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## Chairs' Welcome

We are pleased to welcome you to the 20th International Conference on Knowledge - Based and Intelligent Information & Engineering Systems (KES2016) which was organised by KES International and held on September 5th to 7th, 2016 in York, United Kingdom.

Celebrating 20 years of KES conferences, KES2016 is the 20th event in a series of broad-spectrum intelligent systems conferences first held in Adelaide, Australia in 1997. The main aim of this KES conference series is to provide an internationally respected forum for the dissemination of research results and the discussion of issues relating to the theory, technologies and applications of intelligent information and knowledge-based systems.

This year, this truly international conference attracted a substantial number of researchers and practitioners from all over the world who submitted their papers to five general tracks and 28 special sessions on specific topics. Accepted and presented papers highlight the new trends and challenge of intelligent and knowledge-based systems. Each paper was peer reviewed by at least two members of the International Program Committee and International Reviewer Board. Out of a large number of submissions, more than 200 high-quality papers were accepted for oral presentation and publication in *Procedia Computer Science*, submitted for indexing in CPCi (ISI conferences), Engineering Index, and Scopus.

We would like to express our thanks to the Keynote Speakers - Professors Andreas Holzinger (Austria), Detlef Nauck (UK), Trevor Martin (UK), Itsuki Noda (Japan) and Takahashi Washio (Japan).

Our special thanks go to the Programme Co-chairs, General Track Chairs, all International Programme Committee members and reviewers for their valuable efforts in the review process which helped us to guarantee the highest quality of selected papers for the conference. We cordially thank the organisers and chairs of special sessions which make an essential contribution to the success of the conference.

Finally, we thank all the authors, presenters and delegates for their valuable contribution to making this a successful event.

We hope and intend that KES2016 makes a significant contribution to international collaboration and understanding which is essential to the furtherance of scientific excellence.

**Prof Robert J. Howlett**

**Prof Lakhmi C. Jain**

**Prof Bogdan Gabrys**

**KES2016 Chairs**

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KES2016 is part of the KES Conference Series

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### **KES International**

The organisation and operation of KES2016 is the responsibility of KES International.

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## General and Thematic Track Sessions

Code	Track Title	Track Chair
<b>G01</b>	Theoretical Foundations of Intelligent Systems: Theories, Algorithms and Methodologies	Prof. Cecilia Zanni-Merk & Dr Liya Ding
<b>G02</b>	Intelligent Applications	Dr Carlos Toro
<b>G03</b>	Emergent Intelligent Technologies	Prof Ron Hartung
<b>T01</b>	Knowledge Technologies	Prof Anne Hakansson Royal & Dr Ireneusz Czarnowsk
<b>T02</b>	Natural Language Processing	Prof. Girish Nath Jha

## Invited Sessions

Code	Session	Session Chair
<b>IS01</b>	Networks for Innovation, Knowledge Creation and Sharing	Prof. Dr. Shuichiro Yamamoto
<b>IS02</b>	Numerical Modelling and Intelligent Decision Making	Prof. Margarita N. Favorskaya & Dr. Alena V. Favorskaya
<b>IS03</b>	Computer Vision for Intelligent Decision Making	Prof. Margarita N. Favorskaya & Prof. Lakhmi C. Jain
<b>IS05</b>	Data Science for Big Data	Prof. Katsutoshi Yada
<b>IS06</b>	Knowledge-Based Systems for e-Business	Prof. Kazuhiko Tsuda, Dr. Nobuo Suzuki & Prof. Masakazu Takahashi
<b>IS08</b>	Intelligent Transportation Systems	Dr. Milan Simic
<b>IS10</b>	Innovations in Knowledge and Intelligence Methodologies	Dr. Liya Ding
<b>IS12</b>	Complex Multidimensional Data Analysis	Prof. Mika Sato-Ilic
<b>IS14</b>	Skill Acquisition and Ubiquitous Human Computer Interaction	Assoc. Prof. Masato Soga & Assist. Prof. Hirokazu Miura
<b>IS15</b>	E-learning and ICT for active learning	Prof. Hideyuki Kanematsu, Prof. Nobuyuki Ogawa, Prof. Kuniaki Yajima & Prof. Kazunori Nishino
<b>IS16</b>	Computational Intelligence System and Applications	Prof. Yuji Iwahori & Assist Prof. Ryosuke Yamanishi
<b>IS17</b>	Intelligent Operations Management Under Internet-of-Things Era	Prof. Xiangpei Hu & Associate Prof. Lijun Sun
<b>IS18</b>	Knowledge Engineering in Large-Scale Systems	Dr. Sergey V. Zykov & Dr. Pavel A. Shapkin
<b>IS20</b>	Human factors for communication & intelligent systems	Prof. Atsuko K. Yamazaki
<b>IS21</b>	Intelligent Network, Services and Knowledge Management	Assoc. Prof. Motoki Miura
<b>IS22</b>	Machine Learning for Multimedia Data Analysis	Dr. Alessia Amelio, Ph.D.
<b>IS24</b>	Chance Discovery and Market of Data	Akinori Abe
<b>IS25</b>	Recent Advances in Intelligent Signal, Audio and Video Analysis	Dr. Yulia A Hicks, Assistant Prof. Dr. Hiroharu Kawanaka & Associate Prof. Dr. Haruhiko Takase

Code	Session	Session Chair
<b>IS26</b>	Knowledge-based Learning and Education Support System: Design and Function	Dr. Tomoko Kojiri
<b>IS28</b>	Immunity-Based Systems: Resilient Computing	Prof. Dr. Yoshiteru Ishida

## Plenary Talks

**Prof. Andreas Holzinger**

Medical University Graz, Austria

### *Machine Learning for health informatics: recent trends and applications*

**Abstract:** The goal of ML is to develop algorithms which can learn and improve over time and in automatic machine learning (aML) great advances have been made, for example, in speech recognition, recommender systems, or autonomous vehicles. Automatic approaches greatly benefit from big data with many training sets. In the biomedical domain, we are often confronted with a small number of data sets, where aML-approaches suffer of insufficient training samples. Moreover in the medical domain we are confronted with uncertainties and non-determinism on which such algorithms can not easily be applied. Here, interactive Machine Learning (iML) may be of help, defined as "algorithms that can interact with agents and can optimize their learning behaviour through these interactions, where the agents can also be human". A "doctor-in-the-loop" can be beneficial in solving computationally hard problems, e.g., subspace clustering, protein folding, or k-anonymization of health data, where human expertise can help to reduce an exponential search space through heuristic selection of samples. Therefore, what would otherwise be an NP-hard problem reduces greatly in complexity through the input and the assistance of a human agent involved in the learning phase. However, for the successful application of ML in the biomedical domain a multidisciplinary skill set is required, encompassing the following seven specializations: 1) data science, 2) algorithms, 3) network science, 4) graphs/topology, 5) time/entropy, 6) data visualization, and 7) privacy, data protection, safety and security, fostered in the HCI-KDD approach.



