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.

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DFKI GmbH, Germany
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University of Magdeburg, Germany
University of New South Wales, Australia
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 Ushiama, 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
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Program Committee

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<td>Saha, Asit</td>
<td>Central State University, USA</td>
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<td>Salem, Ziad</td>
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<td>Sanin, Cesar</td>
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<td>Sansone, Carlo</td>
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<td>Sato-Ilic, Mika</td>
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<td>University of Ireland Galway, Ireland</td>
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<td>Schmidt, Benedikt</td>
<td>SAP Research, Germany</td>
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<td>Schneider, Klaus</td>
<td>University of Kaiserslautern, Germany</td>
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<td>Schockaert, Steven</td>
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<td>University of Ulm, Germany</td>
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<td>Seiffert, Udo</td>
<td>Fraunhofer-Institute IFF Magdeburg, Germany</td>
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<td>Sharma, Dharmendra</td>
<td>University of Canberra, Australia</td>
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<td>Sioutis, Christos</td>
<td>DSTO, Australia</td>
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Soga, Masato  
Sordo, Margarita  
Soroka, Anthony  
Spiliopoulou, Myra  
Srinivasan, Dipti  
Sunde, Jadranka  
Suzuki, Nobuo  
Szczepanik, Edward  
Takeda, Kazuhiro  
Taki, Hirokazu  
Tambouratzis, Tatiana  
Tichy, Pavel  
Tino, Peter  
Toro, Carlos  
Torsello, Maria  
Trentin, Edmondo  
Tsirahmitzis, George A.  
Tsuda, Kazuhiro  
Tweedale, Jeffrey  
Uchida, Seiichi  
Uchino, Eiji  
Ushiama, Taketoshi  
Vadera, Sunil  
Varkonyi Koczy, Annamaria  
Vassányi, István  
Vellido, Alfredo  
Velásquez, Juan D.  
Virvou, Maria  
Volpi, Sara  
Watada, Junzo  
Watanabe, Toyohide  
Weber, Rosina  
Wehn, Norbert  
White, Richard J.  
Williams, M. Howard  
Yada, Katsutoshi  
Yamada, Kunihiro  
Yang, Zijiang  
Yoshida, Hiroyuki  
You, Jane  
Yuiizono, Takaya  
Zanni-Merk, Cecilia

Wakayama University, Japan  
Harvard University, USA  
Cardiff University, UK  
Otto-von-Guericke-Universität, Germany  
National University of Singapore, Singapore  
DSTO, Australia  
KDDI Corporation, Japan  
The University of Newcastle, Australia  
Shizuoka University, Japan  
Wakayama University, Japan  
University of Piraeus, Greece  
Rockwell Automation Research Centre, Czech Republic  
The University of Birmingham, UK  
VICOMTech, Spain  
University of Bari, Italy  
University of Siena, Italy  
University of Piraeus, Greece  
University of Tsukuba, Japan  
University of South Australia, Australia  
Kyushu University, Japan  
Yamaguchi University, Japan  
Kyushu University, Japan  
University of Salford, UK  
Obuda University, Hungary  
University of Pannonia, Hungary  
Universitat Politècnica de Catalunya, Spain  
University of Chile, Chile  
University of Piraeus, Greece  
University of Pisa, Italy  
Waseda University, Japan  
Nagoya University, Japan  
The iSchool at Drexel, USA  
University of Kaiserslautern, Germany  
Cardiff University, UK  
Heriot-Watt University, UK  
Kansai University, Japan  
Tokai University, Japan  
York University, Canada  
Harvard Medical School, USA  
The Hong Kong Polytechnic University, Hong Kong  
JAIST, Japan  
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
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 field 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.
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 bimonthly 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.
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 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 (FIIEEE).
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.
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.
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**

