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Chairs' Welcome

We are pleased to welcome you to the 22nd International Conference on Knowledge - Based and Intelligent Information & Engineering Systems (KES 2018), organised by KES International in collaboration with the Society for ETRAN, Belgrade, Serbia. The conference was held at the Metropol Palace Hotel in Belgrade, Serbia during 3-5 September 2018.

KES 2018 is the 22nd 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 engineering and information systems.

This truly international conference has attracted a substantial number of researchers and practitioners from all over the world, who submitted their papers to three general tracks, one thematic track and 30 special sessions on specific topics. A large number of submissions was received and each paper was peer reviewed by at least two members of the International Program Committee. From them, 240 high-quality papers were accepted for oral presentation and publication in *Procedia Computer Science*, submitted for indexing in Conference Proceedings Citation Index (CPCI) and Scopus.

The conference chairs would like to express their gratitude to the Keynote Speakers: Prof Matteo Cristani, University of Verona, Italy; Prof Vladan Devedzic, University of Belgrade, Serbia; Prof Hideyuki Kanematsu, Suzuka College, Japan; Prof Edward Szczerbicki, The University of Newcastle, Australia; and Prof Atsuko K. Yamazaki, Shibaura Institute of Technology, Japan

We would like to acknowledge also the Programme Co-Chairs, the General Track Chairs, the International Programme Committee members and reviewers for their valuable efforts in the review process, helping us to guarantee the highest quality possible for the conference. We would also like to thank the organisers and chairs of the special sessions which make an essential contribution to the success of the conference.

Lastly, we would like to thank all the authors, presenters and delegates for their valuable contribution in making this an extraordinary event.

KES International and the Society for ETRAN hope and intend that KES2018 will make a significant contribution to international research collaboration and understanding, an essential task for the promotion of scientific joint work and excellence.

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General and Thematic Track Sessions

Code	Track Title	Track Chair
G01	Theoretical Foundations of Intelligent Systems: Theories, Algorithms and Methodologies	Prof. Cecilia Zanni-Merk
G02	Intelligent Applications	Dr Carlos Toro
G03	Emergent Intelligent Technologies	Prof Ron Hartung
T01	Knowledge Technologies	Prof Anne Hakansson

Invited Sessions

Code	Session	Session Chair
IS01	Interdisciplinary Approaches in Data Science and Business Intelligence Practice (IADBIP 2018)	Prof. Ivan Luković, Prof. Ralf-Christian Härting
IS02	Knowledge Engineering in Large-Scale Systems	Dr. Sergey V. Zykov
IS03	Intelligent Transportation Systems	Dr Milan Simic
IS04	Data Science for Big Data	Professor Katsutoshi Yada, Professor Takahira Yamaguchi
IS07	Numerical Modelling and Recognition Techniques	Prof. Margarita N. Favorskaya, Dr Alena V. Favorskaya, Prof. Lakhmi Jain
IS08	Reasoning-based Intelligent Systems	Prof.Dr.Kazumi Nakamatsu, Prof.Dr.Jair M. Abe
IS09	Networks for Innovation, Knowledge Creation and Sharing	Prof. Dr. Shuichiro Yamamoto
IS10	Knowledge and data engineering in medicine and health care	Assist. Prof. Wieslaw Paja, Assoc. Prof. Krzysztof Pancierz, Assoc. Prof. Catalin Stoean
IS11	Metaheuristics and multiagent models for flexible manufacturing systems	Dr. Housseem Eddine Nouri, Dr. Olfa Belkahla Driss
IS12	Contemporary issues in Computer education	Assoc. Prof. Hiroko Kanoh, Prof. Toyohide Watanabe, Professor Hironari Nozaki, Prof. Hironori Sasaki, Professor Kyota Aoki, Prof. Yoshiyuki Yabuuchi, Assoc. Prof. Yukiko Maruyama
IS13	Chance Discovery and Market of Data	Prof. Akinori Abe, Prof. Yukio Ohsawa, Prof. Noriyuki Kushiro
IS14	Cyber-Physical Systems and Applications	Prof. Anne Hakansson, Prof. Ronald Hartung
IS15	Computational Intelligence System and Applications	Prof. Yuji Iwahori, Prof. Yoshinori Adachi, Prof. Nobuhiro Inuzuka, Assis. Prof. Ryosuke Yamanishi