**Biography:** Andreas and his Group work on extracting knowledge from data and foster a synergistic combination of methodologies of two areas that offer ideal conditions towards unraveling problems with complex health data: Human-Computer Interaction (HCI) and Knowledge Discovery/Data Mining (KDD), with the central goal of supporting human intelligence with machine learning to discover novel, previously unknown insights into data. Andreas is founder and leader of the international Expert Network HCI-KDD, Assoc. Editor of Knowledge and

Information Systems (KAIS), Brain Informatics (BRIN), and member of IFIP WG 12.9 Computational Intelligence. Andreas is head of the Research Unit HCI-KDD, Institute for Medical Informatics, Statistics and Documentation at the Medical University Graz, Associate Professor at Graz University of Technology, where he teaches Biomedical

Informatics, and supervises engineering students at the Institute of Information Systems and he is currently Visiting Professor at Vienna University of Technology, where he is teaching machine learning for health informatics at the Faculty of Informatics. Andreas holds a PhD (1998) in Cognitive Science from Graz University and a Habilitation (second PhD, 2003) in Computer Science from Graz University of Technology. Andreas was Visiting Professor in Berlin, Innsbruck, London (2 times), Aachen and Vienna. [www.hci-kdd.org](http://www.hci-kdd.org)

**Prof Detlef D Nauck**

BT, UK

***Data Science at BT***

**Abstract:** All large organisations are facing the challenge of integrating sophisticated analytics and the management of big data into their daily operations. Corporations have long realised the value of analytics for making evidence-based decisions, but they are finding it difficult to keep up with the evolving fields of business intelligence, data mining, predictive analytics, big data etc. that all somehow seem to be culminating into what is called Data Science today. The challenges of corporate analytics are not about which analytical tools to buy, which big data environment to deploy or which analytical methods produce the best predictive models. Corporations are struggling more with the 'Hows' of analytics instead of the 'Whats'. In this talk I will look at how BT's corporate research program addresses the challenges that Data Science poses to the business. Using examples of practical projects I will illustrate how analytics and big data methods are used for improving decisions and operations. The presentation will close with an outlook on how corporate analytics may continue to evolve and how academic research can contribute.



**Biography:** Detlef Nauck is Chief Research Scientist for Data Science with BT's Research and Innovation Division located at Adastral Park, Ipswich, UK. He is leading a group of international scientists working on research into Data Science covering areas like process analytics, network analytics, customer analytics, business modelling and autonomies for networks, processes and IT systems. Detlef focuses on solving business problems that require complex analysis of large and diverse data sources and the design of intelligent systems. His research programme focusses on making advances in practical machine learning methods and data analysis techniques and downstreaming them into the business. The aim is to enable networks, systems and processes to reach a level of self-awareness that allows them to automatically predict and prevent failures and so improve customer experience. Detlef has published over 100 papers and holds six patents. He is a Visiting Professor at Bournemouth University and a Private Docent at the Otto-von-Guericke University of Magdeburg, Germany. Detlef holds an MSc (1990) and a PhD (1994) in Computer Science both from the University of Braunschweig, Germany. He also holds a Habilitation (post-doctoral degree) in Computer Science from the Otto-von-Guericke University of Magdeburg, Germany (2000).



**Prof Trevor Martin**

University of Bristol, UK

***The need for approximation in intelligent systems, or how to avoid "2+2 is approximately 5"***

**Abstract:** We are undergoing a revolution in artificial intelligence, driven by simultaneous increases in the computing power available and in the quantity of data that forms the input to algorithms. We can distinguish two distinct trends in this revolution. The first is taking us towards fully autonomous intelligent systems such as autonomic networks, driverless cars and the killer robots beloved by sci fi writers and the popular media. The second strand involves collaborative intelligent systems, where the complementary strengths of humans and machines work in partnership. In both cases, there is a gap between the crisp, binary representations used by computers and the more approximate, vague definitions used by humans. I will argue that this gap can be bridged by graded (fuzzy) representations, which give a mathematical framework to model the approximate hierarchical terms used in human language, as well as enabling management of the uncertainties, reliability and granularity inherent in much of the data.



**Biography:** Trevor Martin is Professor of Artificial Intelligence at the University of Bristol, UK and a BT Senior Research Fellow, working with the Security Futures Practice. His research covers soft computing in artificial intelligence applied to areas such as security analytics, extraction and integration of semi-structured information, soft concept hierarchies, and fundamental approaches to fuzzy uncertainty. In addition to substantial funding from BT, this work has been supported by the European Commission, MOD, GCHQ, EPSRC and DTI.

He is a member of the editorial boards of journals such as Fuzzy Sets and Systems and Evolving Systems, and has served on many conference programme and organising committees, including IEEE Fuzzy Systems programme chair in 2007 and technical co-chair in 2010 and 2015. He is a co-organiser of the URSW (Uncertain Reasoning for the Semantic Web) series of workshops, chairs the IEEE Computational Intelligence Society's Semantic Web Task Force and is a member of the IEEE's recently established FML (Fuzzy Markup Language) Standards group.

**Dr Itsuki Noda**

Artificial Intelligence Research Center (AIRC) National Institute of Advanced Industrial Science and Technology (AIST), Japan

***Multiagent Simulation for Designing Social Services***

**Abstract:** Computer simulations of social phenomena will become the most efficient tool to design and to improve social systems. Big data and advancement of computational powers enable to handle large scale social simulations in which a large number of human activities are represented by behaviors of multiple intelligent agent. We are conducting a project to establish multi-agent social simulations and to apply them to actual real-world problems like disaster mitigation, smart transportation systems, stable economical systems, and so on. In this talk, I will show several results of this project.



**Biography:** NODA, Itsuki is a team leader of Computational Social Intelligence Research Team and deputy leader of NEC-AIST AI Cooperative Research Laboratory in Artificial Intelligence Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Japan. He received the B.E., M.E. and Ph.D., degrees in electrical engineering from Kyoto University, Kyoto, Japan, in 1987, 1989, and 1995, respectively. He was a visiting researcher of Stanford University in 1999, and worked as a staff of Council of Science and Technology Policy of

Japanese government in 2003.

He was a founding member of RoboCup and promoted Simulation League since 1995. Now, he is the president of RoboCup Federation.

He also has been joining development of integrated information sharing and simulation system of disaster and rescue. Some of results were used to support rescue activity for the Great East Japan Earthquake.

He is now promoting a project to develop a framework for large scale multiagent social simulation system on high performance computing environments.

He has received the the 1995 best research award of JNNS (Japanese Neural Network Society), the best paper award of JAWS-2008, the best paper award of IPSJ-2009 and IPSJ-2010, and the 2011 Field Innovation Award (silver) of JSAI.

He is interested in multi-agent social simulation, machine learning, and disaster mitigation information systems.

