister, DFKI GmbH, Germany

Organizing Committee

KES Operations Manager:	Peter Cushion, KES International, UK
KES Systems Support:	Shaun Lee, KES International, UK
ISE Support Staff:	Abhaya Chandra Kammara Shubhmoy Kumar Li Li Juan Miguel Andujar Morgado Johar Muhammad Akmal
DFKI Support Staff:	Sophie Dengel Jonas Geigenberger Christoph Holderle Maximilian Birli Jörn Hees Rouven Bauer

Track Chairs

Bruno Apolloni	University of Milan, Italy
Floriana Esposito	University of Bari, Italy
Anne Håkansson	Stockholm University, Sweden
Ron Hartung	Franklyn University, USA
Honghai Liu	University of Portsmouth, UK
Heiko Maus	DFKI GmbH, Germany
Ngoc Thanh Nguyen	Wroclaw University of Technology, Poland
Andreas Nuernberger	University of Magdeburg, Germany
Tuan Pham	University of New South Wales, Australia
Toyohide Watanabe	Nagoya University, Japan

Invited Session Chairs

The 2nd International Workshop on Natural Language Visualisation

Minhua Ma, The Glasgow School of Art, UK
Bob Coyne, Columbia University, USA

Workshop on Seamless Integration of Semantic Technologies in Computer-supported Office Work (SISTCOW)

Mr. Oleg Rostanin, DFKI GmbH, Germany
Simon Scerri, University of Ireland, Galway, Ireland
Benedikt Schmidt, SAP Research, Germany

Innovations in Chance Discovery

Akinori Abe, University of Tokyo, Japan
Yukio Ohsawa, The University of Tokyo, Japan

Computational Intelligence Methods to Benefit Society

Valentina Balas, Aurel Vlaicu University of Arad, Romania
Lakhmi C. Jain, University of South Australia, Australia

Knowledge - Based Interface Systems (I)

Yuji Iwahori, Chubu University, Japan
Naohiro Ishii, Aichi Institute of Technology, Japan

Advances in Theory and Application of Hybrid Intelligent Systems

Lakhmi C. Jain, University of South Australia, Australia
CP Lim, Universiti Sains Malaysia, Malaysia

Recent trends in Knowledge Engineering, Smart Systems and their Applications

Cesar Sanin, University of Newcastle, Australia
Carlos Toro, VICOMTech, Spain

Data Mining and Service Science for Innovation

Katsutoshi Yada, Kansai University, Japan

Methods and Techniques of Artificial and Computational Intelligence in Economics, Finance and Decision Making

Marina Resta, DIEM sezione di Matematica Finanziaria, Italy

Human-oriented Learning Technology and Learning Support Environment

Toyohide Watanabe, Nagoya University, Japan
Tomoko Kojiri, Kansai University, Japan

Human Activity Support in Knowledge Society

Toyohide Watanabe, Nagoya University, Japan
Takeshi Ushiamo, Kyushu University, Japan

Design of Social Intelligence and Creativity Environment

Toyohide Watanabe, Nagoya University, Japan
Naoto Mukai, Tokyo University of Science, Japan

Knowledge Engineering Applications in Process Systems and Plant Operations

Kazuhiro Takeda, Shizuoka University, Japan
Takashi Hamaguchi, Nagoya Institute of Technology, Japan
Tetsuo Fuchino, Tokyo Institute of Technology

Knowledge - Based Interface Systems (II)

Yoshinori Adachi, Chubu University, Japan
Nobuhiro Inuzuka, Nagoya Inst. of Technology, Japan

Time Series Prediction Based on Fuzzy and Neural Networks	Minvydas Ragulskis, Kaunas University of Technology, Lithuania
Management Technologies from the Perspective of Kansei Engineering and Emotion	Junzo Watada, Waseda University, Japan Hisao Shiizuka, Kogakuin University, Japan Taki Kanda, Bunri University of Hospitality, Japan
Knowledge-Based Systems for e-Business	Kazuhiko Tsuda, University of Tsukuba, Japan Nubuo Suzuki, KDDI Corporation, Japan
Reasoning Based Intelligent Systems (RIS)	Kazumi Nakamatsu, University of Hyogo, Japan Jair Minoro Abe, University of Sao Paulo, Brazil
Skill Acquisition and Ubiquitous Human Computer Interaction	Hirokazu Taki, Wakayama University, Japan Masato Soga, Wakayama University, Japan
International Session on Sustainable Information Systems	Anne Håkansson, KTH, Sweden Jason J. Jung, Yeungnam University, Korea Costin Badica, University of Craiova, Romania
Intelligent Network and Service	Jun Munemori, Wakayama University, Japan Takaya Yuizono, Japan Advanced Institute Science and Technology, Japan
Advances in Theory and Application of Multi-Agent Systems	Bala M. Balachandran, University of Canberra Dharmendra Sharma, University of Canberra
Advanced Design Techniques for Adaptive Hardware and Systems	Sorin Hintea, Technical University of Cluj-Napoca, Romania Hernando Fernández-Canque, Glasgow Caledonian University, UK Gabriel Oltean, Technical University of Cluj-Napoca, Romania
Advanced Knowledge-based Systems	Alfredo Cuzzocrea, ICAR-CNR University of Calabria, Italy
Computational Intelligence for Fault Diagnosis and Prognosis.	Beatrice Lazzerini, University of Pisa, Italy Marco Cococcioni, University of Pisa, Italy Sara Lioba Volpi, University of Pisa, Italy
Multiple Classifiers and Hybrid Learning Paradigms	Edmondo Trentin, University of Siena, Italy Friedhelm Schwenker, University of Ulm, Germany
Soft Computing Techniques and their Intelligent Utilisations	Norio Baba, Osaka Kyoiku University, Japan Kunihiro Yamada, Tokai University, Japan
Document Analysis and Knowledge Science	Seiichi Uchida, Kyushu University, Japan Marcus Liwicki, DFKI GmbH, Germany Koichi Kise, Osaka Prefecture University, Japan

Model-Based Computing for Innovative
Engineering

Klaus Schneider, University of Kaiserslautern,
Germany

Norbert Wehn, University of Kaiserslautern, Germany

Immunity-Based Systems

Yoshiteru Ishida, Toyohashi University of Technology,
Japan

Andreas König, University of Kaiserslautern, Germany

Program Committee

Abe, Akinori	University of Tokyo, Japan
Abe, Jair Minoro	University of Sao Paulo, Brazil
Abeynayake, Canicious	DSTO, Australia
Adachi, Yoshinori	Chubu University, Japan
Adrian, Benjamin	German Research Center for Artificial Intelligence (DFKI), Germany
Angelov, Plamen	Lancaster University, UK
Azar, Ahmad Taher	Modern Science and Arts University (MSA), Egypt
Baba, Norio	Osaka Kyoiku University, Japan
Badica, Costin	University of Craiova, Romania
Balachandran, Bala	University of Canberra, Australia
Balas, Valentina	Aurel Vlaicu University of Arad, Romania
Bannore, Vivek	University of South Australia, Australia
Barb, Adrian S.	Penn State University, USA
Bernardi, Ansgar	German Research Center for Artificial Intelligence (DFKI), Germany
Bianchini, Monica	University of Siena, Italy
Bichindaritz, Isabelle	University of Washington, USA
Boeva, Veselka	Technical University of Sofia, Bulgaria
Buckingham, Christopher	Aston University, UK
Castellano, Giovanna	University of Bari, Italy
Catania, Barbara	Universita degli Studi di Genova, Italy
Ceccarelli, Michele	University of Sannio, Italy
Chahl, Javaan	DSTO, Australia
Chalup, Stephan	The University of Newcastle, Australia
Cheng, Chien-Fu	Tamkang University, Taiwan
Cheng, Kai	Brunel University, UK
Cheung, Benny	Honk Kong Polytechnic University, Hong Kong
Cococcioni, Marco	University of Pisa, Italy
Coyne, Bob	Columbia University, USA
Crippa, Paolo	Università Politecnica delle Marche, Italy
Cummings, Mary (Missy)	Massachusetts Institute of Technology, USA
Cuzzocrea, Alfredo	ICAR-CNR & University of Calabria, Italy
Damiani, Ernesto	Università degli Studi di Milano, Italy
Dasiopoulou, Stamatia	Informatics and Telematics Institute, Greece
De Cock, Martine	University of Washington Tacoma, USA
De Wilde, Philippe	Heriot-Watt University, UK
Dentsoras, Argyris	University of Patras, Greece
Ding, Liya	Macau University of Science and Technology, Hong Kong
Duro, Richard J.	Universidad da Coruña, Spain
Dustdar, Schahram	Vienna University of Technology, Austria
Echizen, Isao	National Institute of Informatics, Japan
Elomaa, Tapio	Tampere University of Technology, Finland
Fernandez-Canque, Hernando	Glasgow Caledonian University, UK
Fernandez-Vilas, Ana	University of Vigo, Spain
Filippidis, Arthur	DSTO, Australia

Fuchino, Tetsuo	Tokyo Institute of Technology, Japan
Gao, Junbin Charles	Sturt University, Australia
Georgieva, Petia	University of Aveiro, Portugal
Godoy, Daniela	UNICEN University, Argentina
Grabot, Bernard	LGP-ENIT, France
Graña Romy, Manuel	Universidad del Pais Vasco, Spain
Grecos, Christos	University of West Scotland, UK
Hakánsson, Anne	KTH, Sweden
Hamaguchi, Takashi	Nagoya Institute of Technology, Japan
Hariz, Alex	University of South Australia, Australia
Hassan, Mohamed	Cairo University, Egypt
Hill, Richard	University of Derby, UK
Hintea, Sorin	Technical University of Cluj-Napoca, Romania
Holmes, Dawn	University of California, USA
Honda, Katsuhiro	Osaka Prefecture University, Japan
Hong, Tzung-Pei	National University of Kaohsiung, Taiwan
Hullermeier, Eyke	Philipps-Universität Marburg, Germany
Ichalkaranje, Nikhil	University of Mumbai, India
Inuzuka, Nobuhiro	Nagoya Institute of Technology, Japan
Ishii, Naohiro	Aichi Institute of Technology, Japan
Ito, Takayuki	Massachusetts Institute of Technology, USA
Iwahori, Yuji	Chubu University, Japan
Jastroch, Norbert	MET Communications GmbH, Germany
Jensen, Richard	Aberystwyth University, UK
Jones, Andrew	Cardiff University, UK
Jung, Jason J.	Yeungnam University, Korea
Kanda, Taki	Bunri University of Hospitality, Japan
Kastania, Anastasia	Athens University of Economics and Business, Greece
Katagiri, Hideki	Hiroshima University, Japan
Kise, Koichi	Osaka Prefecture University, Japan
Ko, In-Young	KAIST, Korea
Kodogiannis, Vassilis S.	University of Westminster, UK
Kojiri, Tomoko	Kansai University, Japan
Konar, Amit	Jadavpur University, India
Koychev, Ivan	University of Sofia, Bulgaria
Kwasnicka, Halina	Wroclaw University of Technology, Poland
Kwong, C.K.	The Hong Kong Polytechnic University, Hong Kong
Lazzerini, Beatrice	University of Pisa, Italy
Lee, Dah-Jye	Brigham Young University, USA
Lim, CP	Universiti Sains Malaysia, Malaysia
Lin, Tsung-Chih	Feng-Chia University, Taiwan
Liu, James	The Hong Kong Polytechnic University, Hong Kong
Liu, Lei	Beijing University of Technology, China
Liwicki, Marcus	German Research Center for Artificial Intelligence (DFKI), Germany
Lovrek, Ignac	University of Zagreb, Croatia
Lu, Jie	University of Technology, Sydney, Australia
Ma, Minhua Eunice	University of Derby, UK

Maglogiannis, Ilias	University of Central Greece, Greece
Magnenat-Thalmann, Nadia	University of Geneva, Switzerland
Malchiodi, Dario	University degli Studi di Milano, Italy
Marinov, Milko T.	University of Ruse, Bulgaria
Markey, Mia	The University of Texas at Austin, USA
Matijasevic, Maja	University of Zagreb, Croatia
Mehmood, Rashid	School of Engineering, Swansea, UK
Montani, Stefania	Università del Piemonte Orientale, Italy
Moreno Jimenez, Ramón	Universidad del Pais Vasco, Spain
Mukai, Naoto	Tokyo University of Science, Japan
Mumford, Christine	Cardiff University, UK
Munemori, Jun	Wakayama University, Japan
Nagashino, Hirofumi	The University of Tokushima, Japan
Nakamatsu, Kazumi	University of Hyogo, Japan
Nedic, Zorica	University of South Australia, Australia
Nguyen, Ngoc Thanh	Wroclaw University of Technology, Poland
Niskanen, Vesa A.	University of Helsinki, Finland
Ogiela, Lidia	AGH & University of Science and Technology, Poland
Ohsawa, Yukio	The University of Tokyo, Japan
Oltean, Gabriel	Technical University of Cluj-Napoca, Romania
Palade, Vasile	Oxford University, UK
Pasi, Gabriella	Università degli Studi di Milano Bicocca, Italy
Patel, Kunal	Ingenuity Systems, USA
Pazos-Arias, Jose	University of Vigo, Spain
Pedrinaci, Carlos	The Open University, UK
Petrosino, Alfredo	Università di Napoli Parthenope, Italy
Pratihari, Dilip	Indian Institute of Technology, India
Putnik, Goran D.	University of Minho, Portugal
Ragulskis, Minvydas	Kaunas University of Technology, Lithuania
Rakus-Andersson, Elisabeth	Blekinge Institute of Technology, Sweden
Reed, Nancy	University of Hawaii, USA
Remagnino, Paolo	Kingston University, UK
Resta, Marina	DIEM sezione di Matematica Finanziaria, Italy
Rostanin, Oleg	German Research Center for Artificial Intelligence (DFKI), Germany
Saha, Asit	Central State University, USA
Salem, Ziad	Aleppo University, Syria
Sanin, Cesar	University of Newcastle, Australia
Sansone, Carlo	Università di Napoli Federico II, Italy
Sato-Ilic, Mika	University of Tsukuba, Japan
Scerri, Simon	University of Ireland Galway, Ireland
Schmidt, Benedikt	SAP Research, Germany
Schneider, Klaus	University of Kaiserslautern, Germany
Schockaert, Steven	Ghent University, Belgium
Schwenker, Friedhelm	University of Ulm, Germany
Seiffert, Udo	Fraunhofer-Institute IFF Magdeburg, Germany
Sharma, Dharmendra	University of Canberra, Australia
Shizuka, Hisao	Kogakuin University, Japan
Sioutis, Christos	DSTO, Australia