Code	Session	Session Chair
IS16	Smart Education: Active Learning using ICT and e-Learning	Prof. Nobuyuki Ogawa, Prof. Hideyuki Kanematsu, Prof. Kuniaki Yajima, Prof. Takashi Yukawa, Assis. Prof. Katsuko T. Nakahira, Prof. Kazunori Nishino
IS17	Human factors for communication & intelligent systems	Dr. Atsuko K. Yamazaki
IS18	Immunity-Based Systems: Resilient Computing for IoT	Prof. Dr. Yoshiteru Ishida, Assoc. Prof. Dr. Takeshi Okamoto
IS19	Information Technology Applications in Data Analytics and Software Development	Dr. Gongzhu Hu, Dr. Narayan Debnath
IS20	Knowledge-Based Systems for e-Business	Prof. Kazuhiko Tsuda, Prof. Masakazu Takahashi, Dr. Nobuo Suzuki
IS21	Multi-Criteria Decision-Analysis methods – theory and their applications	Dr. Jarosław Wątróbski, Dr. Wojciech Sałabun, Dr. Jarosław Jankowski
IS22	Information Systems and Technologies for Management and Economy	Dr. Jarosław Wątróbski, Dr. Wojciech Sałabun, Dr. Jarosław Jankowski, Prof. Joanna Paliszkievicz
IS23	New Generation Computing in Engineering, Life Science and Economy	Dr. Piotr Nikończuk, Prof. Elisabeth Rakus-Andersson
IS24	Cyber Security and Big Data	Prof. Alfredo Cuzzocrea, Dr. Fiammetta Marulli, Dr. Francesco Mercaldo
IS25	Key Enabling Technologies for Virtual Factories	Prof. Federica Mandreoli, Prof. Giacomo Cabri
IS26	Skill Acquisition and Ubiquitous Human Computer Interaction	Assoc. Prof. Masato Soga, Assist. Prof. Hirokazu Miura, Prof. Hirokazu Taki
IS27	Signal and Image Processing Algorithms and Pattern Recognition Techniques for Automated Identification/Classification Systems	Dr. Paolo Crippa, Prof. Claudio Turchetti
IS28	RF and FSO channel modelling for wireless transmission and performance analysis	Assoc. Prof. Stefan Panić, PhD

Code	Session	Session Chair
IS29	Internet-of-Things and Intelligent Systems	Prof. Xiangpei Hu, Assoc. Prof. Lijun Sun
IS30	Intelligent Network Security and Digital Forensics	Prof. Oliver Popov, Dr. Esmiralda Moradian

Plenary Talks

Prof Matteo Cristani

University of Verona, Italy

The Artificial Intelligence of Things

Abstract: Imagine a world in which single objects communicate to each other and to the humans, by a high-level communication protocol, and with a language that is similar to the regular human languages, for instance by a natural spoken language, or a sign language.

Imagine a world in which you can ask to the keys you have in hands: "Where did I park the car?". And also imagine that these objects are connected to each other, so that you can step forward this level of questions. "Hey, house, do I have all the ingredients I need for a walnut cake?". Imagine a world in which you can leave messages to the others in the house: "I had to hurry out, remember to hang out the laundry".

In industrial applications, also, many communications with objects, and among objects can provide strategic advantages. Consider a scenario in which you have a complex industrial machinery, and a worker leaves work since his turn has finished. "When the further operator comes in, remember him that the reset of the line requires warming up of ten minutes for the operation in course."