**Prof Takashi Washio**

Osaka University, Japan

***Nano-Scale and Ultratrace Sensing for IoT using Machine Learning***

**Abstract:** Machine learning and data mining techniques are often used to analyze big data acquired from large-scale IoT systems. On the other hand, they now have a promising outlook to be applied to generating the big data. In this talk, I will demonstrate such promising applications of the techniques to the future advanced sensing devices for IoT. Recent development of advanced devices is now enhancing the feasibility of nano-scale and ultratrace sensing of various objective materials, and is becoming good candidates of novel and compact IoT sensors for our society. However, the output of the individual sensing device is noisy and contains limited information on the sensing object in many cases, because effects of thermal disturbances and quantum fluctuations of the objects and the devices are significant in the nanoscopic sensing process. Key techniques to alleviate these limitations are the information extraction from the sensing output signals and the information integration of the multiple sensing outputs by applying machine learning methods. I will introduce the current development of the sensing systems for detecting hazardous viruses/bacteria and toxic compounds by combining the machine learning techniques and the advanced device techniques in a Japanese national project: InSECT (ultra high-speed and multiplexed sensing system using Incredibly Smart, Efficient and Compact devices by insect Technology) under an umbrella of ImpACT (Impulsing Paradigm Change through Disruptive Technologies) program.



**Biography:** Takashi Washio is a full professor in Department of Reasoning for Intelligence, The Institute of Scientific and Industrial Research, Osaka University which is located at Ibaraki City, Osaka, Japan. He concurrently serves a director of NEC (NEC Corporation) - AIST (National Institute of Advanced Industrial Science and Technology) AI Cooperative Research Laboratory located at Koto-ku, Tokyo, Japan. His department in Osaka University focuses on basic studies of machine learning

and data mining and is a leading research group in Japan. His NEC - AIST cooperative laboratory orients applications of machine learning, data mining and simulation techniques to various scientific, industrial and social fields. His current main research interests are machine learning principles for high dimensional big data in the basic study and machine learning techniques for scientific advanced sensing in the application study. Takashi Washio obtained his M.E. and Ph.D in the field of nuclear measurement and instrumentation control at Tohoku University, Miyagi, Japan, in 1985 and 1988, respectively. He was previously a visiting researcher of a Nuclear

Reactor Laboratory of MIT (Massachusetts Institute of Technology), USA from 1988 to 1990, a senior researcher of Mitsubishi Research Institute from 1990 to 1996, and an associate professor in Osaka University from 1996 to 2006.

## Conference Timetable

Monday 5 September 2016	Room 1 Henley Suite	Room 2 North Ridings	Room 3 Castle	Room 4 Derwent	Room 5 Foss	Room 6 West Ridings	Room 7 Swale
8.00-9.15	Registration						
9.15-9.30	Opening Ceremony Prof Robert J Howlett and Prof Lakhmi C. Jain						
9.30-10.30	Keynote Speaker 1 Prof Trevor Martin <i>The need for approximation in intelligent systems, or how to avoid "2+2 is approximately 5"</i>						
10.30-11.00	Coffee						

Monday 5 September 2016	Room 1 Henley Suite	Room 2 North Ridings	Room 3 Castle	Room 4 Derwent	Room 5 Foss	Room 6 West Ridings	Room 7 Swale
11.00-13.00	G1A: Theoretical Foundations of Intelligent Systems <i>Prof. Cecilia Zanni-Merk, Dr Liya Ding</i> k16gen-008 k16gen-011 k16gen-014 k16gen-017 k16gen-020 k16gen-028	G2A: Intelligent Applications k16gen-021 k16gen-023 k16gen-034 k16gen-037 k16gen-046 k16gen-047	G3A: Emergent Intelligent Technologies <i>Prof Ron Hartung</i> k16gen-004 k16gen-015 k16gen-016 k16gen-030 k16gen-045 k16gen-055	T1A: Knowledge Technology <i>Prof Anne Hakansson, Dr Ireneusz Czarnowski</i> k16gen-007 k16gen-027 k16gen-039 k16gen-049 k16gen-050 k16gen-080	IS05: Data Science for Big Data <i>Prof. Katsutoshi Yada</i> k16is-038 k16is-080 k16is-134 k16is-146 k16is-147	IS24: Chance Discovery and Market of Data <i>Akinori Abe</i> k16is-072 k16is-073 k16is-076 k16is-131 k16is-135 k16is-138	
13.00-14.00	Lunch						
14.00-15.00	Keynote Speaker 2 <i>Dr Itsuki Noda</i> Multiagent Simulation for Designing Social Services						
15.00-15.30	Coffee						

Monday 5 September 2016	Room 1 Henley Suite	Room 2 North Ridings	Room 3 Castle	Room 4 Derwent	Room 5 Foss	Room 6 West Ridings	Room 7 Swale
15.30-17.30	G1B: Theoretical Foundations of Intelligent Systems <i>Prof. Cecilia Zanni-Merk, Dr Liya Ding</i> k16gen-028 k16gen-029 k16gen-044 k16gen-051 k16gen-053 k16gen-074	G2B: Intelligent Applications <i>Dr Carlos Toro</i> k16gen-048 k16gen-063 k16gen-081 k16gen-089 k16gen-090 k16gen-093	G3B: Emergent Intelligent Technologies <i>Prof Ron Hartung</i> k16gen-078 k16gen-091 k16gen-109 k16gen-112 k16gen-119	T1B: Knowledge Technology <i>Prof Anne Hakansson, Dr Ireneusz Czarnowski</i> k16gen-096 k16gen-114 k16gen-121 k16gen-124 k16gen-129 k16gen-139 k16is-083	IS12: Complex Multidimensional Data Analysis <i>Prof. Mika Sato-Ilic</i> k16i6-020 k16is-028 k16is-049 k16is-084 k16is-088 k16is-132		
	Boat Trip						

<b>Tuesday 6 September 2016</b>	<b>Room 1 Henley Suite</b>	<b>Room 2 North Ridings</b>	<b>Room 3 Castle</b>	<b>Room 4 Derwent</b>	<b>Room 5 Foss</b>	<b>Room 6 West Ridings</b>	<b>Room 7 Swale</b>
<b>8.30-9.30</b>	Registration						
<b>9.30-10.30</b>	Keynote Speaker 3 <i>Prof. Andreas            Holzinger</i> Machine Learning for health informatics: recent trends and applications						
<b>10.30-11.00</b>	Coffee						



Tuesday 6 September 2016	Room 1 Henley Suite	Room 2 North Ridings	Room 3 Castle	Room 4 Derwent	Room 5 Foss	Room 6 West Ridings	Room 7 Swale
11.00-13.00	G1C: Theoretical Foundations of Intelligent Systems <i>Prof. Cecilia Zanni-Merk, Dr Liya Ding</i> k16gen-075 k16gen-077 k16gen-084 k16gen-085 k16gen-086 k16gen-092	G2C: Intelligent Applications <i>Dr Carlos Toro</i> k16gen-098 k16gen-099 k16gen-102 k16gen-111 k16gen-113 k16gen-117	T2A: Natural Language Processing <i>Prof. Girish Nath Jha</i> k16gen-006 k16gen-060 k16gen-094 k16gen-104 k16gen-107 k16gen-118	IS16: Computational Intelligence System and Applications <i>Prof. Yuji Iwahori, Assist Prof. Ryosuke Yamanishi</i> k16is-004 k16is-014 k16is-018 k16is-029 k16is-044 k16is-052	IS15A: E- learning and ICT for Active Learning - A <i>Prof. Hideyuki Kanematsu, Prof. Nobuyuki Ogawa, Prof. Kuniaki Yajima, Prof. Kazunori Nishino</i> k16is-010 k16is-091 k16is-095 k16is-096 k16is-097	IS22A: Machine Learning for Multimedia Data Analysis - A <i>Dr. Alessia Amelio</i> k16is-011 k16is-087 k16is-090 k16is-092 k16is-094	IS06 Knowledge- Based Systems for e-Business <i>Prof. Kazuhiko Tsuda, Dr. Nobuo Suzuki, Prof. Masakazu Takahashi</i> k16is-024 k16is-051 k16is-053 k16is-054 k16is-056 k16is-068
13.00-14.00	Lunch						
14.00-15.00	Keynote Speaker 4 <i>Prof Takashi Washio</i> Nano-Scale and Ultratrace Sensing for IoT using Machine Learning						