Soga, Masato	Wakayama University, Japan
Sordo, Margarita	Harvard University, USA
Soroka, Anthony	Cardiff University, UK
Spiliopoulou, Myra	Otto-von-Guericke-Universität, Germany
Srinivasan, Dipti	National University of Singapore, Singapore
Sunde, Jadranka	DSTO, Australia
Suzuki, Nobuo	KDDI Corporation, Japan
Szczerbicki, Edward	The University of Newcastle, Australia
Takeda, Kazuhiro	Shizuoka University, Japan
Taki, Hirokazu	Wakayama University, Japan
Tambouratzis, Tatiana	University of Piraeus, Greece
Tichy, Pavel	Rockwell Automation Research Centre, Czech Republic
Tino, Peter	The University of Birmingham, UK
Toro, Carlos	VICOMTech, Spain
Torsello, Maria	University of Bari, Italy
Trentin, Edmondo	University of Siena, Italy
Tshrintzis, George A.	University of Piraeus, Greece
Tsuda, Kazuhiko	University of Tsukuba, Japan
Tweedale, Jeffrey	University of South Australia, Australia
Uchida, Seiichi	Kyushu University, Japan
Uchino, Eiji	Yamaguchi University, Japan
Ushiamo, Taketoshi	Kyushu University, Japan
Vadera, Sunil	University of Salford, UK
Varkonyi Koczy, Annamaria	Obuda University, Hungary
Vassányi, István	University of Pannonia, Hungary
Vellido, Alfredo	Universitat Politècnica de Catalunya, Spain
Velásquez, Juan D.	University of Chile, Chile
Virvou, Maria	University of Piraeus, Greece
Volpi, Sara	University of Pisa, Italy
Watada, Junzo	Waseda University, Japan
Watanabe, Toyohide	Nagoya University, Japan
Weber, Rosina	The iSchool at Drexel, USA
Wehn, Norbert	University of Kaiserslautern, Germany
White, Richard J.	Cardiff University, UK
Williams, M. Howard	Heriot-Watt University, UK
Yada, Katsutoshi	Kansai University, Japan
Yamada, Kunihiro	Tokai University, Japan
Yang, Zijiang	York University, Canada
Yoshida, Hiroyuki	Harvard Medical School, USA
You, Jane	The Hong Kong Polytechnic University, Hong Kong
Yuizono, Takaya	JAIST, Japan
Zanni-Merk, Cecilia	LGeCo - INSA de Strasbourg, France

Sponsoring Institutions

Center for Computational and Mathematical Modeling (CM)², University of Kaiserslautern, Germany

German Research Center for Artificial Intelligence (DFKI) GmbH, Kaiserslautern, Germany

Institute of Integrated Sensor Systems (ISE), University of Kaiserslautern, Germany

Keynotes

Monday 12 September 2011

42-115, 9:00-10:00



Prof. Keiji Yamada, Ph.D
General Research Manager,
C&C Innovation Laboratories,
NEC Corporation
Professor,
Nara Institute of Science and
Technology, Japan

Title:

Symbiotic System as a New Social Infrastructure Based on Intelligent Interaction Among the Society, Human Beings, and Information Systems

Abstract:

In this talk, I will propose a new social intelligent infrastructure which is called Symbiotic system. The aim of the system is to totally manage social resources which serve for mobility, energy supply, distribution, buildings, water, food, health care, education, and so on. Additionally, human activities must be considered as important elements of social resources. The system consists of the three parts such as monitoring resources, dissolution and re-bundling, and feedback to social resources. Especially promotion of human activities should be combined with control of other resources in order to reduce adverse effects on the natural environments. Information presented to each user is dynamically changed accordingly to his/her estimated profile, tendencies of his/her behaviors, and extracted status of a real filed around him/her. We will demonstrate some prototypes for energy management, traffic control, and regeneration of an aged community.

Biography:

Dr. Keiji YAMADA is the general manager of C&C Innovation Research Laboratories, NEC Corporation, an affiliate professor of Nara Institute of Science and Technology, and a co-director of Research Centre for Computers, Communication, and Social Innovation of La Trobe University, Australia. He received the B.E., the M.E., and the Dr. Eng degrees in information science from Kyoto University in 1982, 1984, and 1987. In 1987, he joined C&C information Technology research laboratories, NEC Corporation. From 1990 to 1991, he was a visiting professor of Computer Science and Engineering Department, University of California at San Diego. He has been serving several academic societies as board members and international conferences as general chairs or financial chairs. His research interest covers knowledge processing and human communication based on pattern recognition, computer vision, artificial neural network, machine learning, human interaction, intelligent network, and socio-technology. He is a member of the IEEE, the IEICE Japan, the IPSJ, and the Japan society of Future research.

Monday 12 September 2011

42-115,13:30-14:30



Dr. Peter Schütt
Leader Software Strategy
& Knowledge Management,
Executive Engagement Manager,
IBM Software Group,
Ehningen, Germany

Title:

Knowledge Sharing in Enterprise Networks

Abstract:

Driven by new technologies, e.g. the success of mobile devices, social networks on the internet and new business analytics capabilities, the way companies create value changes and has to change rapidly. New social ways of sharing information are the foundation of new, smarter ways of working: Information exchange changes from selected push in hierarchical organisations to self organized pull in more network-like organisations - from documents and e-mail to social business tools. Activity streams, embedded experiences, smart filtering, etc., all based on open standards, allow to re-simplify the workplace of the enterprise user, largely independent on the device s/he wishes to work with. The outcome is a much better informed employee - much to the benefit of the success of the company.

Biography:

Dr. Peter Schütt is Leader Social Software Strategy & Knowledge Management in IBM Germany GmbH. In this role he consults industry leaders in northern Europe on Social Business and Enterprise 2.0 strategies and adoption methodologies, and topics such as Smarter Work, the IT based Workplace of the Future, Collaboration, Innovation and Knowledge Management. His articles and interviews in business and IT press draw a lot of attention. In particular, he is a regular author in the German bi-monthly manager's magazine "wissensmanagement". After the success of his first book on Knowledge Management („Wissensmanagement“), published in 2000, he is currently working on a book on Social Business. He acquired a PhD from the University of Hamburg in Physics, and during his studies, was a visitor at CERN in Geneva, CH, for 2 years. Peter is living in Stuttgart, Germany, is married and has two children

Tuesday 13 September 2011

42-115, 9:00-10:00



Prof. Nikhil R. Pal, Ph. D.
Indian Statistical Institute,
Calcutta, India

Title:

Selection of Useful Sensors/Features with Controlled Redundancy Using Neural Networks

Abstract:

While designing many industrial systems, often we need to minimize the required number of sensors at least for three reasons: to reduce the cost of the system, to reduce the cost of decision making, and to honor physical constraints imposed by the specific application. For example, we may not be able to equip an "intelligent welding robot" with too many sensors because of the constraints on the welding environment and the limited available time for decision making. Hence, sensor selection, a generalization of feature selection, is a very important problem.

We shall discuss two connectionist schemes that can simultaneously select the useful sensors (and hence features too) and learn the relation between the input and output. The effectiveness of the systems is demonstrated with a few applications. We argue that the proposed methods can discard bad / derogatory sensors and "indifferent" sensors, and thus eliminate their effect on the system's output. Such systems are also found to discover interesting, sometimes unexpected, relations. A unique characteristic of these schemes is that they look at all sensors/ features simultaneously and thereby can account for subtle nonlinear interactions between sensors/features as well as the interaction between the tool used to solve the problem and sensors/features. Unlike conventional methods, our systems do not require to evaluate various subsets of features/sensors. The proposed schemes can deal with both function-approximation type and classifier-type systems. For any practical system, some redundancy in the set of features/sensors is desirable to account for measurement errors and other uncertainties. Thus a feature/sensor selection scheme should allow some (but not too much) redundancy in the selected set of features/sensors. For this we generalize our system so that they can select useful sensors/features with controlled redundancy.

Biography:

Nikhil R. Pal is a Professor in the Electronics and Communication Sciences Unit of the Indian Statistical Institute. He has served as a Chair Professor at the National Chiao Tung University, Taiwan and as a visiting professor of other universities/institutes. He has coauthored, edited/co-edited several books. His current research interest includes pattern recognition, dimensionality reduction, fuzzy sets theory, neural networks, evolutionary computation, and bioinformatics.

He has served/been serving on the editorial /advisory board/ steering committees of several journals including International Journal of Approximate Reasoning, International Journal of Knowledge Based Intelligent Engineering Systems, The International Journal of Hybrid Intelligent Systems, Iranian Journal of Fuzzy Systems, Neural Information Processing - Letters and Reviews, Fuzzy Sets and Systems, International Journal of Intelligent Computing in Medical Sciences and Image Processing, Fuzzy Information and Engineering : An International Journal, International Journal of Neural Systems, International Journal of Sensor Networks and Data Communications, IEEE Transactions on Fuzzy Systems, and the IEEE Transactions on Systems Man and Cybernetics—B. He has served as the Editor-in-Chief of the IEEE Transactions on Fuzzy Systems for six years (2005-2010). He is a member (2010-2012) of the Administrative Committee of the IEEE Computational Intelligence Society (CIS) and is a Distinguished Lecturer of the IEEE CIS.

He has given many plenary/keynote speeches in different premier international conferences in the area of computational intelligence. He was the president of the Asia Pacific Neural Net Assembly. He was the Program Chair of the 4th International Conference on Advances in Pattern recognition and Digital Techniques, 1999, and was a co-program chair of 2005 IEEE International Conference on Fuzzy Systems and 2006 IEEE International Conference on Fuzzy Systems. He is the General Chair of 2013 IEEE International Conference on Fuzzy Systems that is going to be held in Hyderabad, India. He was the General Chair of 2002 AFSS International Conference on Fuzzy Systems, 2002 and the 11th International Conference on Neural Information Processing, ICONIP 2004.

He is a Fellow of the Indian National Academy of Engineering (FNAE), Fellow of the National Academy of Sciences, India (FNASc.), Fellow of Indian National Science Academy (FNA), Fellow of the International Fuzzy Systems Association (FIFSA) and a Fellow of the IEEE, USA (FIEEE).

Tuesday 13 September 2011

42-115, 13:30-14:30



Dr. Ansgar Bernardi
German Research Center for
Artificial Intelligence,
Kaiserslautern, Germany

Title:

Growing Together: Opening the Way for Comprehensive Public-Private Knowledge Management

Abstract:

Many of today's challenging issues will profit from improved knowledge management and information sharing among the individuals and organizations involved. Furthermore, recent technological developments have opened new opportunities for large-scale information acquisition and processing, for integrating physical goods with their specific information shadow, and for combining human interests and computer systems into new networks of intelligent services. In this talk, agricultural crop production is used as an example of a domain where a variety of actors, both public institutions and individual workers, will profit from improved knowledge management: Detailed information about local characteristics of the soil and the production history, together with grown and scientifically-supported expertise as well as the experiences and actual observations of farmers, workers and agricultural service providers help to reach optimal decisions in all production steps, thus contributing to better food quality, increased harvests, sustainable production, and better environmental protection. Public organizations can collect and provide relevant data, e.g. geo information, on a cross-organizational level. If individual participants can be convinced to contribute selected private data in order to allow for e.g. regional agricultural consultation services, all parties involved will profit from this intensive exchange in mutual win-win situations. Consequently, the integration of individual and decentralized data sources via semantic technologies, the goal-specific collection and evaluation of sensor network data, the social exchange within actors' shared information spaces, and the information organization around universally-accepted fixpoints and shared conceptualizations is presented as a promising road towards useful knowledge support in large, even international, collaborative settings.

Biography:

Dr. Ansgar Bernardi is deputy head of the knowledge management research department at the German Research Center for Artificial Intelligence - DFKI GmbH. He has successfully conducted numerous research projects on learning organizations, knowledge management, distributed organizational memories including annotation of documents and shared development of ontologies, and their application in industrial settings. Ansgar Bernardi was co-ordinator of the EU-funded project NEPOMUK which developed the Social Semantic Desktop. He is now the co-ordinator of the German iGreen project which realizes public-private knowledge management in the agricultural domain.

Wednesday 14 September 2011

42-115, 9:00-10:00



Dr. Knut Manske
Vice President
SAP Research,
SAP AG, Darmstadt, Germany

Title:

Future Urban Management: Towards Best Managed Cities

Abstract:

Urban Management for the benefit of citizens, administration, and business Cities and communities form the nucleus of our modern society. Challenges for agglomerations include the supply of energy and water, transportation, healthcare, and security. Based on information and communication technology urban management enables citizens, local governments, and business actors in cities to collaborate and at the same time enhance cross-departmental processes within local governments in an effective and efficient way. In the global and knowledge based economy, metropolitan areas are the most important centers for production and consumption. Cities are now entering a new phase of development characterized by a strong focus on sustainability, environment, and citizen needs. This creates enormous challenges and opportunities. In order to address the issues coming up in metropolitan areas urban management has to provide holistic solutions. Information and communication technologies are expected to play a leading role in this development.

Biography:

Knut Manske is responsible for research on urban management including public security. He established SAP Research Darmstadt. Knut Manske holds a PhD from the University of Linz, Austria, in the context of multimedia and HCI and received his diploma in Computer Science from the University of Karlsruhe with a focus on Computer Graphics, Human Computer Interaction, and Parallel Computing. Knut Manske is member of the ACM. Prior to joining SAP, Knut Manske was Technical Director of a Software Engineering company who developed solutions for embedded appliances, smart vending, mobile business solutions, and kiosk systems.