There are enormous challenges to deal with in order to realize such wonderful desiderata. We can look at three essential aspects:

Integrate artificial intelligence and IoT, in order to provide objects with communication and reasoning skills;

Determine relevant aspects of the integration process and deal with them, in particular:

- Reasoning in presence of limited computational resources, especially memory;
- Provide correct methods to integrate partial and asynchronous reasoning processes in such a way that the resulting decision is sound;
- Deal with partial and potentially incorrect knowledge, incorrect reasoning, inconsistent decisions by different actors.

The keynote will be envisioning the potentials of the aforementioned integration processes, and show what challenges shall we expect forward.



Biography: Matteo Cristani is Aggregate Professor in the Department of Computer Science of the University of Verona, where he teaches Semantic Web and leads the group KREARTI (Knowledge Representation and applied ARTificial Intelligence). He is the author of more than 60 scientific publications in quality journals and

conferences, since 1997. He had been developing more than twenty research projects in Artificial Intelligence, he is member of the Programme Committees of KES, KES AMSTA, RuleML, ICAIL, ICAART and other international conferences, and he acts as a reviewer in several international journals. He has been leading more than thirty knowledge transfer activities, and is active in the KES community since 2007.

Prof Vladan Devedzic

University of Belgrade, Serbia

Teaching intelligent systems: a case with a long history

Abstract: This talk focuses on experiences with teaching intelligent systems at the University of Belgrade over the past two decades. As the field itself was developing, the courses had to adapt to the new developments and trends, sometimes with warm welcome from the students' side, but not with high enthusiasm at other times. Many lessons have been learned to this end, both pedagogical and practical. Put in the context of varying interests in different AI topics over time, these lessons have been found to go beyond the specifics of the courses that have been taught. Enforcing an interdisciplinary approach when teaching intelligent systems has proven to be the key to gaining students' interest and getting positive reactions. Examples illustrating the lessons learned make a substantial proportion of the talk.



Biography: Vladan Devedzic is a Professor of Software Engineering at the Faculty of Organizational Sciences (School of Business Administration), University of Belgrade, Serbia. He also used to teach several computer science courses at the School of Electrical Engineering, University of Belgrade, as well as at the Military Academy of Serbia. His long-term professional objective is to bring close together ideas from the broad fields of intelligent systems and software engineering. His current professional and research interests include software engineering, programming education, intelligent

software systems and technology-enhanced learning (TEL).

He is the founder and the chair of the GOOD OLD AI research network.

Prof Hideyuki Kanematsu

National Institute of Technology, Suzuka College, Japan

Activation of E-learning Classes by Virtual Problem Based Learning - From Real to Virtual World

Abstract: Problem Based Learning is one of the powerful tools for active learning. My colleagues and I investigated the possibilities how to activate e-learning classes by virtual Problem Based Learning. In my lecture, I will introduce all of our endeavors about the topic so far.



Biography: Dr. Hideyuki Kanematsu is a professor of materials science and engineering at the National Institute of Technology at Suzuka College in Japan. Hide's areas of interest include biofilm engineering, surface engineering, corrosion and STEM Education (Active learning by e-learning). He holds a B.Eng. (1981), a M.Eng(1983) and a Ph.D in Materials Science and Engineering (1989) all from Nagoya University. He is active members, board members,

editorial members of ASM International, National Association for Surface Fishing, the USA (NASF), the Institute of Metal Finishing, UK(IMF) as well as the Minerals, Metals & Materials Society, USA(TMS), American Chemical Society (ACS), Electrochemical Society (ECS), the Japan Institute of Metals (JIM) and the Iron & Steel Institute of Japan (ISIJ) etc.