Tuesday 6 September 2016	Room 1 Henley Suite	Room 2 North Ridings	Room 3 Castle	Room 4 Derwent	Room 5 Foss	Room 6 West Ridings	Room 7 Swale
15.00-15.30	Coffee						
15.30-17.50		IS18: Knowledge Engineering in Large-Scale Systems <i>Dr. Sergey V. Zykov, Dr. Pavel A. Shapkin</i> k16is-025 k16is-026 k16is-027 k16is-039 k16is-062	T2B: Natural Language Processing <i>Prof. Girish Nath Jha</i> k16gen-130 k16gen-149 k16gen-088	IS28: Immunity- Based Systems: Resilient Computing <i>Prof. Dr. Yoshiteru Ishida</i> k16is-055 k16is-126 k16is-136 k16is-137 k16is-139 k16is-148 k16is-149	IS15B: E- learning and ICT for Active Learning - B <i>Prof. Hideyuki Kanematsu, Prof. Nobuyuki Ogawa, Prof. Kuniaki Yajima, Prof. Kazunori Nishino</i> k16is-100 k16is-102 k16is-124	IS22B: Machine Learning for Multimedia Data Analysis - B <i>Dr. Alessia Amelio</i> k16is-101 k16is-110 k16is-111 k16is-112 k16is-114	IS20: Human factors for communication & intelligent systems <i>Prof. Atsuko K. Yamazaki</i> k16is-002 k16is-060 k16is-081 k16is-082 k16is-099 k16is-108 k16is-109
	Conference Dinner						

Wednesday 7 September 2016	Room 1 Henley Suite	Room 2 North Ridings	Room 3 Castle	Room 4 Derwent	Room 5 Foss	Room 6 West Ridings	Room 7 Swale
8.30-9.00	Registration						
9.00-11.00	G1D: Theoretical Foundations of Intelligent Systems <i>Prof. Cecilia Zanni-Merk, Dr Liya Ding</i> k16gen-103 k16gen-110 k16gen-116 k16gen-122 k16gen-125 k16gen-127	G2D: Intelligent Applications <i>Dr Carlos Toro</i> k16gen-132 k16gen-140 k16gen-141 k16gen-145 k16gen-147	IS14: Skill Acquisition and Ubiquitous Human Computer Interaction <i>Assoc. Prof. Masato Soga, Assist. Prof. Hirokazu Miura</i> k16is-033 k16is-043 k16is-103 k16is-141 k16is-142 k16is-143	IS17: Intelligent Operations Management Under Internet- of-Things Era <i>Prof. Xiangpei Hu, Associate Prof. Lijun Sun</i> k16is-009 k16is-058 k16is-066 k16is-086 k16is-115 k16is-133	IS25: Recent Advances in Intelligent Signal, Audio and Video Analysis <i>Dr. Yulia A Hicks, Assistant Prof. Dr. Hiroharu Kawanaka, Associate Prof. Dr. Haruhiko Takase</i> k16is-034 k16is-063 k16is-064 k16is-065 k16is-067 k16is-069	IS26: Knowledge- based Learning and Education Support System: Design and Function <i>Dr. Tomoko Kojiri</i> k16is-031 k16is-047 k16is-059 k16is-077 k16is-079 k16is-128	
11.00-11.30	Coffee						

<b>Wednesday 7 September 2016</b>	<b>Room 1 Henley Suite</b>	<b>Room 2 North Ridings</b>	<b>Room 3 Castle</b>	<b>Room 4 Derwent</b>	<b>Room 5 Foss</b>	<b>Room 6 West Ridings</b>	<b>Room 7 Swale</b>
<b>11.30-12.30</b>	Keynote Speaker 5 <i>Prof Detlef D Nauck</i> Data Science at BT						
<b>12.30-13.30</b>	Lunch						

Wednesday 7 September 2016	Room 1 Henley Suite	Room 2 North Ridings	Room 3 Castle	Room 4 Derwent	Room 5 Foss	Room 6 West Ridings	Room 7 Swale
13.30-15.10	IS01: Networks for Innovation, Knowledge Creation and Sharing <i>Prof. Dr. Shuichiro Yamamoto</i> k16is-005 k16is-006 k16is-013 k16is-015 k16is-045	IS02: Numerical Modelling and Intelligent Decision Making & IS03: Computer Vision for Intelligent Decision Making <i>Prof. Margarita N. Favorskaya, Dr. Alena V. Favorskaya, Prof. Margarita N. Favorskaya, Prof. Lakhmi C. Jain</i> k16is-021 k16is-022 k16is-001 k16is-003 k16is-008	IS08: Intelligent Transportation Systems <i>Dr. Milan Simic</i> k16is-104 k16is-106 k16is-119 k16is-120 k16is-127	IS10: Innovations in Knowledge and Intelligence Methodologies <i>Dr. Liya Ding</i> k16is-030 k16is-037 k16is-071	IS21: Intelligent Network, Services and Knowledge Management <i>Assoc. Prof. Motoki Miura</i> k16is-007 k16is-017 k16is-019 k16is-040	IS27: Statistical Learning for Decision Making Pattern Recognition <i>Dr. Laura Falaschetti</i> k16is-078 k16is-093 k16is-116 k16is-016	
15.10-15.30	Coffee						
15.30	Closing Ceremony						

## Presentation Schedule

### *G1A: Theoretical Foundations of Intelligent Systems*

Chairs: Prof Cecilia Zanni-Merk & Dr Liya Ding

k16gen-008

Randomization-based Frameworks for Privacy-preserving Collaborative Filtering

Assoc. Prof. Dr. Huseyin Polat, Ms. Zeynep Batmaz

k16gen-011

A Novel Structure Learning Algorithm for Optimal Bayesian Network: Best Parents

Mr. Andrew Kreimer, Dr. Maya Herman

k16gen-014

Text Classification Using a Novel Time Series Based Methodology

Prof. Zeev Volkovich, Dr. Renata Avros

k16gen-017

Supporting Adaptive Tour with High Level Petri Nets

Dr. Shang Gao,

k16gen-020

Community detection by consensus genetic-based algorithm for directed networks

Phd Mari· Nascimento, Msc Stefano Mathias, Phd Valerio Rosset

***G1B: Theoretical Foundations of Intelligent Systems***

Chairs: Prof Cecilia Zanni-Merk & Dr Liya Ding

k16gen-028

Obtaining repetitive actions for genetic programming with multiple trees

Mr. Takashi Ito, Dr. Michimasa Inaba, Dr. Kenichi Takahashi

k16gen-029

Interactive learning of a FALCON for a card game

Mr. Kazuma Kasahara, Dr. Michimasa Inaba, Mr. Kenta Nimoto, Dr. Kenichi Takahashi

k16gen-044

Definability in Mining Incomplete Data

Professor Jerzy Grzymala-busse, Doctor Teresa Mroczek

k16gen-051

Dynamic delegation based on temporal context

Phd Student Ouarda Bettaz, Associate Professor Narhimene Boustia,  
Professor Aicha Mokhtari

k16gen-053

Automatic Transformation of Data Warehouse Schema To NoSQL Data Base:  
Comparative Study