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<tr>
<th>Time</th>
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<th>Details</th>
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<tbody>
<tr>
<td>8:30</td>
<td>42-115</td>
<td>Opening of the conference</td>
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<tr>
<td>9:00</td>
<td>42-115</td>
<td><strong>Keynote 1:</strong> ‘Symbiotic System as a New Social Infrastructure Based on Intelligent Interaction Among the Society, Human Beings, and Information Systems’&lt;br&gt;Chair: Prof. Koichi Kise, Osaka Prefecture University, Japan</td>
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<tr>
<td>10:00</td>
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<td>Coffee</td>
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<td>10:20</td>
<td>42-105</td>
<td><strong>IS08, Recent trends in Knowledge Engineering, Smart Systems and their Applications - I</strong>&lt;br&gt;Chair: Dr. Cesar Sanin, University of Newcastle, Australia&lt;br&gt;Co-chair: Dr. Carlos Toro, VICOMTech, Spain</td>
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<tr>
<td>10:20</td>
<td>46-210</td>
<td><strong>G06, Knowledge Management, Ontologies and Data Mining - I</strong>&lt;br&gt;Chair: Dr. Heiko Maus, DFKI GmbH, Germany</td>
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<td>10:20</td>
<td>46-110</td>
<td><strong>IS32, Document Analysis and Knowledge Science - I</strong>&lt;br&gt;Chair: Prof. Seiichi Uchida, Kyushu University, Japan&lt;br&gt;Co-chair: Dr. Marcus Liwicki, DFKI GmbH, Germany&lt;br&gt;Prof. Koichi Kise, Osaka Prefecture University, Japan</td>
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<td>10:20</td>
<td>46-260</td>
<td><strong>G01, Artificial Neural Networks, Connectionists Systems and Evolutionary Computation - I</strong>&lt;br&gt;Chair: Prof. Bruno Apolloni, University of Milan, Italy</td>
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<td>12:20</td>
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<td>Lunch</td>
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<tr>
<td>13:30</td>
<td>42-115</td>
<td><strong>Keynote 2:</strong> “Knowledge Sharing in Enterprise Networks”&lt;br&gt;Dr. Peter Schütt, Executive Engagement Manager, IBM Software Group, Germany&lt;br&gt;Chair: Prof. Andreas Dengel, University of Kaiserslautern &amp; DFKI GmbH, Germany</td>
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<td>14:35</td>
<td>46-260</td>
<td><strong>G01, Artificial Neural Networks, Connectionists Systems and Evolutionary Computation - II</strong>&lt;br&gt;Chair: Prof. Bruno Apolloni, University of Milan, Italy</td>
</tr>
<tr>
<td>14:35</td>
<td>46-280</td>
<td><strong>IS12, Human-oriented Learning Technology and Learning Support Environment - I</strong>&lt;br&gt;Chair: Prof. Toyohide Watanabe, Nagoya University, Japan&lt;br&gt;Co-chair: Dr. Tomoko Kojiri, Kansai University, Japan</td>
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<td>14:35</td>
<td>42-115</td>
<td><strong>G02, Machine Learning and Classical AI - I</strong>&lt;br&gt;Chair: Prof. Floriana Esposito, University of Bari, Italy</td>
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<td>15:55</td>
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<td>Coffee</td>
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<td>16:15</td>
<td>42-105</td>
<td><strong>IS08, Recent trends in Knowledge Engineering, Smart Systems and their Applications - II</strong>&lt;br&gt;Chair: Dr. Cesar Sanin, University of Newcastle, Australia&lt;br&gt;Co-chair: Dr. Carlos Toro, VICOMTech, Spain</td>
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<td>16:15</td>
<td>46-210</td>
<td><strong>G06, Knowledge Management, Ontologies and Data Mining - III</strong>&lt;br&gt;Chair: Dr. Heiko Maus, DFKI GmbH, Germany</td>
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<td>16:15</td>
<td>46-110</td>
<td><strong>IS32, Document Analysis and Knowledge Science - II</strong>&lt;br&gt;Chair: Prof. Seiichi Uchida, Kyushu University, Japan&lt;br&gt;Co-chair: Dr. Marcus Liwicki, DFKI GmbH, Germany&lt;br&gt;Prof. Koichi Kise, Osaka Prefecture University, Japan</td>
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<td>16:15</td>
<td>42-110</td>
<td><strong>G03+G08, Agent, Multi-AgentSystems, Intelligent Robotics and Control - I</strong>&lt;br&gt;Chair: Prof. Ngoc Nguyen, Wroclaw University of Technology, Poland&lt;br&gt;Prof. Honghai Liu, University of Portsmouth, UK</td>
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<td>16:15</td>
<td>46-210</td>
<td><strong>G06, Knowledge Management, Ontologies and Data Mining - II</strong>&lt;br&gt;Chair: Dr. Heiko Maus, DFKI GmbH, Germany</td>
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<td>16:15</td>
<td>46-270</td>
<td><strong>G10, Other / Misc. Intelligent Systems Topics - I</strong>&lt;br&gt;Chair: Prof. Ron Hartung, Franklin University, USA</td>
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<td>18:30</td>
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<td>Drinks Reception</td>
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(Refer to page 23 for Monday’s detailed programme)
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<tr>
<th>Time</th>
<th>Venue</th>
<th>Details</th>
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</table>
| 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 Håkansson, 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  
Co-chair: Prof. CP Lim, Universiti Sains Malaysia, Malaysia |
| 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. Lakshmi 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 Håkansson, 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 Lazzerini, 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 Håkansson, 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  
**IS06, Advances in Theory and Application of Hybrid Intelligent Systems**  
Chair: Prof. Lakshmi C. Jain, University of South Australia, Australia  
Co-chair: Prof. CP Lim, Universiti Sains Malaysia, Malaysia |
| 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  | Coffee|         |
| 19:00  | Dinner|         |