Prof Edward Szczerbicki

The University of Newcastle, Australia

Smart Engineering of Experience with Decisional DNA: Challenges, Approaches, and Case Studies

Abstract: The concept of Decisional DNA, a unique knowledge representation based on experience, is decade old. This presentation introduces the initial idea of Set of Experience Knowledge Structure, its advancement into Decisional DNA, and its many real life applications in such diverse domains as medicine, maintenance, energy, robotics, industrial hazard control, autonomous cars, and product development. The most current and future research steps into Industry 4.0 and Internet of Things are also discussed addressing emerging challenges related to the concept of semantically enhanced knowledge-based society and cyber-physical systems. The overall aim of this keynote talk is to provide guidelines to develop tools for smart processing and engineering of experience. Still, the guide does not presume to give ultimate answers. Rather, it poses ideas and case studies to explore. It also encourages the audience to become aware of the multifaceted interdisciplinary character of such issues.



Biography: Professor Szczerbicki has had very extensive experience in the area of complex/intelligent systems development over an uninterrupted 35 year period, 25 years of which he spent in the top systems research centres in the USA, UK, Germany, and Australia. In this area he contributed to the understanding of information and knowledge engineering in systems operating in environments characterized by informational uncertainties and dynamics. He has published 300+ refereed papers which attracted close to 2000 citations over the last ten years. His DSc degree (1993) and the Title of Professor (2006) were gained in the area of information science for his international published contributions. His academic experience includes ongoing positions with Gdansk University of Technology, Gdansk, Poland; Strathclyde University, Glasgow, Scotland; The University of Iowa, Iowa City, USA; University of California, Berkeley, USA; and The University of Newcastle, Newcastle Australia.

Prof Atsuko K. Yamazaki

Shibaura Institute of Technology, Japan

Neurological factors for knowledge-based systems: NIRS studies as examples

Abstract: Along with recent progress in neuroscience research, interpreting neuroscience research results in terms of human cognition and behavior has been recognized as a key for developing knowledge-based systems based on human factors. In addition, neuroscience techniques have now become more accessible to researchers in Knowledge Engineering fields. Neuroimaging, one of the techniques often utilized in neuroscience, can be effectively used to investigate activity and function in the brain. Functional neuroimaging studies in Knowledge Engineering focus on which areas of the brain perform specific tasks in relation to system enhancement by using such techniques as functional magnetic resonance imaging, electroencephalography and near infrared spectroscopy (NIRS). Bridging neuroscience data and a knowledge-based system is indispensable in order to build a system based on humans' tacit knowledge. However, it is by no means easy to incorporate neuroscience into knowledge-based engineering due to the difficulties of designing a human-factors study, of measuring neuroactivities and of interpreting the data, which often requires specialized knowledge both in neuroscience and in physiology. In this talk, the speaker will introduce some NIRS studies conducted by her research groups, for example, leveraging neuroimaging techniques for incorporating such human factors into knowledge-based systems. The results of the studies will be presented not only in association with human-system interaction, but also human-human communication.



Biography: Atsuko K. Yamazaki is Professor at Shibaura Institute of Technology, where she teaches communication studies and conducts research in the areas of information science, systems engineering, human communication studies and global education in engineering. She holds the following degrees: BS in Chemistry, Ibaraki University; MA in TESOL, Monterey Institute of International Studies; MS in Computer Science, University of Maryland; and Ph.D. in Systems Engineering, Wakayama University. She has held leadership positions in the IEEE Professional Communication Society and the Japan Association of College English Teachers. She was an

adjunct research instructor at the Naval Postgraduate School in Monterey, California and a visiting researcher at The Woods Hole Oceanographic Institution. She joined the Institute of Technologists as an Associate Professor in 2001 and moved to Shibaura Institute of Technology in 2008. Her work has been published by Ecological Modelling,

Deep-Sea Research, IEEE, KES, Japan Society for Artificial Intelligence, Japanese Society for Information and Systems in Education, and others. Her current research projects include studies of user-interface designs to enhance brain activity in the elderly, and human cognitive activities for human-system communication from neurological aspects. She has also been leading projects for developing ICT & IoT systems to assist small and medium farming operations. She has been serving as Chair for an Invited Session: Human Factors for Communication & Intelligent Systems, at KES conferences since 2014.