PhD student Rania Yangui, Professor Faiez Gargouri, Assistant Teacher Ahlem Nabli

k16gen-074

On the use of surplus division to facilitate efficient negotiation in the  
presence of incomplete information

Dr. Trong Hieu Tran, Mrs. Thi Hong Khanh Nguyen, Prof. Dr. Quoc Bao Vo

***G1C: Theoretical Foundations of Intelligent Systems***

Chairs: Prof Cecilia Zanni-Merk & Dr Liya Ding

k16gen-075

Development of Heartbeat Detection Kit For Biometric Authentication System

Dr. Dzati Athiar Ramli, Mr Kai Jye Chee, Mr Man Yeap Hooi

k16gen-077

Decision Support System for Production Scheduling (DSSPS)

Mr Chiuliang Gan, Dr Liya Ding, Mr Budihardjo Hadianto, Mr Weipang Liang,  
Mr Ting Lin, Mr Kwongwai Watt

k16gen-084

Multi-objective Multi-level Filling Evolutionary Algorithm for the 3D Cutting  
Stock Problem

Miss Yanira Gonz lez Gonz lez, Miss Coromoto Le n Hern ndez, Miss Gara  
Miranda Valladares

k16gen-085

Improving semantic relatedness assessments: ontologies meet textual  
corpora

Dr Montserrat Batet, Dr David S nchez

k16gen-086

Formalization of a Framework for Cultural Translation in Global Collaboration.  
The case of the Lean Organization

Mr. Pierre Masai, Dr. Cecilia Zanni-merk

k16gen-092

Wavelet Neural Networks for DNA Sequence Classification Using the Genetic  
Algorithms and the Least Trimmed Square

MR Abdesselem Dakhli, Mr wajdi bellil, Mr chokri benamar



***G1D: Theoretical Foundations of Intelligent Systems***

Chairs: Prof Cecilia Zanni-Merk & Dr Liya Ding

k16gen-103

Growing Neural Gas as a memory mechanism of a heuristic to solve a community detection problem in networks

Phd Mari· Nascimento, Bsc Camila Santos

k16gen-110

Improving the Connectivity of Community Detection-based Hierarchical Routing Protocols in Large-Scale WSNs

Professor ValÈrio Rosset, Professor Mari· Nascimento, Mr. Matheus Paulo

k16gen-116

Spatio-Temporal Web Performance Prediction: Turning Bands Method and Sequential Gaussian Simulation

Professor Leszek Borzemski, Msc Michał Danielak, Dr Anna Kamińska-Chuchmała

k16gen-122

Modelling Functional Behavior of Event-Based Systems: A Practical Knowledge-Based Approach

Mr. Fahim Imam, Prof. Thomas Dean

k16gen-125

A novel robust metric for comparing the intelligence of two cooperative multiagent systems

Senior Lecturer Dr. Laszlo Barna Iantovics, Prof. Dr. Elena Nechita, Associate Prof. Dr Corina Rotar

k16gen-127

New algorithm for Frequent Itemsets Mining From Evidential Data Streams

Mr. Farhat Amine, Dr. Ben Said Lamjed, Dr. Gouider Mohamed Salah

***G2A: Intelligent Applications***

Chair: Dr Carlos Toro

k16gen-021

Peak Finding Algorithm to Improve Syllable Segmentation for Noisy Bioacoustic Sound Signal

Dr. Dzati Athiar Ramli, Dr. Haryati Jaafar

k16gen-023

Designing Intelligent Factory: Conceptual Framework and Empirical Validation

Mr. Syed Shafiq, Dr. Cesar Sanin, Prof. Edward Szczerbicki, Dr. Carlos Toro, Dr. Gorka Velez

k16gen-034

Modeling the Perceptual Response from Effects Oriented Web Components Towards Lower Intrusiveness

Dr Jarosław Jankowski, Dr Anna Lewandowska, MSc Wojciech Sałabun, Dr Jarosław Wątróbski, Dr Paweł Ziemia

k16gen-037

Simulation of Detecting Function object for AGV using Computer Vision with Neural Network

Miss Jittima Varagul, Mr. Toshio Ito

k16gen-046

Autonomous driving trains to pass in bidirectional crossing loop preventing stops

Dr. Osmar Dordal, Dr. Br·ulio jvila

k16gen-047

Multi-Objective Cuckoo Search Optimization for Dimensionality Reduction

Mr Waleed Yamany, Assoc. Prof Nashwa El-bendary, Dr Eid Emary, Prof. Aboul Ella Hassanien

***G2B: Intelligent Applications***

Chair: Dr Carlos Toro

k16gen-048

Metal based additive layer manufacturing: variations, correlations and process control

Mr Paul O'regan, Mr Gareth Hankins, Mr Nick Jones, Mr Paul Prickett, Professor Rossi Setchi

k16gen-063

EARNPIPE: A Testbed for Smart Water Pipeline Monitoring using Wireless Sensor Network

Phd Fatma Karray, Professor Mohamed Abid, Professor Alberto Garcia-ortiz, Doctor Mohamed W. Jmal, Doctor Abdulfattah M. Obeid

k16gen-081

Ontology Knowledge mining based Association Rules Ranking

Phd Student Rihab Idoudi, Professor Kamel Hamrouni, Dr. Karim Saheb Ettabaa, Professor Basel Solaiman

k16gen-089

Predicting Book Use in University Libraries by Synchronous Obsolescence

Dr. Kensuke Baba, Dr. Toshiro Minami, Dr. Tetsuya Nakatoh

k16gen-090

An Innovative Approach for Attribute Reduction using Rough Sets and Flower Pollination Optimisation

Dr Gerald Schaefer, Dr Eid Emary, Dr Aboul Ella Hassanien, Mr Waleed Yamany, Dr Shao Ying Zhu

k16gen-093

Using machine vision for flexible automatic assembly system

Assoc. Prof. Dr. Kontorn Chamniprasartb, Mr. Phansak Nerakaea, Dr. Pichitra Uangpairoj

## *G2C: Intelligent Applications*

Chair: Dr Carlos Toro

k16gen-098

Intellectual Ring Laser Quality Control System - Key Component of Ring Lasers  
Science-Based Production

Ass. Professor Tatiana Soloveva, Ass. Professor Alexander Belov

k16gen-099

Comparing and combining time series trajectories using Dynamic Time  
Warping

Dr Neil Vaughan, Professor Bogdan Gabrys

k16gen-102

Logical and semantic modeling of complex biomolecular networks  
Ph.d Student Ali Ayadi, Associate Professor François De Bertrand De Beuvron,  
Associate Professor Saoussen Krichen, Associate Professor Cecilia Zanni-merk

k16gen-111

A multi-agent approach to computational optimization of metal forming  
processes