**Tuesday 13 September, KES 2011**

(refer to page 33 for Tuesday’s detailed programme)
## Wednesday 14 September, KES 2011

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
<th>Details</th>
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</table>
| 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 Shizuka, Kogakuin University, Japan  
Dr. Taki Kandu, Bunri University of Hospitality, Japan |
|        | 46-110| **IS15, Knowledge Engineering Applications in Process Systems and Plant Operations**  
Chair: Dr. Kazuhiko 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 |
|        | 46-03 | **IS03, Knowledge-Based Interface Systems (I)**  
Chair: Prof. Yuji Iwahori, Chubu University, Japan  
Co-chair: Prof. Naohiro Ishii, Aichi Institute of Technology, Japan |
| 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 Ushiama, 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 |
| 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 Ushiami, 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 |
| 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 – 1
Chair: Dr. Cesar Sanin, University of Newcastle, Australia; Co-chair: Dr. Carlos Toro, VICOMTech, Spain

Leszek Borzemski and Anna Kaminska-Chuchma La [Volume II, Page 577]

Piotr Rygielski and Jakub M. Tomczak [Volume II, Page 587]

[11:00] A Multi-Agent Approach for Engineering Design Knowledge Modelling


[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

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]

Rafael Schirru, Stephan Baumann, Martin Memmel, and Andreas Dengel [Volume I, Page 494]

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

Nahla Jlaiel and Mohamed Ben Ahmed [Volume I, Page 514]

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

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

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]

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

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 Miniaei-Bidgoli, and Akram Beigi [Volume I, Page 021]

Eduardo Segredo, Carlos Segura, and Coromoto León [Volume I, Page 031]

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 Nguyen, Wroclaw University of Technology, Poland; Prof. Honghai Liu, University of Portsmouth, UK

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]

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 Rózewski 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]

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

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]

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

Monday 12 September 2011
46-280, 14:35 to 15:55

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]

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

Xicen Zhang, Yuki Hayashi, Tomoko Kojiri, and Toyohide Watanabe [Volume III, Page 589]
Monday 12 September 2011
42-115, 14:35 to 15:55

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]

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

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-AgentSystems, Intelligent Robotics and Control – II
Chair: Prof. Ngoc Nguyen, 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]

Fabio De Felice, Alessandro 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]

Sotiris Batsakis, Kostas Stravoskoufos, and Euripides G.M. Petrakis [Volume I, Page 556]

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. Ren 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]

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 Szczersicki [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 Szczersicki [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 Szczersicki [Volume II, Page 665]

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

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

Norihiro Kamide [Volume I, Page 596]

[16:35] Towards a Parallel Approach for Incremental Mining of Functional Dependencies on Multi-core Systems
Ghada Gasmi, Yahya Slimani, and Lotfi Lakhal [Volume I, Page 587]

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

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

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]

Kazuhisa Seta, Chihiro Hara, Minoru Fujiwara, Motohide Umano, and Mitsuru Ikeda [Volume IV, Page 292]
Chair: Prof. Ngoc Nguyen, 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 Şisman [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]

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

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Monday 12 September 2011
42-110, 16:15 to 18:15

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

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

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]

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

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]
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
42-115, 9:00 to 10:00