Timetable – Sunday 2 September

17.00-19.00

Early Registration

Drinks Reception
Metropol Palace Hotel
Ivo Andric Ballroom Terrace

Timetable – Monday 3 September

	Ivo Andric Ballroom B (Plenary Room)	Ivo Andric Ballroom A	Nikola Tesla Ballroom A	Nikola Tesla Ballroom B	Nikola Tesla Ballroom C	Plato Room	Aristotle Room	Lavender Room	22 Restaurant
8.00-9.15	Registration								
9.15-9.30	Opening Ceremony								
9.30-10.30	Keynote Speaker 1 Matteo Cristani, University of Verona, Italy The Artificial Intelligence of Things Chair: Prof Robert J Howlett								
10.30-11.00	Coffee								
11.00-13.00	GIA: Theoretical Foundations of Intelligent Systems Chair: Prof Cecilia Zanni-Merk	G2A: Intelligent Applications Chair: Dr Yulia Hicks	G3A: Emergent Intelligent Technologies Chair: Prof Ron Hartung	IS13: Chance Discovery and Market of Data Chair: Prof Akinori Abe	IS01: Interdisciplinary Approaches in Data Science and Business Intelligence Practice (IADBIP 2018) Chair: Prof Ivan Luković	IS02A: Knowledge Engineering in Large-Scale Systems Chair: Dr Sergey Zykov	IS03 & IS04: Intelligent Transportation Systems & Data Science for Big Data Chairs: Dr Milan Simic & Prof Katsutoshi Yada	IS09: Networks for Innovation, Knowledge Creation and Sharing Chair: Prof Shuichiro Yamamoto	IS10: Knowledge and data engineering in medicine and health care Chair: Prof Wieslaw Paja
13.00-14.00	Lunch								

	Ivo Andric Ballroom B (Plenary Room)	Ivo Andric Ballroom A	Nikola Tesla Ballroom A	Nikola Tesla Ballroom B	Nikola Tesla Ballroom C	Plato Room	Aristotle Room	Lavender Room	22 Restaurant
14.00-15.00	<p align="center">Keynote Speaker 2 Vladan Devedzic, University of Belgrade, Serbia Teaching intelligent systems: a case with a long history Chair: Prof Lakhmi Jain</p>								
15.00-15.30	<p align="center">Coffee</p>								
15.30-16.30	<p align="center">Belgrade Industrial Round Table Safety and Privacy in the Industry 4.0 Era A panel of local experts, government representatives and industrialists meet to discuss technical issues.</p>								
Meet hotel lobby 6.15 for 6.30 prompt departure	<p align="center">Social Trip The Belgrade Experience</p>								

Timetable – Tuesday 4 September

	Ivo Andric Ballroom B (Plenary Room)	Ivo Andric Ballroom A	Nikola Tesla Ballroom A	Nikola Tesla Ballroom B	Nikola Tesla Ballroom C	Plato Room	Aristotle Room	Lavender Room	22 Restaurant
8.30-9.30	Registration								
9.30-10.30	Keynote Speaker 3 Edward Szczerbicki, The University of Newcastle, Australia Smart Engineering of Experience with Decisional DNA: Challenges, Approaches, and Case Studies Chair: Prof Robert J Howlett								
10.30-11.00	Coffee								
11.00-13.00	G1B: Theoretical Foundations of Intelligent Systems Chair: Prof Cecilia Zanni-Merk	G2B: Intelligent Applications Chair: Dr Yulia Hicks	G3B: Emergent Intelligent Technologies Chair: Prof Ron Hartung	S1A: Symposium on Information Systems and Technologies for Management, Economy and Decision Making Chair: Dr Jarosław Wątróbski	IS15: Computational Intelligence System and Applications Chair: Prof. Yuji Iwahori	IS02B: Knowledge Engineering in Large-Scale Systems Chair: Dr Sergey Zykov	IS20A: Knowledge-Based Systems for e-Business Chair: Prof. Kazuhiko Tsuda	IS07A: Numerical Modelling and Recognition Techniques Chair: Prof Margarita Favorskaya	IS12: Contemporary issues in Computer education Chair: Prof Hiroko Kanoh
13.00-14.00	Lunch								
14.00-15.00	Keynote Speaker 4 Prof Atsuko K. Yamazaki, Shibaura Institute of Technology, Japan Neurological factors for knowledge-based systems: NIRS studies as examples Chair: Prof. Edward Szczerbicki								