Wednesday 14 September 2011

42-115, 13:30-14:30



Prof. Dr. Ulrich Reimer,
Institute for Information
and Process Management,
University of Applied Sciences,
St. Gallen, Switzerland

Title:

(Meta-) Modeling of Process-Oriented Information Systems

Abstract:

The talk gives an application-oriented view on implementing and maintaining process-oriented information systems using a model-driven approach. It presents results of the project HERA (Helvetic E-Government Reference Architecture) which has developed a support system for cross-organisational e-government processes. A detailed analysis of e-government processes revealed their strong collaborative character and resulted in a set of requirements for a support system. The HERA project has also shown that instead of implementing each cross-organisational e-government solution from scratch it is advisable to develop a generic framework to be configured with application-specific aspects via a model-driven approach. The talk discusses how this has been achieved in HERA and how this approach can be adopted for application areas other than e-government.

Biography:

Prof. Dr. Ulrich Reimer studied computer science and received his doctorate in 1987 at the Information Science Dept. of the University of Konstanz with a thesis on formal ontologies for natural language understanding. From 1987 to 1991 he was assistant professor at the University of Konstanz before becoming the head of the IT R&D group of Swiss Life, the biggest life insurance company in Switzerland, in 1991. In his 10 years at Swiss Life he was responsible for large-scale research projects in the areas of Semantic Web, knowledge management, data mining and e-tutoring. Subsequently he joined an IT and consulting company where he was working on enriching web-based information systems with Semantic Web functionality. In 2005 he changed to his current position at the Institute of Information and Process Management at the University of Applied Sciences St. Gallen where he is responsible for applied R&D. His current research activities include semantic technologies, knowledge extraction from texts, knowledge management, and model-driven information systems.

Programme Schedule

Monday 12 September, KES 2011		
Time	Venue	Details
8:30	42-115	Opening of the conference
9:00	42-115	Keynote 1: "Symbiotic System as a New Social Infrastructure Based on Intelligent Interaction Among the Society, Human Beings, and Information Systems" Prof. Keiji Yamada , Ph.D. Nara Institute of Science and Technology, Japan Chair: Prof. Koichi Kise, Osaka Prefecture University, Japan
10:00		Coffee
10:20	42-105	IS08, Recent trends in Knowledge Engineering, Smart Systems and their Applications - I Chair: Dr. Cesar Sanin, University of Newcastle, Australia Co-chair: Dr. Carlos Toro, VICOMTech, Spain
	46-210	G06, Knowledge Management, Ontologies and Data Mining - I Chair: Dr. Heiko Maus, DFKI GmbH, Germany
	46-110	IS32, Document Analysis and Knowledge Science - I Chair: Prof. Seiichi Uchida, Kyushu University, Japan Co-chair: Dr. Marcus Liwicki, DFKI GmbH, Germany Prof. Koichi Kise, Osaka Prefecture University, Japan
	46-260	G01, Artificial Neural Networks, Connectionists Systems and Evolutionary Computation - I Chair: Prof. Bruno Apolloni, University of Milan, Italy
	42-110	G03+G08, Agent, Multi-AgentSystems, Intelligent Robotics and Control - I Chair: Prof. Ngoc Ngyuen, Wroclaw University of Technology, Poland Prof. Honghai Liu, University of Portsmouth, UK
	46-280	IS12, Human-oriented Learning Technology and Learning Support Environment - I Chair: Prof. Toyohide Watanabe, Nagoya University, Japan Co-chair: Dr. Tomoko Kojiri, Kansai University, Japan
12:20		Lunch
13:30	42-115	Keynote 2: "Knowledge Sharing in Enterprise Networks" Dr. Peter Schütt, Executive Engagement Manager, IBM Software Group, Germany Chair: Prof. Andreas Dengel, University of Kaiserslautern & DFKI GmbH, Germany
14:35	46-260	G01, Artificial Neural Networks, Connectionists Systems and Evolutionary Computation - II Chair: Prof. Bruno Apolloni, University of Milan, Italy
	46-280	IS12, Human-oriented Learning Technology and Learning Support Environment - II Chair: Prof. Toyohide Watanabe, Nagoya University, Japan Co-chair: Dr. Tomoko Kojiri, Kansai University, Japan
	42-115	G02, Machine Learning and Classical AI - I Chair: Prof. Floriana Esposito, University of Bari, Italy
	42-110	G03+G08, Agent, Multi-AgentSystems, Intelligent Robotics and Control - II Chair: Prof. Ngoc Ngyuen, Wroclaw University of Technology, Poland Prof. Honghai Liu, University of Portsmouth, UK
	46-210	G06, Knowledge Management, Ontologies and Data Mining - II Chair: Dr. Heiko Maus, DFKI GmbH, Germany
	46-270	G10, Other / Misc. Intelligent Systems Topics - I Chair: Prof. Ron Hartung, Franklyn University, USA
15:55		Coffee
16:15	42-105	IS08, Recent trends in Knowledge Engineering, Smart Systems and their Applications - II Chair: Dr. Cesar Sanin, University of Newcastle, Australia Co-chair: Dr. Carlos Toro, VICOMTech, Spain
	46-210	G06, Knowledge Management, Ontologies and Data Mining - III Chair: Dr. Heiko Maus, DFKI GmbH, Germany
	46-110	IS32, Document Analysis and Knowledge Science - II Chair: Prof. Seiichi Uchida, Kyushu University, Japan Co-chair: Dr. Marcus Liwicki, DFKI GmbH, Germany Prof. Koichi Kise, Osaka Prefecture University, Japan
	42-110	G03+G08, Agent, Multi-AgentSystems, Intelligent Robotics and Control - III Chair: Prof. Ngoc Ngyuen, Wroclaw University of Technology, Poland Prof. Honghai Liu, University of Portsmouth, UK
	46-270	G10, Other / Misc. Intelligent Systems Topics - II Chair: Prof. Ron Hartung, Franklyn University, USA
	42-115	G02, Machine Learning and Classical AI - II Chair: Prof. Floriana Esposito, University of Bari, Italy
18:15		End of Day (refer to page 23 for Mondays's detailed programme)
18:30		Drinks Reception

Tuesday 13 September, KES 2011		
Time	Venue	Details
9:00	42-115	Keynote 3: "Selection of Useful Sensors/Features with Controlled Redundancy Using Neural Networks " Prof. Nikhil R. Pal, Ph. D., Indian Statistical Institute, Calcutta, India Chair: Prof. Andreas König, University of Kaiserslautern
10:00		Coffee
10:20	42-110	G04, Knowledge Based and Expert Systems - I Chair: Prof. Anne Häkansson, Stockholm University, Sweden
	46-110	IS24, Intelligent Network and Service - I Chair: Prof. Jun Munemori, Wakayama University, Japan Co-chair: Prof. Takaya Yuizono, Japan Advanced Institute Science and Technology, Japan
	46-210	G09, Intelligent Tutoring Systems and E-Learning Environments - I Chair: Prof. Toyohide Watanabe, Nagoya University, Japan
	46-270	G10, Other / Misc. Intelligent Systems Topics - III Chair: Prof. Ron Hartung, Franklyn University, USA
	46-260	IS10, Data Mining and Service Science for Innovation - I Chair: Prof. Katsutoshi Yada, Kansai University, Japan
	46-280	WS01, The 2nd International Workshop on Natural Language Visualisation Chair: Dr. Minhua Ma, The Glasgow School of Art, UK Co-chair: Bob Coyne, Columbia University, USA
		IS06, Advances in Theory and Application of Hybrid Intelligent Systems Chair: Prof. Lakhmi C. Jain, University of South Australia, Australia Co-chair: Prof. CP Lim, Universiti Sains Malaysia, Malaysia
12:20		Lunch
13:30	42-115	Keynote 4: "Growing Together: Opening the Way for Comprehensive Public-Private Knowledge Management" Dr. Ansgar Bernardi, German Research Center for Artificial Intelligence, Germany Chair: Prof. Knut Hinkelmann, University of Applied Sciences North- western Switzerland, Switzerland
14:35	46-280	IS23, Sustainable Information Systems Chair: Prof. Anne Häkansson, KTH, Sweden Co-chair: Prof. Jason J. Jung, Yeungnam University, Korea Prof. Costin Badica, University of Craiova, Romania
		IS28, Computational Intelligence for Fault Diagnosis and Prognosis Chair: Prof. Beatrice Lazzarini, University of Pisa, Italy Co-chair: Dr. Marco Cococcioni, University of Pisa, Italy Ms. Sara Lioba Volpi, University of Pisa, Italy
		IS30, Multiple Classifiers and Hybrid Learning Paradigms Chair: Prof. Edmondo Trentin, University of Siena, Italy Co-chair: Dr. Friedhelm Schwenker, University of Ulm, Germany
	42-115	G07, Web Intelligence, Text and Multimedia Mining and Retrieval - I Chair: Prof. Andreas Nuernberger, University of Magdeburg, Germany
	42-105	IS34, Immunity-Based Systems - I Chair: Prof. Yoshiteru Ishida, Toyohashi University of Technology, Japan Co-chair: Prof. Andreas König, University of Kaiserslautern, Germany
	46-260	IS11+WS02, Methods and Techniques of Artificial and Computational Intelligence in Economics, Finance and Decision Making - I Chair: Dr. Marina Resta, DIEM sezione di Matematica Finanziaria, Italy
	42-110	G04, Knowledge Based and Expert Systems - II Chair: Prof. Anne Häkansson, Stockholm University, Sweden
	46-270	G10, Other / Misc. Intelligent Systems Topics - IV Chair: Prof. Ron Hartung, Franklyn University, USA
15:55		Coffee
16:15	46-260	IS10, Data Mining and Service Science for Innovation - II Chair: Prof. Katsutoshi Yada, Kansai University, Japan
	42-115	G07, Web Intelligence, Text and Multimedia Mining and Retrieval - II Chair: Prof. Andreas Nuernberger, University of Magdeburg, Germany
	42-105	IS34, Immunity-Based Systems - II Chair: Prof. Yoshiteru Ishida, Toyohashi University of Technology, Japan Co-chair: Prof. Andreas König, University of Kaiserslautern, Germany
	46-280	IS11+WS02 - II, Workshop on Seamless Integration of Semantic Technologies in Computer-supported Office Work (SISTCOW) Chair: Mr. Oleg Rostanin, DFKI GmbH, Germany Co-chair: Mr. Simon Scerri, University of Ireland, Galway, Ireland Mr. Benedikt Schmidt, SAP Research, Germany
	46-110	IS24, Intelligent Network and Service - II Chair: Prof. Jun Munemori, Wakayama University, Japan Co-chair: Prof. Takaya Yuizono, Japan Advanced Institute Science and Technology, Japan
	46-210	G09, Intelligent Tutoring Systems and E-Learning Environments - II Chair: Prof. Toyohide Watanabe, Nagoya University, Japan
18:15		End of Day (refer to page 33 for Tuesday's detailed programme)
19:30		Dinner

Wednesday 14 September, KES 2011		
Time	Venue	Details
9:00	42-115	Keynote 5: "Future Urban Management: Towards Best Managed Cities" Dr. Knut Manske, Vice President SAP Research, SAP AG, Darmstadt, Germany Chair: Prof. Andreas Dengel, University of Kaiserslautern & DFKI GmbH, Germany
10:00		Coffee
10:20	42-110	IS19, Management Technologies from the Perspective of Kansei Engineering and Emotion Chair: Prof. Junzo Watada, Waseda University, Japan Co-chair: Prof. Hisao Shiizuka, Kogakuin University, Japan Dr. Taki Kanda, Bunri University of Hospitality, Japan
	46-110	IS15, Knowledge Engineering Applications in Process Systems and Plant Operations Chair: Dr. Kazuhiro Takeda, Shizuoka University, Japan Co-chair: Dr. Takashi Hamaguchi, Nagoya Institute of Technology, Japan Dr. Tetsuo Fuchino, Tokyo Institute of Technology, Japan
	46-210	IS26, Advanced Design Techniques for Adaptive Hardware and Systems Chair: Prof. Sorin Hintea, Technical University of Cluj-Napoca, Romania Co-chair: Prof. Hernando Fernández-Canque, Glasgow Caledonian University, UK Prof. Gabriel Oltean, Technical University of Cluj-Napoca, Romania
	46-260	IS14, Design of Social Intelligence and Creativity Environment Chair: Prof. Toyohide Watanabe, Nagoya University, Japan Co-chair: Dr. Naoto Mukai, Tokyo University of Science, Japan
	46-280	IS16, Knowledge-Based Interface Systems (II) Chair: Prof. Yoshinori Adachi, Chubu University, Japan Co-chair: Prof. Nobuhiro Inuzuka, Nagoya Inst. of Technology, Japan IS03, Knowledge-Based Interface Systems (I) Chair: Prof. Yuji Iwahori, Chubu University, Japan Co-chair: Prof. Naohiro Ishii, Aichi Institute of Technology, Japan
	42-105	IS33, Model-Based Computing for Innovative Engineering Chair: Prof. Klaus Schneider, University of Kaiserslautern, Germany Co-chair: Prof. Norbert Wehn, University of Kaiserslautern, Germany
12:20		Lunch
13:30	42-115	Keynote 6: "(Meta-) Modeling of Process-Oriented Information Systems" Prof. Dr. Ulrich Reimer, University of Applied Sciences St. Gallen, Switzerland Chair: Prof. Knut Hinkelmann, University of Applied Sciences North- western Switzerland, Switzerland
14:35	42-110	IS13, Human Activity Support in Knowledge Society - I Chair: Prof. Toyohide Watanabe, Nagoya University, Japan Co-Chair: Prof. Taketoshi Ushima, Kyushu University, Japan
	46-110	IS20, Knowledge-Based Systems for e-Business - I Chair: Prof. Kazuhiko Tsuda, University of Tsukuba, Japan Co-chair: Dr. Nubuo Suzuki, KDDI Corporation, Japan
	46-210	G05, Intelligent Vision, Image Processing and Signal Processing - I Chair: Prof. Koichi Kise, Osaka Prefecture University, Japan
	46-260	IS01, Innovations in Chance Discovery - I Chair: Prof. Akinori Abe, University of Tokyo, Japan Co-chair: Prof. Yukio Ohsawa, The University of Tokyo, Japan
	46-280	IS27, Advanced Knowledge-based Systems - I Chair: Dr. Alfredo Cuzzocrea, ICAR-CNR, University of Calabria, Italy
	42-105	IS22, Skill Acquisition and Ubiquitous Human Computer Interaction - I Chair: Prof. Hirokazu Taki, Wakayama University, Japan Co-chair: Prof. Masato Soga, Wakayama University, Japan
15:55		Coffee
16:15	42-110	IS13, Human Activity Support in Knowledge Society - II Chair: Prof. Toyohide Watanabe, Nagoya University, Japan Co-Chair: Prof. Taketoshi Ushima, Kyushu University, Japan
	46-110	IS20, Knowledge-Based Systems for e-Business - II Chair: Prof. Kazuhiko Tsuda, University of Tsukuba, Japan Co-chair: Dr. Nubuo Suzuki, KDDI Corporation, Japan
	46-210	G05, Intelligent Vision, Image Processing and Signal Processing - II Chair: Prof. Koichi Kise, Osaka Prefecture University, Japan
	46-260	IS01, Innovations in Chance Discovery - II Chair: Prof. Akinori Abe, University of Tokyo, Japan Co-chair: Prof. Yukio Ohsawa, The University of Tokyo, Japan
	46-280	IS27, Advanced Knowledge-based Systems - II Chair: Dr. Alfredo Cuzzocrea, ICAR-CNR, University of Calabria, Italy
	42-105	IS22, Skill Acquisition and Ubiquitous Human Computer Interaction - II Chair: Prof. Hirokazu Taki, Wakayama University, Japan Co-chair: Prof. Masato Soga, Wakayama University, Japan
17:35	42-115	Preview of KES 2012 Closing of the conference (refer to page 43 for Wednesday's detailed programme)