Phd Jerzy Duda, Phd Andrzej Macioł, Phd Piotr Macioł

k16gen-113

A New Model for Multi-criteria ABC Inventory Classification: PROAFTN  
Method

Mr Mohamed Radwene Douissa, Mr Khaled Jabeur

k16gen-117

Introducing a pilot data collection model for real-time evaluation of data  
redundancy

Mr Ali Rezaei Yazdi, Dr Christopher Buckingham

***G2D: Intelligent Applications***

Chair: Dr Carlos Toro

k16gen-132

Activity detection in smart home environment

Mr. Pavle Skocir, Prof. Gordan Jezic, Mr. Petar Krivic, Assoc. Prof. Mario Kusek, Ms. Matea Tomeljck

k16gen-140

Portable decision support for diagnosis of Traumatic Brain Injury

Professor Rossi Setchi, Mr Bruno Albert, Dr Alexandre Noyvirt, Mr Haldor Sjaaheim, Dr Frode Strisland, Dr Svetla Velikova

k16gen-141

Automatic EEG processing for the early diagnosis of Traumatic Brain Injury

Professor Rossi Setchi, Mr Bruno Albert, Dr Alexandre Noyvirt, Mr Haldor Sjaaheim, Dr Frode Strisland, Dr Svetla Velikova

k16gen-145

Effects of change propagation resulting from adaptive preprocessing in multicomponent predictive systems

Mr Manuel Martin Salvador, Marcin Dr Budka, Bogdan Proff Gabrys

k16gen-147

Local learning for multi-layer, multi-component predictive system

Miss Bassma Al-jubouri, Prof. Bogdan Gabrys

### *G3A: Emergent Intelligent Technologies*

Chair: Prof Ron Hartung

k16gen-004

A Virtual Reality Environment for Rehabilitation of Prospective Memory in Stroke Patients

Professor Antonija Mitrovic

k16gen-015

Log-based Evaluation of Label Splits for Process Models

Ir. Niek Tax, Dr. Ir. Reinder Haakma, Dr. Natalia Sidorova, Prof.dr. Ir. Wil Van Der Aalst

k16gen-016

Graph Models of Network Behavior in Environmental Planning

Professor Gianni Fenu, Mr Pier Luigi Pau

k16gen-030

The Entropy and PCA Based Anomaly Prediction in Data Streams

Prof Dr Daocheng Hong, Prof Dr Yanchun Zhang, Dr Deshan Zhao

k16gen-045

CL-AntInc Algorithm for Clustering Binary Data Streams Using the Ants Behavior

Phd Student Nesrine Masmoudi, Prof Hanane Azzag, Prof Maher Ben Jemaa, Prof Cyrille Bertelle, Prof Mustapha Lebbah

k16gen-055

MEMO GRAPH: An Ontology Visualization Tool for Everyone

Student Fatma Ghorbel, Doctor Nebrasse Ellouze, Professor Faiez Gargouri, Doctor FayÁal Hamdi, Student Noura Herradi, Professor Elisabeth MÈtais

***G3B: Emergent Intelligent Technologies***

Chair: Prof Ron Hartung

k16gen-078

COALAA-GEN: A general adaptive approach for ambient assistive applications

Dr Nadia Abchiche-mimouni, Phd Antonio Andriatrimoson, Pr Etienne Colle,  
Dr Simon Galerne

k16gen-091

Automatic motion selection method for spoken dialog scenario editor

Dr. Motoyuki Suzuki, Mr. Kohei Kawashima

k16gen-109

Do Process-based Systems Support Emergent, Collaborative and Flexible Processes? Comparative Analysis of Current Systems

Miss Hanane Ariouat, Associate Professor Eric Andonoff, Professor Chihab Hanachi

k16gen-112

OaaS based on temporal partitioning with minimum energy consumption

Research Student Emna Hosni, PhD Zaki Brahmi

k16gen-119

A competitive intelligence solution to predict competitor action using K-modes algorithm and rough set theory

Mrs Dhekra Ben Sassi, Dr. Wahiba Ben Abdessalem, Dr. Anissa Frini, Dr. Naoufel Kraiem

**T1A: Knowledge Technology**

Chairs: Prof Anne Hakansson & Dr Ireneusz Czarnowski

k16gen-007

An ontology-based framework aiming to support Implanted Devices: cardiac rehabilitation

Dr Imran Razzak, Mr Mohammad Waqjallah

k16gen-027

Cultivation-time recommender system based on climatic conditions for newly reclaimed lands in Egypt

Dr. Nashwa El-bendary, Ms. Esraa Elhariri, Prof. Aboul Ella Hassanien, Dr. Maryam Hazman, Dr. Samir Saleh

k16gen-039

Evaluating the suitability of Web search engines as proxies for knowledge discovery from the Web

Ms. Laura Martinez-Sanahuja, Dr. David Sanchez

k16gen-049

Short Query Expansion for Microblog Retrieval

Phd Student Meriem Amina Zingla, Prof. Chiraz Latiri, Prof. Yahya Slimani

k16gen-050

Formal Description and Automatic Generation of Learning Spaces based on Ontologies

Msc Ricardo Martini, Phd Pedro Henriques, Phd Giovanni Librelotto

k16gen-080

An Ontology-based Knowledge Modelling Approach for River Water Quality Monitoring and Assessment

Dr. Xiaomin Zhu, Dr. Shaoli Chen, Dr. Xiaoci Huang, Prof. Jianjun Yi



***T1B: Knowledge Technology***

Chairs: Prof Anne Hakansson & Dr Ireneusz Czarnowski

k16gen-096

Big Data Integration: a MongoDB Database and Modular Ontologies based Approach

Phd Student Hanen Abbes, Prof. Faiez Gargouri

k16gen-114

A mobile recommendation system supporting group collaborative decision making

MSc Gabriel Marques, Dr. Ana Afonso, Dr. Ana Respicio

k16gen-121

A support system to accumulate interpretations of multiple story timelines  
Dr. Yoshimasa Ohmoto, Prof. Toyooki Nishida, Mr. Takashi Ookaki

k16gen-124

CoMRing: A framework for Community detection based on Multi-Relational querying exploration