[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

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

Tomoaki Matsuno, Masui Takahiro, Keiichi Abe, Hiroshi Mineno, Ryuuji 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

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]

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

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

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

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

Ramón Hervás, Jesús Fontecha, Vladimir Villarreal, and Jose Bravo [Volume II, Page 293]
Negotiation in Electronic Commerce: A Study in the Latin-American Market  
Osvaldo Cairo, Juan Gabriel Olarte, and Fernando Rivera [Volume II, Page 303]

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

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

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

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

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

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

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

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]

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

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

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

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]

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]
[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]

Elisabeth Rakus-Andersson [Volume IV, Page 400]
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 Northwestern 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

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]

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

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

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]
Marina Resta [Volume II, Page 369]

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

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]

Seiji Tsuchiya, Misako Imono, Eriko Yoshimura, and Hirokazu Watabe [Volume I, Page 368]

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 Gatziu Grivas, Marc Schaaf, and Arne Koschel [Volume II, Page 272]

Jaegeol 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 Gatziu 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 Shirota [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]

Yoshiteru Ishida [Volume IV, Page 352]

Yoshiteru Ishida and Kazuma Sasaki [Volume IV, Page 362]
Automatic Filter Synthesis Based on Tree Generation and Evolutionary Optimization
Paul Faragó, Lelia Feştilă, Peter Söser, and Sorin Hintea [Volume IV, Page ]

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

SWord: Semantic Annotations Revisited
Oleg Rostanin and Passant Al Agroudy [Volume II, Page 407]

Using Suffix Arrays for Efficiently Recognition of Named Entities in Large Scale.
Benjamin Adrian and Sven Schwarz [Volume II, Page 417]

Extracting Personal Concepts From Users’ Emails To Initialize Their Personal Information Models
Sven Schwarz, Frank Marmann, and Heiko Maus [Volume II, Page 427]

Situation Exchange System using Nonverbal Information for Remote Communication
Junko Itou, Yoko Mori, and Jun Munemori [Volume III, Page 130]

A Consideration for New Employee Education by the Industry-University Cooperation
Teruhisa Ichikawa and Tomoya Kitani [Volume III, Page 138]

Development of e-Learning System using Handwriting on Screen
Satoru Fujii, Rie Onishi, and Kouji Yoshida [Volume III, Page 148]

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]

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]

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]

Ryo Okamoto and Akihiro Kashihara [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]

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

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

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

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

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

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]

Framework to Systematize Recipe Design of Batch Process into Technology
Tetsuo Fuchino, Teijii Kitajima, Yukiyasu Shimada, and Kouji Kawano [Volume III, Page 432]

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

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

Design Illustration of a Symmetric OTA using Multiobjective Genetic Algorithms
Laura Ivanciu, Gabriel Oltean, and Sorin Hintea [Volume III, Page 452]

Dynamic Reconfiguration in JPEG2000 Hardware Architecture
Ali Ahmadiania, Hernando Fernandez-Canque, and Roberto Ramirez-Iniguez [Volume III, Page 462]

DTIRC Based Optical Collimators
R. Ramirez-Iniguez, A. Ahmadinid, and H. Fernandez-Canque [Volume III, Page 471]

Machine Vision Applied to Highly Variable Objects

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]

Distributed Active Optical Fiber Sensor for Bending Measurement
Ramona Gălătus and E. Voiculescu [Volume III, Page 501]

Wednesday 14 September 2011
46-260, 10:20 to 12:20

Design of Social Intelligence and Creativity Environment
Chair: Prof. Toyohide Watanabe, Nagoya University, Japan; Co-chair: Dr. Naoto Mukai, Tokyo University of Science, Japan

Controlling Chaotic Oscillations in User-Centric Cognitive Radio Networks
Yuki Nonaka and Mikio Hasegawa [Volume III, Page 599]

A Study of the Analytical Method for the Location Planning of Charging Stations for Electric Vehicles
Hisatomo Hanabus 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]

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

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


[10:40] 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]

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]

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

Chair: Prof. Toyohide Watanabe, Nagoya University, Japan ; Co Chair: Prof.Taketoshi Ushiama, 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]

Soichi Murai and Taketoshi Ushiama [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

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

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]

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]

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

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]
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 Furuhata, 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 Fruhata, 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]

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 Ushiama, 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

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]


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]

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]
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 Reserach 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)