Monday 12 September 2011

42-115, 8:30 to 9:00

Opening of the KES 2011 Conference

Monday 12 September 2011

42-115, 9:00 to 10:00

Plenary Session Keynote 1: *"Symbiotic System as a New Social Infrastructure Based on Intelligent Interaction Among the Society, Human Beings, and Information Systems"*
 Prof. Keiji Yamada, Ph.D, Nara Institute of Science and Technology, Japan
 Chair: Prof. Koichi Kise, Osaka Prefecture University, Japan

Monday 12 September 2011

42-105, 10:20 to 12:20

[IS08] Recent trends in Knowledge Engineering, Smart Systems and their Applications – I
 Chair: Dr. Cesar Sanin, University of Newcastle, Australia ; Co-chair: Dr. Carlos Toro, VICOMTech, Spain

[10:20] Knowledge Discovery about Web Performance with Geostatistical Turning Bands Method
Leszek Borzemski and Anna Kaminska-Chuchma La [Volume II, Page 577]

[10:40] Context Change Detection for Resource Allocation in Service-oriented Systems
Piotr Rygielski and Jakub M. Tomczak [Volume II, Page 587]

[11:00] A Multi-Agent Approach for Engineering Design Knowledge Modelling
Ricardo Mejía-Gutiérrez, Alejandro Cálad-Alvarez, and Santiago Ruiz-Arenas [Volume II, Page 597]

[11:20] An Architecture for the Semantic Enhancement of Clinical Decision Support Systems
Eider Sanchez, Carlos Toro, Eduardo Carrasco, Gloria Bueno, Carlos Parra, Patricia Bonachela, Manuel Graña, and Frank Guijarro [Volume II, Page 607]

[11:40] An Approach to Measure Quality of Knowledge in the e-Decisional Community
Leonardo Mancilla-Amaya, Cesar Sanín, and Edward Szczerbicki [Volume II, Page 617]

[12:00] Application of Decisional DNA in Web Data Mining
Peng Wang, Cesar Sanin, and Edward Szczerbicki [Volume II, Page 627]

Monday 12 September 2011

46-210, 10:20 to 12:20

[G06] Knowledge Management, Ontologies and Data Mining – I
 Chair: Dr. Heiko Maus, DFKI GmbH, Germany

[10:20] Necessary Tools Choice in a Particular Situation for Computer Conversation
Eriko Yoshimura, Misako Imono, Seiji Tsuchiya, and Hirokazu Watabe [Volume I, Page 474]

[10:40] Recommendation and Diagnosis Services with Structure Analysis of Presentation Documents
Shinobu Hasegawa, Akihide Tanida, and Akihiro Kashihara [Volume I, Page 484]

[11:00] Topic-based Recommendations for Enterprise 2.0 Resource Sharing Platforms
Rafael Schirru, Stephan Baumann, Martin Memmel, and Andreas Dengel [Volume I, Page 494]

[11:20] Custom Ontologies for an Automated Image Annotation System
Gabriel Mihai, Liana Stanescu, Dumitru Dan Burdescu, and Marius Brezovan [Volume I, Page 504]

[11:40] MetaProPOS: a Meta-Process Patterns Ontology for Software Development Communities
Nahla Jlaïel and Mohamed Ben Ahmed [Volume I, Page 514]

[12:00] An Ontology-based Framework for Collaborative Maintenance Planning
Ren Genquan, Zhang Yinwen, Zhang Li, Wang Jianmin, and Lan Ting [Volume I, Page 526]

Monday 12 September 2011

46-110, 10:20 to 12:20

[IS32] Document Analysis and Knowledge Science – I
Chair: Prof. Seiichi Uchida, Kyushu University, Japan ; Co-chair: Dr. Marcus Liwicki, DFKI GmbH, Germany ; Prof. Koichi Kise, Osaka Prefecture University, Japan

[10:20] An Intelligent Shopping List - Combining Digital Paper with Product Ontologies
Marcus Liwicki, Sandra Thieme, Gerrit Kahl, and Andreas Dengel [Volume IV, Page 189]

[10:40] A New Approach for Instance-Based Skew Estimation
Soma Shiraishi, Yaokai Feng, and Seiichi Uchida [Volume IV, Page 197]

[11:00] Handwriting on Paper as a Cybermedium
Akira Yoshida, Marcus Liwiki, Seiichi Uchida, Masakazu Iwamura, Shinichiro Omachi, and Koichi Kise [Volume IV, Page 207]

[11:20] Semantic Retrieval of Images by Learning from Wikipedia
Martin Klinkigt, Koichi Kise, Heiko Maus, and Andreas Dengel [Volume IV, Page 215]

[11:40] From Handwriting Recognition to Ontologie-Based Information Extraction of Handwritten Notes
Marcus Liwicki, Sebastian Ebert, and Andreas Dengel [Volume IV, Page 225]

[12:00] Performing Operations on Structured Information Space of Braille Music
Wladyslaw Homenda and Tomasz Sitarek [Volume IV, Page 235]

Monday 12 September 2011

46-260, 10:20 to 12:20

[G01] Artificial Neural Networks, Connectionists Systems and Evolutionary Computation – I
Chair: Prof. Bruno Apolloni, University of Milan, Italy

[10:20] Adaptive Recurrent Neuro-Fuzzy Networks Based on Takagi-Sugeno Inference for Nonlinear Identification in Mechatronic Systems
Florin Ionescu, Dragos Arotaritei, and Stefan Arghir [Volume I, Page 001]

[10:40] Evolution of Iterative Formulas Using Cartesian Genetic Programming
Milos Minarik and Lukas Sekanina [Volume I, Page 011]

[11:00] New Clustering Algorithm with the Convergence Proof
Hamid Parvin, Behrouz Minaei-Bidgoli, and Akram Beigi [Volume I, Page 021]

[11:20] On the Comparison of Parallel Island-based Models for the Multiobjectivised Antenna Positioning Problem
Eduardo Segredo, Carlos Segura, and Coromoto León [Volume I, Page 031]

[11:40] Adaptive Request Distribution in Cluster-Based Web System
Krzysztof Zatwarnicki [Volume I, Page 041]

[12:00] Globally Evolved Dynamic Bee Colony Optimization
Anggi Putri Pertiwi and Suyanto [Volume I, Page 051]

Monday 12 September 2011

42-110, 10:20 to 12:20

[G03+G08] Agent, Multi-Agent Systems, Intelligent Robotics and Control – I
 Chair: Prof. Ngoc Ngyuen, Wroclaw University of Technology, Poland ; Prof. Honghai Liu, University of Portsmouth, UK

[10:20] Agents' Logics with Common Knowledge and Uncertainty: Unification Problem, Algorithm for Construction Solutions
Vladimir V. Rybakov [Volume I, Page 169]

[10:40] Labelled Transition System Generation from Alvis Language
Leszek Kotulski, Marcin Szpyrka, and Adam Sedziwy [Volume I, Page 179]

[11:00] Snapshot Reachability Graphs for Alvis Models
Marcin Szpyrka and Leszek Kotulski [Volume I, Page 189]

[11:20] Merging Belief Bases by Negotiation
Trong Hieu Tran, Quoc Bao Vo, and Ryszard Kowalczyk [Volume I, Page 199]

[11:40] Semantic Distance Measure Between Ontology Concept's Attributes
Marcin Pietranik and Ngoc Thanh Nguyen [Volume I, Page 209]

[12:00] Casual Schedule Management and Shared System using an Avatar
Takashi Yoshino and Takayuki Yamano [Volume I, Page 219]

Monday 12 September 2011

46-280, 10:20 to 12:20

[IS12] Human-oriented Learning Technology and Learning Support Environment – I
 Chair: Prof. Toyohide Watanabe, Nagoya University, Japan ; Co-chair: Dr. Tomoko Kojiri, Kansai University, Japan

[10:20] Multilingual Problem Based Learning in Metaverse
Sahar Farjami, Ryosuke Taguchi, Katsuko T. Nakahira, Rodrigo N.R. Yoshimi Fukumura, and Hideyuki Kanematsu [Volume III, Page 508]

[10:40] Information System Development for Open Learning Support: Open System of Distance Learning

Przemysław Różewski and Emma Kusztina [Volume III, Page 519]

[11:00] Designing the Web-community for Self-managed Training of Runners

Shinji Otsuka, Kenji Matsuura, Naka Gotoda, Toshio Tanaka, Kazuhide Kanenishi, Hiroaki Ogata, and Yoneo Yano [Volume III, Page 529]

[11:20] An Analysis for the Causes of the Academic Procrastination Behaviour

Kousuke Muramatsu, Hisayoshi Kunimune, and Masaaki Niimura [Volume III, Page 539]

[11:40] Effect of Students' Seat Location on Programming Course Achievement

Motoki Miura and Taro Sugihara [Volume III, Page 549]

[12:00] Developing a Method of Recommending e-Learning Courses Based on Students' Learning Preferences

Kazunori Nishino, Nanakotakata, Yurie Iribe, Shinji Mizuno, Kumiko Aoki, and Yoshimi Fukumura [Volume III, Page 559]

Monday 12 September 2011

42-115, 13:30 to 14:30

Plenary Session Keynote 2: "Knowledge Sharing in Enterprise Networks"

Dr. Peter Schütt, Executive Engagement Manager, IBM Software Group, Germany

Chair: Prof. Andreas Dengel, University of Kaiserslautern & DFKI GmbH, Germany

Monday 12 September 2011

46-260, 14:35 to 15:55

[G01] Artificial Neural Networks, Connectionists Systems and Evolutionary Computation – II

Chair: Prof. Bruno Apolloni, University of Milan, Italy

[14:35] Polytope Classifier: a Symbolic Knowledge Extraction from Piecewise-Linear Support Vector Machine

Vilen Jumutc and Andrey Bondarenko [Volume I, Page 061]

[14:55] A Library of Nonlinearities for Modeling and Simulation of Hybrid Systems

Florin Ionescu, Dragos Arotaritei, Stefan Arghir, George Constantin, Dan Stefanoiu, and Florin Stratulat [Volume I, Page 071]

[15:15] Cluster Validity Measures Based on the Minimum Description Length Principle

Olga Georgieva, Katharina Tschumitschew, and Frank Klawonn [Volume I, Page 081]

[15:35] A Trajectory Tracking FLC Tuned with PSO for Triga Mark-II Nuclear Research Reactor

Gürçan Lokman, A. Fevzi Baba, and Vedat Topuz [Volume I, Page 089]

Monday 12 September 2011

46-280, 14:35 to 15:55

[IS12] Human-oriented Learning Technology and Learning Support Environment – II

Chair: Prof. Toyohide Watanabe, Nagoya University, Japan ; Co-chair: Dr. Tomoko Kojiri, Kansai University, Japan

[14:35] A Supportive Social Environment for Self-Regulation in Job-Hunters in Japan

Bjarte Johansen, Mu Fei Lin, Yuki Aoki, Weiqin Chen, and Kazuhisa Seta [Volume III, Page 569]

[14:55] Proposition of a Competence-based Computer System for Supporting Candidates for Studies and Students

Katarzyna Sikora, Przemysław Różewski, and Emma Kusztina [Volume III, Page 579]

[15:15] Japanese Learning Support for Chinese-Japanese Translation

Xicen Zhang, Yuki Hayashi, Tomoko Kojiri, and Toyohide Watanabe [Volume III, Page 589]

Monday 12 September 2011

42-115, 14:35 to 15:55

[G02] Machine Learning and Classical AI – I

Chair: Prof. Floriana Esposito, University of Bari, Italy

[14:35] Things to Know About a (dis)similarity Measure

Lluís Belanche and Jorge Orozco [Volume I, Page 099]

[14:55] A New Classifier Ensembles Framework

Hamid Parvin, Behrouz Minaei-Bidgoli, and Akram Beigi [Volume I, Page 109]

[15:15] Policy Gradient Reinforcement Learning with Environmental Dynamics and Action-Values in Policies

Seiji Ishihara and Harukazu Igarashi [Volume I, Page 119]