Phd Student Guesmi Soumaya, Professor Chiraz Latiri, Associate Professor Chiraz Trabelsi

k16gen-129

A Multidimensional Knowledge Model for Business Process Modeling

Phd Student Sonya Ouali, Associate Professor Lotfi Bouzguenda, Assistant Professor Mohamed Mhiri

k16gen-139

Knowledge discovery from social graph data

Prof. Carson Leung, Prof. Alfredo Cuzzocrea

k16is-083

Testing environment for CPS by cooperating model checking with execution testing

Mr. Takeru Kuroiwa, Mr. Yusuke Aoyama, Prof. Noriyuki Kushiro

**T2A: Natural Language Processing**

Chair: Prof. Girish Jha

k16gen-006

Zoning Features and 2DLSTM for Urdu Text Line Recognition

Dr Imran Razzak, Mr Saad Ahmad, Mr Riaz Ahmad, Miss Saeeda Naz

k16gen-060

AQA-WebCorp: Web-based Factual Questions for Arabic

Mrs Wided Bakari

k16gen-094

Using semantic resources in image retrieval

Associate Professor Adrian Iftene, Graduate Master Alexandra Baboi

k16gen-104

Error Analysis of SaHiT - a Statistical Sanskrit-Hindi Translator

Mr. Rajneesh Pandey, Prof. Girish Jha

k16gen-107

machine translation

Ms Sharmin Muzaffar, Mr Pitambar Behera, Mr Girish Nath Jha

k16gen-118

Knowledge based framework for intelligent emotion recognition in spontaneous speech

Dr. Rupayan Chakraborty, Dr. Sunil Kopperapu, Mrs. Meghna Pandharipande

***T2B: Natural Language Processing***

Chair: Prof. Girish Jha

k16gen-130

Semi-supervised approach to Romanian noun declension

Ms. Octavia-maria Sulea,

k16gen-149

Positive and Negative Sentiment Words in a Blog Corpus Written in Hebrew

Prof. Yaakov Hacoheh-kerner,

k16gen-088

A Comparison of Concept-base Model and Word Distributed Model as Word Association System

Mr Akihiro Toyoshima, Dr Noriyuki Okumura

*IS01: Networks for Innovation, Knowledge Creation and Sharing*

Chair: Prof Shuichiro Yamamoto

k16is-005

The evaluation knowledge of standard software asset using The Seven Samurai framework

Mr. Nobuhide Kobayashi, Dr. Shuji Morisaki, Mr. Hiroyuki Utsunomiya, Ms. Hikari Yamada, Dr. Shuichiro Yamamoto

k16is-006

Modelling Goal Dependencies and Domain Model Together

Dr. Kaiya Haruhiko

k16is-013

A Human Activity based Operational Knowledge Elicitation Method

Prof. Shuichiro Yamamoto

k16is-015

A safety knowledge representation of the automatic driving system

Mr. Hiroyuki Utsunomiya, Mr. Nobuhide Kobayashi, Prof. Shuichiro Yamamoto

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The Changing Structures of Co-invention Networks in American Urban Areas

Dr. Der-shiuan Lee

***IS02: Networks for Innovation, Knowledge Creation and Sharing & IS03: Computer Vision for Intelligent Decision Making***

Chairs: Prof Margarita Favorskaya, Dr. Alena V. Favorskaya, Prof. Margarita N. Favorskaya, Prof. Lakhmi C. Jain

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Numerical modeling of wave processes during shelf seismic exploration  
Dr. Alena Favorskaya, Dr. Nikolay Khokhlov, Prof. Igor Petrov

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Numerical modeling of non-destructive testing of composites  
Dr. Katerina Beklemysheva, Dr. Alexey Ermakov, Dr. Alena Favorskaya, Prof. Igor Petrov, Dr. Alexey Vasyukov

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Scene text deblurring in non-stationary video sequences  
Prof. Margarita Favorskaya, Dr. Vladimir Buryachenko

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Spatio-temporal smoke clustering in outdoor scenes based on boosted random forests  
Prof. Margarita Favorskaya, Prof. Aleksei Popov, Mrs. Anna Pyataeva

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Toolset for Construction and Verification of Rules for Spacecraft's Autonomous Decision Making  
Prof Andrei Tiugashev, Dr Alexander Belozubov

*IS05: Data Science for Big Data*

Chair: Prof Katsutoshi Yada

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A Hybrid Approach for Drug Abuse Events Extraction from Twitter

Phd Student Ferdaous Jenhani, Professor Lamjed Ben Said, Professor

Mohamed Salah Gouider

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Clustering of customer shopping paths in Japanese grocery stores

Dr Natsuki Sano, Dr Tomomichi Suzuki, Mr Reo Tsutsui, Dr Katsutoshi Yada

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Model selection for financial statement analysis: Variable selection with data mining technique

Mr. Ken Ishibashi, Associate Prof. Takuya Iwasaki, Prof. Shota Otomasa, Prof. Katsutoshi Yada

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Fractal Dimension of Shopping Path: Influence on Purchase Behavior in a Supermarket

Dr. Yuta Kaneko, Prof Katsutoshi Yada

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Integrating Smart Glasses with Question-answering Module in Assistant Work Environment

Mr Ryutaro Nambu, Mr Tatsuya Kimoto, Mr Takeshi Morita, Mr Takahira Yamaguchi

*IS06: Knowledge-Based Systems for e-Business*

Chairs: Prof Kazuhiko Tsuda, Dr. Nobuo Suzuki, Prof. Masakazu Takahashi

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Radio quality clustering to induce the behavior toward optimal wireless connection

Dr. Nobuo Suzuki, Prof. Kazuhiko Tsuda

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Study of sensitivity knowledge for quantitative evaluations

Mr Kato Takumi, Mr Tsuda Kazuhiko

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A Study on the Efficient Estimation of the Payment Intention in the Mail Order Industry

Dr. Prof. Masakazu Takahashi, Mr. Hiroaki Azuma, Dr. Prof. Kazuhiko Tsuda

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Construction of the Collaboration Skills Knowledge in Software Development

Ms. Ayako Masuda, Phd Tohru Matsuodani, Phd/assoc. Prof. Chikako Morimoto, Phd/Prof. Kazuhiko Tsuda

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A Method for the Construction of User Targeting Knowledge for B2B Industry Website

Mr. Takumi Ozawa, Dr. Akiyuki Sekiguchi, Dr. Kazuhiko Tsuda

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Mr. Yoshikazu Tanaka, Dr. Kazuhiko Tsuda

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Chair: Dr Milan Simic

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Dr Marwan Ali, Mr Abed Alrahman, Prof Farrukh Nagi, Dr Milan Simic

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Dr Marwan Ali, Mr Fadi Imad, Prof Farrukh Nagi, Dr Milan Simic

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Professor Reza Jazar, Associate Professor M Fard, Lecturer Hormoz Marzbani

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Dr Maria Spichkova, Mr Jian Cheng, Mr Xuening Dong, Mr Yuxi Gui, Prof Heinrich Schmidt, Dr Milan Simic

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Mr. Bruno Carlo Rampinelli Rota, Dr. Simic Milan



*IS10: Innovations in Knowledge and Intelligence Methodologies*

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Handling Knowledge Imperfection in Hybrid Logic Inference

Dr Liya Ding, Dr. Jeffrey Tweedale

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A trajectory base method for ship's safe path planning

Mrs Agnieszka Lazarowska,

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Large Scale Microblogging Intentions Analysis with Pattern Based Approach

Dr. Mohamed Hamroun, Dr. Lamjed Ben Said, Dr. Mohamed Salah Gouider

***IS12: Complex Multidimensional Data Analysis***

Chair: Prof Mika Sato-Ilic

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Mr. Jun Tsuchida, Dr. Hiroshi Yadohisa

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Dr Tetsushi Yuge, Ms Megumi Maruyama, Dr Shigeru Yanagi