[15:35] Fuzzy c-Means Clustering with Mutual Relation Constraints Construction of Two Types of Algorithms

Endo Yasunori and Hamasuna Yukihiro [Volume I, Page 129]

Monday 12 September 2011

42-110, 14:35 to 15:55

[G03+G08] Agent, Multi-Agent Systems, Intelligent Robotics and Control – II

Chair: Prof. Ngoc Ngyuen, Wroclaw University of Technology, Poland ; Prof. Honghai Liu, University of Portsmouth, UK

[14:35] Buyer Coalitions on JADE Platform

Laor Boongasame, Sakon Wathanathamsiri, and Akawuth Pichanachon [Volume I, Page 229]

[14:55] Emotional Agents in a Social Strategic Game

Weiqin Chen, Christoph Carlson, and Mathias Hellevang [Volume I, Page 239]

[15:15] Modelling Multimodal 3D Virtual Environments with Asynchronous Multi- Agent Abstract State Machine

Fabio De Felice, Aless, andro Bianchi, and Fabio Abbattista [Volume I, Page 249]

[15:35] A Serialization Algorithm for Mobile Robots Using Mobile Agents with Distributed Ant Colony Clustering

Munehiro Shintani, Shawn Lee, Munehiro Takimoto, and Yasushi Kambayashi [Volume I, Page 259]

Monday 12 September 2011

46-210, 14:35 to 15:55

[G06] Knowledge Management, Ontologies and Data Mining – II

Chair: Dr. Heiko Maus, DFKI GmbH, Germany

[14:35] A Framework for a Fuzzy Matching between Multiple Domain Ontologies

Konstantin Todorov, Peter Geibel, and Celine Hudelot [Volume I, Page 536]

[14:55] Agent-based Semantic Composition of Web Services using Distributed Description Logics
Mourad Ouziri and Damien Pellier [Volume I, Page 546]

[15:15] Temporal Reasoning for Supporting Temporal Queries in OWL 2.0
Sotiris Batsakis, Kostas Stravoskoufos, and Euripides G.M. Petrakis [Volume I, Page 556]

[15:35] An Algorithm for Finding Gene Signatures Supervised by Survival Time Data
Stefano M. Pagnotta and Michele Ceccarelli [Volume I, Page 566]

Monday 12 September 2011

46-270, 14:35 to 15:55

[G10] Other / Misc. Intelligent Systems Topics – I
Chair: Prof. Ron Hartung, Franklyn University, USA

[14:35] Multiple Hypothesis Testing and Quasi Essential Graph for Comparing Two Sets of Bayesian Networks
Hoai-Tuong Nguyen, Philippe Leray, and Gerard Ramstein [Volume II, Page 173]

[14:55] Financial Performance Analysis of European Banks using a Fuzzified Self-Organizing Map
Peter Sarlin and Tomas Eklund [Volume II, Page 183]

[15:15] Self-Organizing Map in Process Visualization
Miki Sirola and Jaakko Talonen [Volume II, Page 193]

[15:35] Skyline Adaptive Fuzzy Query
Wei Yan, Cecilia Zanni-Merk, and François Rousselot [Volume II, Page 343]

Monday 12 September 2011

42-105, 16:15 to 18:15

[IS08] Recent trends in Knowledge Engineering, Smart Systems and their Applications – II
Chair: Dr. Cesar Sanin, University of Newcastle, Australia ; **Co-chair:** Dr. Carlos Toro, VICOMTech, Spain

[16:15] A Concept for Comprehensive Knowledge Management System
Bartosz Kucharski and Edward Szczerbicki [Volume II, Page 637]

[16:35] The Role and Concept of Sub-models in the Smart Fuzzy Model of the Internet Mortgage Market
Aleksander Orłowski and Edward Szczerbicki [Volume II, Page 647]

[16:55] Knowledge Management Challenges in Collaborative Design of a Virtual Call Centre
Marcin Sikorski, Igor Garnik, Bohdan Ludwiszewski, and Jan Wyrwiński [Volume II, Page 655]

[17:15] Decisional DNA Applied to Digital TV
Haoxi Zhang, Cesar Sanin, and Edward Szczerbicki [Volume II, Page 665]

[17:35] Measurement of the Development of a Learning IT Organization Supported by a Model of Knowledge Acquisition and Processing
Cezary Orłowski and Tomasz Sitek [Volume II, Page 675]

[17:55] Prediction Based Handovers for Wireless Networks Resources Management
Piotr Rygielski, Paweł Swiatek, Krzysztof Juszczyszyn, and Adam Grzech [Volume II, Page 685]

Monday 12 September 2011

46-210, 16:15 to 18:15

[G06] Knowledge Management, Ontologies and Data Mining – III

Chair: Dr. Heiko Maus, DFKI GmbH, Germany

[16:15] Paraconsistent Semantics for Description Logics: A Comparison

Norihiro Kamide [Volume I, Page 596]

[16:35] Towards a Parallel Approach for Incremental Mining of Functional Dependencies on Multi-core Systems

Ghada Gasmí, Yahya Slimani, and Lotfi Lakhal [Volume I, Page 587]

[16:55] An Empirical Comparison of Flat and Hierarchical Performance Measures for Multi-Label Classification with Hierarchy Extraction

Florian Brucker, Fernando Benites, and Elena Sapozhnikova [Volume I, Page 576]

[17:15] Matching of Different Abstraction Level Knowledge Sources: the Case of Inventive Design

Wei Yan, Cecilia Zanni-Merk, and François Rousselot [Volume I, Page]

Monday 12 September 2011

46-110, 16:15 to 18:15

[IS32] Document Analysis and Knowledge Science – II

Chair: Prof. Seiichi Uchida, Kyushu University, Japan ; Co-chair: Dr. Marcus Liwicki, DFKI GmbH, Germany ; Prof. Koichi Kise, Osaka Prefecture University, Japan

[16:15] Knowledge & Transaction Based Domestic Energy Saving Support System

Hiroki Shigeyoshi, Shuki Inoue, Ken'iti Tamano, Shingo Aoki, Hiroshi Tsuji, and Tsuyoshi Ueno [Volume IV, Page 245]

[16:35] Spatial Statistics with Three-tier Breadth First Search for Analyzing Social Geocontents

Yutaka Arakawa, Shigeaki Tagashira, and Akira Fukuda [Volume IV, Page 255]

[16:55] Visualization of learner's state and learning paths with Knowledge Structures

Yu Nakamura, Hiroshi Tsuji, Kazuhisa Seta, Kiyota Hashimoto, and Dietrich Albert [Volume IV, Page 264]

[17:15] FACT-Graph in Web Log Data

Ryosuke Saga, Takao Miyamoto, Hiroshi Tsuji, and Kazunori Matsumoto [Volume IV, Page 274]

[17:35] Field Experiments in Social Networking Service using a Knowledge Sharing System with Nursing Skill Videos

Yukie Majima, Satoshi Shimada, and Yasuko Maekawa [Volume IV, Page 284]

[17:55] Presentation Based Meta-Learning Support System Tightens Learners' Evaluation Criteria

Kazuhisa Seta, Chihiro Hara, Minoru Fujiwara, Motohide Umamo, and Mitsuru Ikeda [Volume IV, Page 292]

Monday 12 September 2011

42-110, 16:15 to 18:15

[G03+G08] Agent, Multi-Agent Systems, Intelligent Robotics and Control – III

Chair: Prof. Ngoc Ngyuen, Wroclaw University of Technology, Poland ; Prof. Honghai Liu, University of Portsmouth, UK

[16:15] A Muscular Activation Controlled Rehabilitation Robot System

Erhan Akdoğan and Zeynep Şişman [Volume I, Page 270]

[16:35] Design of a Control System for Robot Shopping Carts

Takafumi Kohtsuka, Taishi Onozato, Hitoshi Tamura, Shigetomo Katayama, and Yasushi Kambayashi [Volume I, Page 280]

[16:55] Implementation of the Integrated Management System for Electric Vehicle Charging Stations

Seongjoon Lee, Hongkwan Son, Taehyun Ha, Hyungoo Lee, Daekyeong Kim, and Junghyo Bae [Volume I, Page 290]

Monday 12 September 2011

46-270, 16:15 to 18:15

[G10] Other / Misc. Intelligent Systems Topics – II

Chair: Prof. Ron Hartung, Franklyn University, USA

[16:15] On Possibility of Conditional Invariant Detection

Hani Fouladgar, Behrouz Minaei-Bidgoli, and Hamid Parvin [Volume II, Page 212]

[16:35] Investigating Attachment Behavior of Nodes during Evolution of a Complex Social Network: A case of a Scientific Collaboration Network

Alireza Abbasi and Liaquat Hossain [Volume II, Page 253]

[16:55] On Temporal Gödel-Gentzen Translation

Norihiro Kamide [Volume II, Page 223]

[17:15] A Decidable First-Order Logic for Medical Reasoning

Norihiro Kamide [Volume II, Page 233]

[17:35] Interpolation Theorems for some Extended Description Logics

Norihiro Kamide [Volume II, Page 243]

[17:55] Activity Recognition in Healthcare Monitoring Systems using Wireless Sensor Networks

Rodica-Elena Doran and Ioana-Iuliana Farkas [Volume II, Page 262]

Monday 12 September 2011

42-115, 16:15 to 18:15

[G02] Machine Learning and Classical AI – II

Chair: Prof. Floriana Esposito, University of Bari, Italy

[16:15] Adaptive HTTP Request Distribution in Time-Varying Environment of Globally Distributed Cluster-Based Web System

Anna Zatwarnicka and Krzysztof Zatwarnicki [Volume I, Page 139]

[16:35] Distributed BitTable Multi-Agent Association Rules Mining Algorithm

Walid Adly Atteya, Keshav Dahal, and M. Alamgir Hossain [Volume I, Page 149]

[16:55] Sentiment Analysis of Customer Reviews: Balanced versus Unbalanced Datasets

Nicola Burns, Yaxin Bi, Hui Wang, and Terry Anderson [Volume I, Page 159]

Tuesday 13 September 2011

42-115, 9:00 to 10:00

Plenary Session Keynote 3: “*Selection of Useful Sensors/Features with Controlled Redundancy Using Neural Networks*”

Prof. Nikhil R. Pal, Ph. D., Indian Statistical Institute, Calcutta, India

Chair: Prof. Andreas König, University of Kaiserslautern

Tuesday 13 September 2011

42-110, 10:20 to 12:20

[G04] Knowledge Based and Expert Systems – I

Chair: Prof. Anne Håkansson, Stockholm University, Sweden

[10:20] Input-Output Conditions for Automatic Program Generation using Petri Nets

Masahiro Osogami, Teruya Yamanishi, and Katsuji Uosaki [Volume I, Page 297]

[10:40] Representation of Knowledge and Uncertainty in Temporal Logic LTL with Since on Frames Z of Integer Numbers

Vladimir V. Rybakov [Volume I, Page 307]

[11:00] KAMET II: KAMET plus Knowledge Generation

Oswaldo Cairo and Silvia Guardati [Volume I, Page 317]

[11:20] Use of Metadata for Access Control and Version Management in RDF Database

Kazuhiro Kuwabara and Shotaro Yasunaga [Volume I, Page 328]

[11:40] Knowledge Elicitation Methods Taxonomy: Russian view

Tatiana A. Gavrilova, Irina A. Leshcheva, and Maria N. Rumyantseva [Volume I, Page 338]

[12:00] A Formal Framework for Declarative Scene Description Transformation into Geometric Constraints

Georgios Bardis, Dimitrios Makris, Vassilios Golfopoulos, Georgios Miaoulis, and Dimitri Plemenos [Volume I, Page 348]

Tuesday 13 September 2011

46-110, 10:20 to 12:20

[IS24] Intelligent Network and Service – I

Chair: Prof. Jun Munemori, Wakayama University, Japan ; Co-chair: Prof. Takaya Yuizono, Japan Advanced Institute Science and Technology, Japan

[10:20] Designing Mobile Search Interface with Query Term Extraction

Nayuko Watanabe, Masayuki Okamoto, Masaaki Kikuchi, Takayuki Iida, Kenta Sasaki, Kensuke Horiuchi, and Masanori Hattori [Volume III, Page 070]

[10:40] Development of a Distributed Pictograph Chat System: Pictograph Chat Communicator IV

Jun Munemori, Tadashi Nishide, Tomoki Fujita, and Junko Itou [Volume III, Page 080]

[11:00] Trial of a Distance Learning System using a Brain Wave Sensor

Kouji Yoshida, Yuuta Sakamoto, Yuuki Satou, Isao Miyaji, Kunihiro Yamada, and Satoru Fujii [Volume III, Page 090]

[11:20] Applying Gesture Command Input Method for Pen-based Group KJ System

Takahiro Nyu and Motoki Miura [Volume III, Page 100]

[11:40] Evaluation of a System for Visualizing Agro-environmental Knowledge

Tomoaki Matsuno, Masui Takahiro, Keiichi Abe, Hiroshi Mineno, Ryuui Oosuka, and Tadanori Mizuno [Volume III, Page 110]

[12:00] Optimization of the Number of Signaling Links in Intelligent Large-Scale Networks

Ahmad Jabban, Youssef Nasser, and Maryline Helard [Volume III, Page 120]

Tuesday 13 September 2011

46-210, 10:20 to 12:20

[G09] Intelligent Tutoring Systems and E-Learning Environments – I

Chair: Prof. Toyohide Watanabe, Nagoya University, Japan

[10:20] Intelligent E-Learning System for Training Power Systems Operators

Liliana Argotte, Yasmin Hernandez, and G. Arroyo-Figueroa [Volume II, Page 093]

[10:40] Interaction Based on Contribution Awareness in Collaborative Learning

Yuki Hayashi, Tomoko Kojiri, and Toyohide Watanabe [Volume II, Page 103]

[11:00] The MATHESIS Semantic Authoring Framework: Ontology-Driven Knowledge Engineering for ITS Authoring

Dimitrios Sklavakis and Ioannis Refanidis [Volume II, Page 113]

[11:20] An Intelligent Tutoring System Architecture for Competency-based Learning

Miguel Badaracco and Luis Martínez [Volume II, Page 123]

[11:40] A Majority Density Approach for Developing Testing and Diagnostic Systems

Dechawut Wanichsan, Dechawut Wanichsan, Patcharin Panjaburee, Parames Laosinchai, and Sasithorn Chookaew [Volume II, Page 133]

[12:00] Exploiting Learners' Tendencies for Detecting English Determiner Errors

Ryo Nagata and Atsuo Kawai [Volume II, Page 143]

Tuesday 13 September 2011

46-270, 10:20 to 12:20

[G10] Other / Misc. Intelligent Systems Topics – III

Chair: Prof. Ron Hartung, Franklyn University, USA

[10:20] Effective Content-based Music Retrieval with Pattern based Relevance Feedback

Ja-Hwung Su, Tzu-Shiang Hung, Chun-Jen Lee, Chung-Li Lu, Wei-Lun Chang, and Vincent S. Tseng [Volume II, Page 283]

[10:40] Meta-Context: Putting Context-awareness into Context

Ramón Hervás, Jesús Fontecha, Vladimir Villarreal, and Jose Bravo [Volume II, Page 293]

[11:00] Negotiation in Electronic Commerce: A Study in the Latin-American Market
Oswaldo Cairo, Juan Gabriel Olarte, and Fernando Rivera [Volume II, Page 303]

[11:20] Adjusted Case-Based Software Effort Estimation Using Bees Optimization Algorithm
Mohammad Azzeh [Volume II, Page 313]

[11:40] A New Honeybee Optimization for Constraint Reasoning: Case of Max-CSPs
Ines Methlouthi and Sadok Bouamama [Volume II, Page 323]

[12:00] Hybrid Virtual Sensor Based on RBFN or SVR Compared for An Embedded Application
Kuncup Iswandy and Andreas König [Volume II, Page 333]

Tuesday 13 September 2011

46-260, 10:20 to 12:20

[IS10] Data Mining and Service Science for Innovation – I
Chair: Prof. Katsutoshi Yada, Kansai University, Japan

[10:20] A Mobility Service based on Japanese Linked Data
Chie Iijima, Takeshi Morita, Yoshitaro Enomoto, and Takahira Yamaguchi [Volume III, Page 250]

[10:40] A Consideration of an Area Classification Method for ICT Service Diffusion
Motoi Iwashita [Volume III, Page 260]

[11:00] Text Visualization Service for Creating Comprehended Texts
Wataru Sunayama and Yoko Nishihara [Volume III, Page 270]

[11:20] An Analysis of the Relationship between a Speed of the Internet Access and Internet Access Line Switching
Takeshi Kurosawa, Shinsuke Shimogawa, Motoi Iwashita, and Shouji Kouno [Volume III, Page 280]

[11:40] Comparison Analysis of Video Game Purchase Factors between Japanese and American Consumers
Kodai Kitami, Ryosuke Saga, and Kazunori Matsumoto [Volume III, Page 290]

[12:00] Extraction of Customer Potential Value Using Unpurchased Items and In-store Movements
Takanobu Nakahara and Katsutoshi Yada [Volume III, Page 300]

Tuesday 13 September 2011

46-280, 10:20 to 11:00

[WS01 - JS 01] The 2nd International Workshop on Natural Language Visualisation
Chair: Dr. Minhua Ma, The Glasgow School of Art, UK ; Co-chair: Bob Coyne, Columbia University, USA

[10:20] Modeling Spatial Knowledge for Generating Verbal and Visual Route Directions
Stephanie Schuldes, Katarina Boland, Michael Roth, Michael Strube, Susanne Kroemker, and Anette Frank [Volume IV, Page 372]

[10:40] Collecting Semantic Information for Locations in the Scenario-Based Lexical Knowledge Resource of a Text-to-Scene Conversion System
Masoud Rouhizadeh, Bob Coyne, and Richard Sproat [Volume IV, Page 380]

Tuesday 13 September 2011

46-280, 11:00 to 12:20

[IS06 - JS 03] Advances in Theory and Application of Hybrid Intelligent Systems

Chair: Prof. Lakhmi C. Jain, University of South Australia, Australia ; **Co-chair:** Prof. CP Lim, Universiti Sains Malaysia, Malaysia

[11:00] Neural Networks Based Model Predictive Control for a Lactic Acid Production Bioprocess

Emil Petre, Dorin Şendrescu, and Dan Selişteanu [Volume IV, Page 390]

[11:20] Hybridization of Immunological Computation and Fuzzy Systems in Surgery Decision Making

Elisabeth Rakus-Andersson [Volume IV, Page 400]

Tuesday 13 September 2011

42-115, 13:30 to 14:30

Plenary Session Keynote 4: *"Growing Together: Opening the Way for Comprehensive Public-Private Knowledge Management"*

Dr. Ansgar Bernardi, German Research Center for Artificial Intelligence, Germany

Chair: Prof. Knut Hinkelmann, University of Applied Sciences North- western Switzerland, Switzerland

Tuesday 13 September 2011

46-280, 14:35 to 15:15

[IS23 - JS 05] Sustainable Information Systems

Chair: Prof. Anne Håkansson, KTH, Sweden ; Co-chair: Prof. Jason J. Jung, Yeungnam University, Korea ; Prof. Costin Badica, University of Craiova, Romania

[14:35] Ontology Reconsidered

Ronald L Hartung [Volume IV, Page 410]

[14:55] A Multi-Agent System with Negotiation Agents for e-trading Products and Services

Anne Håkansson [Volume IV, Page 417]

Tuesday 13 September 2011

46-280, 15:15 to 15:35

[IS28 - JS 07] Computational Intelligence for Fault Diagnosis and Prognosis

Chair: Prof. Beatrice Lazzerini, University of Pisa, Italy ; Co-chair: Dr. Marco Cococcioni, University of Pisa, Italy ; Ms. Sara Lioba Volpi, University of Pisa, Italy

[15:15] Practical Implementation of Robust Condition Based Backwash Initiation Using SCADA

Paul Prickett, Gwyn Davies, and Roger Grosvenor [Volume IV, Page 427]

Tuesday 13 September 2011

46-280, 15:35 to 15:55

[IS30 - JS 08] Multiple Classifiers and Hybrid Learning Paradigms

Chair: Prof. Edmondo Trentin, University of Siena, Italy ; Co-chair: Dr. Friedhelm Schwenker, University of Ulm, Germany

[15:35] Multiclass SVM Classification Using Graphs Calibrated by Similarity between Classes

Marcin Luckner [Volume IV, Page 437]

Tuesday 13 September 2011

42-115, 14:35 to 15:55

[G07] Web Intelligence, Text and Multimedia Mining and Retrieval – I
Chair: Prof. Andreas Nuernberger, University of Magdeburg, Germany

[14:35] Autonomous and Adaptive Identification of Topics in Unstructured Text
Louis Massey [Volume II, Page 001]

[14:55] Outlier-Based Approaches for Intrinsic and External Plagiarism Detection
Gabriel Oberreuter, Gaston L'Huillier, Sebastián A. Ríos, and Juan D. Velásquez [Volume II, Page 011]

[15:15] An Extended Method for Finding Related Web Pages with Focused Crawling Techniques
Kazutaka Furuse, Hiroaki Ohmura, Hanxiong Chen, and Hiroyuki Kitagawa [Volume II, Page 021]

[15:35] Development of Multilingual Interview-Sheet Composition System to Support Multilingual Communication in Medical Field
Taku Fukushima, Takashi Yoshino, and Aguri Shigeno [Volume II, Page 031]

Tuesday 13 September 2011

42-105, 14:35 to 15:55

[IS34] Immunity-Based Systems – I
Chair: Prof. Yoshiteru Ishida, Toyohashi University of Technology, Japan ; Co-chair: Prof. Andreas König, University of Kaiserslautern, Germany

[14:35] A Vulnerability Remediation Support System Using a Peer-to-Peer Network
Haruki Shida and Takeshi Okamoto [Volume IV, Page 302]

[14:55] Toward Elucidation of Longevity of Immunological Memory
Kouji Harada and Yoshiteru Ishida [Volume IV, Page 312]

[15:15] Spatial Distribution of Connection Weight in Self-Repairing Network
Masahiro Tokumitsu and Yoshiteru Ishida [Volume IV, Page 322]

[15:35] Robustness of Membrane Formation in a Spatial Prisoner's Dilemma with a Spatial Generosity
Yuji Katsumata and Yoshiteru Ishida [Volume IV, Page 332]

Tuesday 13 September 2011

46-260, 14:35 to 15:55

[IS11] Methods and Techniques of Artificial and Computational Intelligence in Economics, Finance and Decision Making – I
Chair: Dr. Marina Resta, DIEM sezione di Matematica Finanziaria, Italy

[14:35] An Effective Utilization of Many Neural Networks for Improving the Traditional Technical Analysis in the Stock Market
Norio Baba, Kokutan Liu, Lee Chen Han, Takao Mitsuda, Kou Ro, and Kou Ninn [Volume II, Page 363]

[14:55] A new Framework for Assets Selection Based on Dimensions Reduction Techniques
Marina Resta [Volume II, Page 369]

[15:15] Forecasting Stock Price based on Fuzzy Time-Series with Entropy-Based Discretization Partitioning
Bo-Tsuen Chena, Mu-Yen Chena, Hsiu-Sen Chianga, and Chia-Chen Chenb [Volume II, Page 379]

[15:35] On the use of Feed-Forward Neural Networks to Discriminate between Models in Financial and Insurance Risk Frameworks
Enrico Di Bella [Volume II, Page 389]

Tuesday 13 September 2011

42-110, 14:35 to 15:55

[G04] Knowledge Based and Expert Systems – II
Chair: Prof. Anne Håkansson, Stockholm University, Sweden

[14:35] User Movement Prediction Based on Traffic Topology for Value Added Services
Marin Vukovic, Dragan Jevtic, and Ignac Lovrek [Volume I, Page 358]

[14:55] Emotion Judgment Method from a Meaning of an Utterance Sentence
Seiji Tsuchiya, Misako Imono, Eriko Yoshimura, and Hirokazu Watabe [Volume I, Page 368]

[15:15] A Computationally Efficient Fuzzy Logic Parameterisation System for Computer Games
Leslie Jones, Robert Cox, and Sharifa Alghowinem [Volume I, Page 378]

[15:35] Representation and Reuse of Design Knowledge: An Application for Sales Call Support
Julian R. Eichhoff and Wolfgang Maass [Volume I, Page 388]

Tuesday 13 September 2011

46-270, 14:35 to 15:55

[G10] Other / Misc. Intelligent Systems Topics – IV
Chair: Prof. Ron Hartung, Franklyn University, USA

[14:35] Defining Events as a Foundation of an Event Notification Middleware for the Cloud Ecosystem
Rolf Sauter, Alex Stratz Stella Gatziau Grivas, Marc Schaaf, and Arne Koschel [Volume II, Page 272]

[14:55] Kalman Filter vs. Particle Filter in Improving K-NN Indoor Positioning
Jaeyeol Yim, Jinseog Kim, Gyeyoung Lee, and Kyubark Shim [Volume II, Page 200]

[15:15] Improved Travel Time Prediction Algorithms for Intelligent Transportation Systems
Nihad K. Chowdhury and Carson K.-S. Leung [Volume II, Page 353]

Tuesday 13 September 2011

46-260, 16:15 to 18:15

[IS10] Data Mining and Service Science for Innovation – II

Chair: Prof. Katsutoshi Yada, Kansai University, Japan

[16:15] Clockwise and Anti-clockwise Directions of Customer Orientation in a Supermarket: Evidence from RFID Data

Marina Kholod, Keiji Takai, and Katsutoshi Yada [Volume III, Page 310]

Tuesday 13 September 2011

42-115, 16:15 to 18:15

[G07] Web Intelligence, Text and Multimedia Mining and Retrieval – II

Chair: Prof. Andreas Nuernberger, University of Magdeburg, Germany

[16:15] User Modeling-Based Spatial Web Personalization

Hadjouni Myriam, Baazaoui Hajer, Aufaure Marie Aude, and Ben Ghezala Henda [Volume II, Page 041]

[16:35] Context-aware Website Personalization

Daniela Wolff, Marc Schaaf, Stella Gatzju Grivas, and Uwe Leimstoll [Volume II, Page 051]

[16:55] Node- first Causal Network Extraction for Trend Analysis based on Web Mining

Hideki Kawai, Katsumi Tanaka, Kazuo Kunieda, and Keiji Yamada [Volume II, Page 063]

[17:15] Consumer Behavior Analysis from Buzz Marketing Sites over Time Series Concept Graphs

Tetsuji Kuboyama, Takako Hashimoto, and Yukari Shiota [Volume II, Page 073]

[17:35] Fuzzy Image Labeling by Partially Supervised Shape Clustering

G. Castellano, A.M. Fanelli, and M.A. Torsello [Volume II, Page 083]

Tuesday 13 September 2011

42-105, 16:15 to 18:15

[IS34] Immunity-Based Systems – II

Chair: Prof. Yoshiteru Ishida, Toyohashi University of Technology, Japan ; Co-chair: Prof. Andreas König, University of Kaiserslautern, Germany

[16:15] Identifying Generative Mechanisms from Spatiotemporal Patterns in Diffusion Phenomena

Takuya Ueda and Yoshiteru Ishida [Volume IV, Page 342]

[16:35] A Note on the Collective Identity of Indistinguishable Entities: A View from the Stable Marriage Problem

Yoshiteru Ishida [Volume IV, Page 352]

[16:55] Asymmetric Structure between Two Sets of Adaptive Agents: An Approach Using a Matching Automaton

Yoshiteru Ishida and Kazuma Sasaki [Volume IV, Page 362]

[17:15] Automatic Filter Synthesis Based on Tree Generation and Evolutionary Optimization
Paul Faragó, Lelia Feștilă, Peter Söser, and Sorin Hintea [Volume IV, Page]

Tuesday 13 September 2011

46-280, 16:15 to 18:15

[WS02] Workshop on Seamless Integration of Semantic Technologies in Computer-supported Office Work (SISTCOW)

Chair: Mr. Oleg Rostanin, DFKI GmbH, Germany ; **Co-chair:** Mr. Simon Scerri, University of Ireland, Galway, Ireland ; Mr. Benedikt Schmidt, SAP Research, Germany

[16:15] Interaction Data Management

Benedikt Schmidt and Eicke Godehardt [Volume II, Page 399]

[16:35] SWord: Semantic Annotations Revisited

Oleg Rostanin and Passant Al Agroudy [Volume II, Page 407]

[16:55] Using Suffix Arrays for Efficiently Recognition of Named Entities in Large Scale.