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Dr Hirokazu Yanagihara,

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Chairs: Assoc. Prof. Masato Soga, Assist. Prof. Hirokazu Miura

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Prof. Taizo Miyachi, Dr. Gulbanu Buribayeva, Dr. Takashi Furuhata, Ms. Saiko Iga

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Mr. Yosuke Yamaguchi, Prof. Motoki Miura

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Mr. Abhishek Rudra Pal, Dr. Dilip Pratihar

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Mr. Daiki Kurematsu, Dr. Noriyuki Matsuda, Dr. Hirokazu Miura, Prof. Hirokazu Taki

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Chairs: Prof. Hideyuki Kanematsu, Prof. Nobuyuki Ogawa, Prof. Kuniaki Yajima, Prof. Kazunori Nishino

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The PASCA: a Mail Based Randomized Blinded Peer Assessment System for Complex Artifacts

Senior Lecturer Olga Maksimenkova, Associate Prof. Alexey Neznanov

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Prof. Phd. Nobuyuki Ogawa, Prof. Akira Shimizu

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Dr. Shin'ichi Tsumori, Prof. Kazunori Nishino, Prof. Tomiya Yamazumi

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Dr. Yajima Kuniaki, Miss Iwatsuki Rui, Mr Takahashi Souru

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Dr. Lui Yoshida, Dr. Kayoko Kurita

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Master Student Rozalina Amran, Professor Kazunori Nishino, Teacher Fumie Yokoyama

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Mr Yajima Kuniaki, Ms Takahashi Akiko, Mr Oiguchi Seishi, Mr Kashiwaba  
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Chairs: Prof Yuji Iwahori, Assist Prof. Ryosuke Yamanishi

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Mr. Kenta Nimoto, Dr. Michimasa Inaba, Dr. Kenichi Takahashi

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Mr. Kouki Hamamoto, Dr. Akira Kitamura, Mr. Hiroki Matsuno, Mr. Satoshi Taguchi, Mr. Shingo Watanabe

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Mr. Kota Higashi, Prof. Yoshinori Adachi, Dr. Manas Bhuyan, Dr. Shinji Fukui, Prof. Yuji Iwahori

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Dr. Shinji Fukui, Dr. M. Bhuyan, Mr. Sou Hayakawa, Prof. Yuji Iwahori, Dr. Tsuyoshi Nakamura

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Mr. Naoki Shino, Prof. Junichi Fukumoto, Assoc. Prof. Yoko Nishihara, Assis. Prof. Ryosuke Yamanishi

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Mr. Seiki Ootani, Prof. Yuji Iwahori, Assis. Prof. Ryosuke Yamanishi

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Chairs: Prof Xiangpei Hu, Associate Prof. Lijun Sun

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Dr Yan Fang, Ms Chao Li, Dr Lijun Sun

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Professor Xuping Wang, University Lecturer Junhu Ruan, Master Student Meng Wang, Doctoral Student Hongxin Zhan

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Ms. Tao Lu, Ms. Xinxin Zha, Mr. Xin Zhao

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Chairs: Dr Sergey Zykov, Dr. Pavel A. Shapkin

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Translating semantic networks to UML class diagrams

Mr. Ivan Barashev,

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Dr. Pavel Shapkin, Ms. Anastasia Domracheva

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Dr. Pavel Shapkin, Ms. Sophiya Rubar, Dr. Sergey Zykov

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Dr. Sergey Zykov, Dr. Leonid Shumsky

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Dr. Alexander Gromoff, Mrs. Yulia Bilinkis, Mr. Nikolay Kazantsev



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Chair: Prof Atsuko Yamazaki

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Dr. Toshio Ito, Mr. Kenta Yamazaki

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Mr. Muhammad Nur Adilin Mohd Anuardi, Mr. Hideyuki Shinohara, Prof. Atsuko K. Yamazaki

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Evacuation Route Planning for Safety Route Guidance System after Natural Disaster Using Multi-Objective Genetic Algorithm

Ms Yukie Ikeda, Dr Masahiro Inoue

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Ms. Haruka Ishii, Mr. Maher Aljehani, Dr. Masahiro Inoue, Mr. Keisuke Kimino, Mr. Nobuhiro Ohe

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The effect of amplitude enlargement in English speech on brain functions

Mr. Kazukiyo Inada, Prof. Atsuko Yamazaki

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Ms. Suopor Hiranchiracheep, Mr. Wichean Foyipikul, Ms. Atsuko K. Yamazaki

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Dr. Kaoru Eto, Dr. Yasuo Kabasawa, Dr. Minoru Mukuda, Mr. Shota Sakamura, Dr. Atsuko Yamazaki, Ms. Hiroko Yoshida

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Chair: Prof Motoki Miura

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Professor Tsukasa Kudo, Professor Masahiko Ishino, Dr. Nobuhiro Kataoka,  
Professor Kenji Saotome

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Prof. Motoki Miura

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Mr. Manabu Ito, Prof. Motoki Miura

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Student Wala Ben Messaoud, Assistant Teacher Youssef Ben Halima,  
Professor Khaled Ghedira

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Chair: Dr Alessia Amelio

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Phd Radu Tudor Ionescu,

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Dr. Adrian-gabriel Chifu, Dr. SÈbastien Fournier

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Ms. Yaqi Wang, Prof. Liangrui Peng, Prof Shengjin Wang

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Ph.d Student Allani Olfa, Prof. Baazaoui Hajer

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Dr Carlos Mello, Mr Diego Menor, Dr Cleber Zanchettin

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Professor Yumiko Nara, Teaching Assistant Tomiko Sata

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Mr. Teruaki Hayashi, Phd. Yukio Ohsawa

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Chairs Dr Yulia Hicks, Assistant Prof. Dr. Hiroharu Kawanaka, Associate Prof. Dr. Haruhiko Takase

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Phd Student Karima Elmasri, Prof William Evans, Dr Yulia Hicks, Mrs Rebecca Pettit, Dr Xianfang Sun, Dr Xin Yang

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Mrs Zainab Harbi, Mrs Yulia Hicks, Mrs Rossitza Setchi

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Chair: Dr Tomoko Kojiri

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Dr Jacek Szybowski,



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Dr. Yuji Watanabe, Miss San Sara

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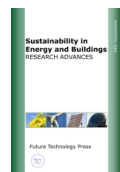
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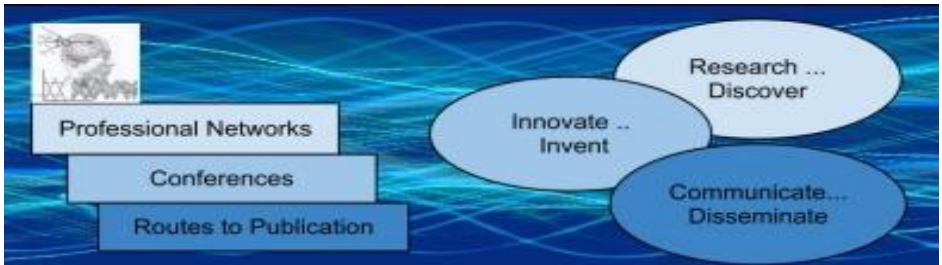
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