Benjamin Adrian and Sven Schwarz [Volume II, Page 417]

[17:15] Extracting Personal Concepts From Users' Emails To Initialize Their Personal Information Models

Sven Schwarz, Frank Marmann, and Heiko Maus [Volume II, Page 427]

Tuesday 13 September 2011

46-110, 16:15 to 18:15

[IS24] Intelligent Network and Service – II

Chair: Prof. Jun Munemori, Wakayama University, Japan ; **Co-chair:** Prof. Takaya Yuizono, Japan Advanced Institute Science and Technology, Japan

[16:15] Situation Exchange System using Nonverbal Information for Remote Communication

Junko Itou, Yoko Mori, and Jun Munemori [Volume III, Page 130]

[16:35] A Consideration for New Employee Education by the Industry-University Cooperation

Teruhisa Ichikawa and Tomoya Kitani [Volume III, Page 138]

[16:55] Development of e-Learning System using Handwriting on Screen

Satoru Fujii, Rie Onishi, and Kouji Yoshida [Volume III, Page 148]

[17:15] Normalization of Biological Expression Data Based on Selection of a Stable Element Set

Yoshihiko Bouki, Takuya Yoshihiro, Etsuko Inoue, and Masaru Nakagawa [Volume III, Page 157]

[17:35] Promoting Cultural Learning: Effects of Cultural Knowledge on Text Chats between Japanese and Chinese Participants

Takaya Yuizono, Wei Li, and Jun Munemori [Volume III, Page 171]

[17:55] A Heuristic Approach to Fair Routing Path Selection

Noriaki Hirose, Kaori Yoshida, and Mario Koeppen [Volume III, Page 181]

Tuesday 13 September 2011

46-210, 16:15 to 18:15

[G09] Intelligent Tutoring Systems and E-Learning Environments – II

Chair: Prof. Toyohide Watanabe, Nagoya University, Japan

[16:15] Analysis of Students' Learning Activities through Quantifying Time-Series Comments

Kazumasa Goda and Tsunenori Mine [Volume II, Page 153]

[16:35] Back-Review Support Method for Presentation Rehearsal Support System

Ryo Okamoto and Akihiro Kashiara [Volume II, Page 163]

Wednesday 14 September 2011

42-115, 9:00 to 10:00

Plenary Session Keynote 5: "Future Urban Management: Towards Best Managed Cities"

Dr. Knut Manske, Vice President SAP Research, SAP AG, Darmstadt, Germany

Chair: Prof. Andreas Dengel, University of Kaiserslautern & DFKI GmbH, Germany

Wednesday 14 September 2011

42-110, 10:20 to 12:20

[IS19] Management Technologies from the Perspective of Kansei Engineering and Emotion

Chair: Prof. Junzo Watada, Waseda University, Japan ; Co-chair: Prof. Hisao Shiizuka, Kogakuin University, Japan ; Dr. Taki Kanda, Bunri University of Hospitality, Japan

[10:20] Solving Bilevel Quadratic Programming Problems and its Application

Shamshul Bahar Yaakob and Junzo Watada [Volume III, Page 191]

[10:40] Interactivity and Fun of Characters

Hisao Shiizuka and Ayako Hashizume [Volume III, Page 201]

[11:00] Design Technique for Enhancing Software Quality and Development Suitability

Kunihiro Yamada, Kouji Yoshida, Masanori Kojima, Nobuhiro Kataoka, and Tadanori Mizuno [Volume III, Page 211]

[11:20] A new MOPSO to Solve a Multi-objective Portfolio Selection Model with Fuzzy Value-at-Risk

Bo Wang, You Li, and Junzo Watada [Volume III, Page 221]

[11:40] Adaptation a School Building of the Mutual Complementary Network by Wireless and Wired

Naoki Yusa, Fumiaki Henmi, Hideaki Banba, Hiroshi Mineno, and Kunihiro Yamada [Volume III, Page 231]

[12:00] Design of Initial Biosensor for Measurement of Glucose in Human Blood by Using Bio-computing Technology

Yuyi Chu, Junzo Watada, Ikno Kim, and Juiyu Wu [Volume III, Page 241]

Wednesday 14 September 2011

46-110, 10:20 to 12:20

[IS15] Knowledge Engineering Applications in Process Systems and Plant Operations

Chair: Dr. Kazuhiro Takeda, Shizuoka University, Japan ; Co-chair: Dr. Takashi Hamaguchi, Nagoya Institute of Technology, Japan ; Dr. Tetsuo Fuchino, Tokyo Institute of Technology, Japan

[10:20] Knowledge-Based Diagnosis of Process Systems using Procedure HAZID Information

Agnes Werner-Stark, Erzsebet Nemeth, and Katalin M. Hangos [Volume III, Page 393]

[10:40] An Agent Cloning Approach for Process Design of Discrete Plants

Tatan Firmansyah and Rafael Batres [Volume III, Page 403]

[11:00] Adaptation of Trend Analysis Method to Various Modes of Temperature Operation for Suspension Polymerization using Ultrasound

Hideyuki Matsumoto, H. Mori, and C. Kuroda [Volume III, Page 413]

[11:20] Design Method of Plant Alarm Systems on the Basis of Two-Layer Cause-Effect Model

Kazuhiro Takeda, Annuar H. B. M. Aimi, Takashi Hamaguchi, Masaru Noda, and Naoki Kimura [Volume III, Page 423]

[11:40] Framework to Systematize Recipe Design of Batch Process into Technology

Tetsuo Fuchino, Teijii Kitajima, Yukiyasu Shimada, and Kouji Kawano [Volume III, Page 432]

[12:00] A SCADA based Power Plant Monitoring and Management System

Paul Prickett, Gwyn Davies, and Roger Grosvenor [Volume III, Page 442]

Wednesday 14 September 2011

46-210, 10:20 to 12:20

[IS26] Advanced Design Techniques for Adaptive Hardware and Systems

Chair: Prof. Sorin Hintea, Technical University of Cluj-Napoca, Romania ; **Co-chair:** Prof. Hernando Fernández-Canque, Glasgow Caledonian University, UK ; Prof. Gabriel Oltean, Technical University of Cluj-Napoca, Romania

[10:20] Design Illustration of a Symmetric OTA using Multiobjective Genetic Algorithms

Laura Ivanciu, Gabriel Oltean, and Sorin Hintea [Volume III, Page 452]

[10:40] Dynamic Reconfiguration in JPEG2000 Hardware Architecture

Ali Ahmadinia, Hernando Fernandez-Canque, and Roberto Ramirez-Iniguez [Volume III, Page 462]

[11:00] DTIRC Based Optical Collimators

R. Ramirez-Iniguez, A. Ahmadinia, and H. Fernandez-Canque [Volume III, Page 471]

[11:20] Machine Vision Applied to Highly Variable Objects

H. Fernandez-Canque, S. Hintea, R. Ramirez-Iniguez, A. Ahmadinia, G. Csipkes, and D. Csipkes [Volume III, Page 481]

[11:40] Mutual Information-based Sensor Positioning for Car Cabin Comfort Control

Diana Hintea, James Brusey, Elena Gaura, Neil Beloe, and David Bridge [Volume III, Page 491]

[12:00] Distributed Active Optical Fiber Sensor for Bending Measurement

Ramona Gălăţus and E. Voiculescu [Volume III, Page 501]

Wednesday 14 September 2011

46-260, 10:20 to 12:20

[IS14] Design of Social Intelligence and Creativity Environment

Chair: Prof. Toyohide Watanabe, Nagoya University, Japan ; **Co-chair:** Dr. Naoto Mukai, Tokyo University of Science, Japan

[10:20] Controlling Chaotic Oscillations in User-Centric Cognitive Radio Networks

Yuki Nonaka and Mikio Hasegawa [Volume III, Page 599]

[10:40] A Study of the Analytical Method for the Location Planning of Charging Stations for Electric Vehicles

Hisatomo Hanabusa and Ryota Horiguchi [Volume III, Page 609]

[11:00] Optimization of Charging Station Placement by using Taxi Probe Data for On-Demand Electrical Bus System

Hisashi Kameda and Naoto Mukai [Volume III, Page 619]

[11:20] Analyzing Map Features and Building Information for Disaster Response using Agent-Based Simulations

Kazunori Iwata, Nobuhiro Ito, Hiroaki Koketsu, and Naohiro Ishii [Volume III, Page 629]

[11:40] Word Familiarity Distributions to Understand Heaps' Law of Vocabulary Growth of the Internet Forums

Masao Kubo, Hiroshi Sato, and Takashi Matsubara [Volume III, Page 639]

[12:00] Skill-up Support for Slide Composition through Discussion

Keita Maeda, Yuki Hayashi, Tomoko Kojiri, and Toyohide Watanabe [Volume III, Page 649]

Wednesday 14 September 2011

46-280, 10:20 to 11:20

[IS16] Knowledge-Based Interface Systems (II)

Chair: Prof. Yoshinori Adachi, Chubu University, Japan ; **Co-chair:** Prof. Nobuhiro Inuzuka, Nagoya Inst. of Technology, Japan

[10:20] Dynamic Learning of Neural Network by Analog Electronic Circuits

Masashi Kawaguchi, Takashi Jimbo, and Naohiro Ishii [Volume IV, Page 073]

[10:40] Preliminary Research for System Construction that Judges Understanding Level from Learner's Expression and Movement

Yoshinori Adachi, Masahiro Ozaki, and Yuji Iwahori [Volume IV, Page 081]

[11:00] Pattern Mining on Ego-Centric Networks of Friendship Networks

Nobuhiro Inuzuka, Shin Takeuchi, and Hiroshi Matsushima [Volume IV, Page 090]

Wednesday 14 September 2011

46-280, 11:20 to 12:20

[IS03] Knowledge-Based Interface Systems (I)

Chair: Prof. Yuji Iwahori, Chubu University, Japan ; **Co-chair:** Prof. Naohiro Ishii, Aichi Institute of Technology, Japan

[11:20] Control of Variables in Reducts - kNN Classification with Confidence

Naohiro Ishii, Yuichi Morioka, Yongguang Bao, and Hidekazu Tanaka [Volume IV, Page 099]

[11:40] Detecting Separation of Moving Objects Based on Non-Parametric Bayesian Scheme for Tracking by Particle Filter

Yasuchika Takeda, Shinji Fukui, Yuji Iwahori, and Robert J. Woodham [Volume IV, Page 109]

[12:00] Discrimination of True Defect and Indefinite Defect with Visual Inspection Using SVM

Yuji Iwahori, Kazuya Futamura, and Yoshinori Adachi [Volume IV, Page 118]

Wednesday 14 September 2011

42-105, 10:20 to 12:20

[IS33] Model-Based Computing for Innovative Engineering

Chair: Prof. Klaus Schneider, University of Kaiserslautern, Germany ; **Co-chair:** Prof. Norbert Wehn, University of Kaiserslautern, Germany

[10:20] WoM: An Open Interactive Platform for Describing, Exploring, and Sharing Mathematical Models

Jean-Marie Gaillourdet, Thomas Grundmann, Martin Memmel, Karsten Schmidt, Arnd Poetzsch-Heffter, and Stefan Deßloch [Volume IV, Page 127]

[10:40] Efficient Generation of Ambient Intelligent User Interfaces

Kai Breiner, Gerrit Meixner, Dieter Rombach, Marc Seissler, and Detlef Zühlke [Volume IV, Page 137]

[11:00] From Context to Context-Awareness: Model-based User Classification for Efficient Multicasting

Christian Mannweiler, Joerg Schneider, Andreas Klein, and Hans D. Schotten [Volume IV, Page 147]

[11:20] Automated Design of Dependable Intelligent Sensory Systems with Self-x Properties

Kuncup Iswandy and Andreas König [Volume IV, Page 157]

[11:40] Safe Automotive Software

Karl Heckemann, Manuel Gesell, Thomas Pfister, Karsten Berns, Klaus Schneider, and Mario Trapp [Volume IV, Page 169]

[12:00] Energy Efficient Acceleration and Evaluation of Financial Computations Towards Real-Time Pricing

Christian De Schryver, Matthias Jung, Norbert Wehn, Henning Marxen, Anton Kostiuk, and Ralf Korn [Volume IV, Page 179]

Wednesday 14 September 2011

42-115, 13:30 to 14:30

Plenary Session Keynote 6: “(Meta-) Modeling of Process-Oriented Information Systems”

Prof. Dr. Ulrich Reimer, University of Applied Sciences St. Gallen, Switzerland

Chair: Prof. Knut Hinkelmann, University of Applied Sciences North- western Switzerland, Switzerland

Wednesday 14 September 2011

42-110, 14:35 to 15:55

[IS13] Human Activity Support in Knowledge Society – I

Chair: Prof. Toyohide Watanabe, Nagoya University, Japan ; Co Chair: Prof. Taketoshi Ushima, Kyushu University, Japan

[14:35] Introducing Specialization and Generalization to a Graph-Based Data Model

Yuki Ohira, Teruhisa Hochin, and Hiroki Nomiya [Volume IV, Page 001]

[14:55] Composition of Japanese Folk-Tales Based on STRIPS-like Framework

Ryosuke Arasawa, Koichi Hanaue, and Toyohide Watanabe [Volume IV, Page 014]

[15:15] A Method for Extracting Attractive Sentences from an Electronic Book Based on Reviews for Effective Browsing

Soichi Murai and Taketoshi Ushima [Volume IV, Page 024]

[15:35] Face Image Annotation and Retrieval in Impressive Words using Minimum Bounding Rectangles of Face Parts

Hideaki Ito and Hiroyasu Koshimizu [Volume IV, Page 034]

Wednesday 14 September 2011

46-110, 14:35 to 15:55

[IS20] Knowledge-Based Systems for e-Business – I

Chair: Prof. Kazuhiko Tsuda, University of Tsukuba, Japan ; Co-chair: Dr. Nubuo Suzuki, KDDI Corporation, Japan

[14:35] Dynamic Optimal Revenue-Sharing Strategy in E-Commerce

Masaru Unno and Hua Xu [Volume III, Page 317]

[14:55] Building Knowledge for Prevention of Forgetting Purchase Based on Customer Behavior in a Store

Masakazu Takahashi and Kazuhiko Tsuda [Volume III, Page 327]

[15:15] Conformity Evaluation System Based on Member Capability Information in the Software Projects

Kouji Tanaka, Chieko Matsumoto, and Kazuhiko Tsuda [Volume III, Page 335]

[15:35] Software Logical Structure Verification Method by Modeling Implemented Specification

Keiji Uetsuki, Tohru Matsuodani, and Kazuhiko Tsuda [Volume III, Page 343]

Wednesday 14 September 2011

46-210, 14:35 to 15:55

[G05] Intelligent Vision, Image Processing and Signal Processing – I

Chair: Prof. Koichi Kise, Osaka Prefecture University, Japan

[14:35] Generic and Specific Object Recognition for Semantic Retrieval of Images

Martin Klinkigt, Koichi Kise, and Andreas Dengel [Volume I, Page 398]

[14:55] A Lane Detection and Tracking Method for Driver Assistance System

Nadra Ben Romdhane, Mohamed Hammami, and Hanene Ben-Abdallah [Volume I, Page 408]

[15:15] Effective TV Advertising Block Division into Single Commercials Method

Pawel Biernacki [Volume I, Page 418]

[15:35] Robust Depth Camera Based Eye Localization for Human-Machine Interactions

Li Li, Yanhao Xu, and Andreas König [Volume I, Page 424]

Wednesday 14 September 2011

46-260, 14:35 to 15:55

[IS01] Innovations in Chance Discovery – I

Chair: Prof. Akinori Abe, University of Tokyo, Japan ; **Co-chair:** Prof. Yukio Ohsawa, The University of Tokyo, Japan

[14:35] A Diagrammatic Approach to Discovering Chances in Team Relationships

Ruediger Oehlmann and Balpreet Gill [Volume II, Page 437]

[14:55] Ontology-based Knowledge Navigation Platform for Intelligent Manufacturing

Reiko Fujiwara, Akira Kitamura, and Kouji Mutoh [Volume II, Page 444]

[15:15] Finding Top-N Chance Patterns with KeyGraph®-Based Importance

Yoshiaki Okubo, Makoto Haraguchi, and Sachio Hirokawa [Volume II, Page 454]

[15:35] Quantitative Evaluation Method of Criticism in Value Creating Conversation

Yoko Nishihara and Yukio Ohsawa [Volume II, Page 466]

Wednesday 14 September 2011

46-280, 14:35 to 15:55

[IS27] Advanced Knowledge-based Systems – I

Chair: Dr. Alfredo Cuzzocrea, ICAR-CNR, University of Calabria, Italy

[14:35] On Kernel Information Propagation for Tag Clustering in Social Annotation Systems

Guandong Xu, Yu Zong, Rong Pan, Peter Dolog, and Ping Jin [Volume II, Page 501]

[14:55] An Efficient Itemset Mining Approach for Data Streams

Elena Baralis, Tania Cerquitelli, Silvia Chiusano, Alberto Grand, and Luigi Grimaudo [Volume II, Page 511]

[15:15] The Representation of Inconsistent Knowledge in Advanced Knowledge Based Systems
Mark Burgin and Kees (C.N.J.) De Vey Mestdagh [Volume II, Page 520]

[15:35] Contextual Ontology Module Learning from Web Snippets and Past User Queries
Nesrine Ben Mustapha, Marie-Aude Aufaure, Hajer Baazaoui Zghal, and Henda Ben Ghezala [Volume II, Page 535]

Wednesday 14 September 2011

42-105, 14:35 to 15:55

[IS22] Skill Acquisition and Ubiquitous Human Computer Interaction – I
Chair: Prof. Hirokazu Taki, Wakayama University, Japan ; **Co-chair:** Prof. Masato Soga, Wakayama University, Japan

[14:35] Parallel Quiet Acoustic Guides for Sensible Culture
Taizo Miyachi, Takashi Furuhashi, Yuto Takubo, and Shosuke Watanabe [Volume III, Page 001]

[14:55] Doze Driving Prevention System by Low Frequency Stimulation and High Density Oxygen with Fragrance of GF (Grape Fruit)
Takashi Furuhashi, Taizo Miyachi, and Tomoya Adachi [Volume III, Page 011]

[15:15] A Wearable System with Virtual Competitor based on Runner's Body Motion
Naka Gotoda, Kenji Matsuura, Shinji Otsuka, Toshio Tanaka, Shinichi Yamagiwa, and Yoneo Yano [Volume III, Page 021]

[15:35] A Preliminary Examination of Background-color Effects on the Scores of Computer-based English Grammar Tests Using Near-infrared Spectroscopy
Atsuko K. Yamazaki and Kaoru Eto [Volume III, Page 031]

Wednesday 14 September 2011

42-110, 16:15 to 18:15

[IS13] Human Activity Support in Knowledge Society – II
Chair: Prof. Toyohide Watanabe, Nagoya University, Japan ; **Co-Chair:** Prof. Taketoshi Ushima, Kyushu University, Japan

[16:15] Collaborative Filtering for Predicting Users' Potential Preferences
Kenta Oku, Ta Son Tung, and Fumio Hattori [Volume IV, Page 044]

[16:35] A Web Browsing Behavior Recording System
Hayato Ohmura, Teruaki Kitasuka, and Masayoshi Aritsugi [Volume IV, Page 053]

[16:55] Application Framework for Data Broadcast Contents Integrated with Web Services on Digital TV
Yoshihiro Okada and Shigeru Takano [Volume IV, Page 063]

Wednesday 14 September 2011

46-110, 16:15 to 18:15

[IS20] Knowledge-Based Systems for e-Business – II

Chair: Prof. Kazuhiko Tsuda, University of Tsukuba, Japan ; Co-chair: Dr. Nubuo Suzuki, KDDI Corporation, Japan

[16:15] Modeling Islamic Finance Knowledge for Contract Compliance in Islamic Banking

Aziza Mamadolimova, Norbaitiah Ambiah, and Dickson Lukose [Volume III, Page 353]

[16:35] Word-of-Mouth Effects on Social Networks

Setsuya Kurahashi and Muneyoshi Saito [Volume III, Page 363]

[16:55] Exceeding The Efficiency of Distributed Approximate Algorithms Enabling by The Multiplexing Method

Yasuki Iizuka and Kayo Iizuka [Volume III, Page 373]

[17:15] Extraction Method of the Mutual Understanding Gap based on Egocentrism in Short Dialogues

Nobuo Suzuki, Yoshikatsu Fujita, and Kazuhiko Tsuda [Volume III, Page 385]

Wednesday 14 September 2011

46-210, 16:15 to 18:15

[G05] Intelligent Vision, Image Processing and Signal Processing – II

Chair: Prof. Koichi Kise, Osaka Prefecture University, Japan

[16:15] Novel Metrics for Face Recognition Using Local Binary Patterns

Len Bui, Dat Tran, Xu Huang, and Girija Chetty [Volume I, Page 436]

[16:35] Unsupervised Scene Classification Based on Context of Features for a Mobile Robot

Hirokazu Madokoro, Yuya Utsumi, and Kazuhito Sato [Volume I, Page 446]

[16:55] Possibilistic Entropy: a New Method for Nonlinear Dynamical Analysis of Biosignals

Tuan D. Pham [Volume I, Page 466]

[17:15] A Novel Emotion Recognizer from Speech using both Prosodic and Linguistic Features

Motoyuki Suzuki, Seiji Tsuchiya, and Fuji Ren [Volume I, Page 456] [This paper will be rescheduled to 42-115 at 17:55 hrs, Tuesday September 13th due to author's unavailability]

Wednesday 14 September 2011

46-260, 16:15 to 18:15

[IS01] Innovations in Chance Discovery – II

Chair: Prof. Akinori Abe, University of Tokyo, Japan ; Co-chair: Prof. Yukio Ohsawa, The University of Tokyo, Japan

[16:15] Chance Discovery and Unification in Linear Modal Logic

Vladimir V. Rybakov [Volume II, Page 475]

[16:35] From Epistemic Luck to Chance-Seeking. The Role of Cognitive Niche Construction
Lorenzo Magnani and Emanuele Bardone [Volume II, Page 483]

[16:55] Relation between Chance Discovery and Black Swan Awareness
Akinori Abe [Volume II, Page 491]

Wednesday 14 September 2011

46-280, 16:15 to 18:15

[IS27] Advanced Knowledge-based Systems – II
Chair: Dr. Alfredo Cuzzocrea, ICAR-CNR, University of Calabria, Italy

[16:15] Inconsistency-tolerant Integrity Checking based on Inconsistency Metrics
Hendrik Decker [Volume II, Page 545]

[16:35] OLAP over Continuous Domains via Density-Based Hierarchical Clustering
Michelangelo Ceci, Alfredo Cuzzocrea, and Donato Malerba [Volume II, Page 555]

[16:55] Non Separable Transforms For Clustering Trajectories
Alfredo Cuzzocrea and Elio Masciari [Volume II, Page 567]

Wednesday 14 September 2011

42-105, 16:15 to 18:15

[IS22] Skill Acquisition and Ubiquitous Human Computer Interaction – II
Chair: Prof. Hirokazu Taki, Wakayama University, Japan ; Co-chair: Prof. Masato Soga, Wakayama University, Japan

[16:15] Proposal and Development of Motion Navigator Enabling Learners to Observe Expert's Motion from Expert's Viewpoint by Augmented Reality
Masato Soga, Tomoyasu Nishino, and Hirokazu Taki [Volume III, Page 041]

[16:35] A Study on Navigation System for Pedestrians Based on Street Illuminations
Hirokazu Miura, Syujo Takeshima, Noriyuki Matsuda, and Hirokazu Taki [Volume III, Page 051]

[16:55] Interaction Techniques for Integrated Content-Based Enterprise Search
Ulf Müller, Daniel Metz, Sachin Karadgi, Manfred Grauer, and Walter Schäfer [Volume III, Page 059]

KES 2011 General Information

Conference Office and Registration

Days: Mon / Tue / Wed

Place: University of Kaiserslautern

Building no. 42, foyer

Time: 08:00 – 17:00 hrs

WiFi Access

Network name SSID: TU-KL.guest

Network authentication: WPA2 or WPA

Data encryption: AES or TKIP

Network key: ze9keiphai

Coffee Breaks

Coffee, beverages, fruits, cake.

Days: Mon / Tue / Wed

Place: University of Kaiserslautern

Building no. 42, foyer

Time: 10:00 – 10:20 hrs / 15:55 – 16:15 hrs

Lunch

Two menus to choose from, one of which is vegetarian, softdrink.

Please present the respective vouchers included in the conference bag for each day. Please note that the vouchers are only valid at the signposted KES 2011 counter.

The entrance for the KES 2011 delegates is located around the corner right of the main entrance of the "Mensa" (Building 30). Lunch will be served on the second floor. Please follow the KES 2011 signs.

Days: Mon / Tue / Wed

Place: University of Kaiserslautern

Building no. 30, side entrance

Time: 12:20 – 13:30 hrs

Conference Reception

Drinks and snacks.

Day: Monday

Place: University of Kaiserslautern

Building no. 42, foyer

Time: 18:30 – 20:30 hrs

Bus shuttle to hotels in the city center after the reception:

After the reception a bus shuttle will take the KES 2011 delegates to the Fruchthalle in the city center of Kaiserslautern. The Fruchthalle is within walking distance to the pre-selected conference hotels (see map in cover). Departure will be at 20:45 hrs from the bus stop "Universität West" at Trippstadter Straße underneath the pedestrian bridge. The shuttle display will show "KES 2011 Fruchthalle". In order to access the bus stop "Universität West" please turn left after you exit building 42 (foyer) and walk about 80 m to Trippstadter Straße.

Conference Dinner

Seated dinner in Fruchthalle.

Day: Tuesday

Place: Fruchthalle in the city center of Kaiserslautern

Time: 19:30 – 22:30 hrs

Bus shuttle to the conference dinner venue in the city center after the end of the sessions:

After the end of the sessions a bus shuttle will take the KES 2011 delegates to the Fruchthalle in the city center (see map in cover). Departure will be at 18:30 from the bus stop "Universität West" at Trippstadter Straße underneath the pedestrian bridge. The shuttle display will show "KES 2011 Fruchthalle". In order to access the bus stop "Universität West" please turn left after you exit building 42 (foyer) and walk about 80 m to Trippstadter Straße.

Campus Cafeteria

The campus cafeteria is located in building no. 30 right across the conference venue in building 42.

Place: University of Kaiserslautern

Building no. 30

Opening hrs: 08:00 – 16:00 hrs

Taxi Service

You can order a private taxi service around the clock. The fare from the inner city to the campus of the university will be around 8-10 Euros.

Phone: 366777

DFKI Lab Tour

The German Research Center for Artificial Intelligence (DFKI) will offer a lab tour on Thursday, September 15. KES 2011 delegates may enrol at the registration desk in building 42. Please note that the capacity is limited.

Date: Thursday, September 15th, 2011

Time: 10:00 - 12:00 hrs, Further information may be obtained from the registration desk

Location: German Research Center for Artificial Intelligence (DFKI), Trippstadter Straße 122, 67663 Kaiserslautern

KES 2012

Manuel Graña - University of the Basque Country (Spain)

Dr.-Ing. Jorge Posada Velásquez -Vicomtech-IK4 (Spain)

Notes