	Ivo Andric Ballroom B (Plenary Room)	Ivo Andric Ballroom A	Nikola Tesla Ballroom A	Nikola Tesla Ballroom B	Nikola Tesla Ballroom C	Plato Room	Aristotle Room	Lavender Room	22 Restaurant
15.00-15.30	Coffee								
15.30-17.30	G1C: Theoretical Foundations of Intelligent Systems Chair: Prof Cecilia Zanni-Merk	G2C: Intelligent Applications Chair: Prof Vladan Devedzic	G3C: Emergent Intelligent Technologies Chair: Prof Ron Hartung	S1B: Symposium on Information Systems and Technologies for Management, Economy and Decision Making Chair: Dr Jarosław Wątróbski	IS17: Human factors for communication & intelligent systems Chair: Dr. Atsuko K. Yamazaki	IS19: Information Technology Applications in Data Analytics and Software Development Chair: Dr. Gongzhu Hu	IS20B: Knowledge-Based Systems for e-Business Chair: Prof. Kazuhiko Tsuda	IS07B: Numerical Modelling and Recognition Techniques Chair: Prof Margarita Favorskaya	IS23: New Generation Computing in Engineering, Life Science and Economy Chair: Dr. Piotr Nikończuk
Meet hotel lobby 6.30 to leave 6.45 and be seated by 7pm	Conference Gala Dinner Topciderac Restaurant								

Timetable – Wednesday 5 September

	Ivo Andric Ballroom B (Plenary Room)	Ivo Andric Ballroom A	Nikola Tesla Ballroom A	Nikola Tesla Ballroom B	Nikola Tesla Ballroom C	Plato Room	Aristotle Room	Lavender Room
9.00-9.30	Registration							
9.30-11.30	G1D: Theoretical Foundations of Intelligent Systems Chair: Prof Cecilia Zanni-Merk	G2D: Intelligent Applications Chair: Prof Liya Ding	T1A: Knowledge Technology Chair: Prof Anne Hakansson	S1C: Symposium on Information Systems and Technologies for Management, Economy and Decision Making Chair: Dr Jarosław Wątróbski	IS26: Skill Acquisition and Ubiquitous Human Computer Interaction Chair: Assoc. Prof. Masato Soga	IS27: Signal and Image Processing Algorithms and Pattern Recognition Techniques for Automated Identification/Classification Systems Chair: Dr. Paolo Crippa	IS16A: Smart Education: Active Learning using ICT and e-Learning Chair: Prof. Nobuyuki Ogawa	IS29A: Internet-of-Things and Intelligent Systems Chair: Prof. Xiangpei Hu
11.30-12.00	Coffee							
12.00-13.00	Keynote Speaker 5 Hideyuki Kanematsu, National Institute of Technology, Suzuka College, Japan Activation of E-learning Classes by Virtual Problem Based Learning - From Real to Virtual World Chair: Prof. Edward Szczerbicki							
13.00-14.00	Lunch							

	Ivo Andric Ballroom B (Plenary Room)	Ivo Andric Ballroom A	Nikola Tesla Ballroom A	Nikola Tesla Ballroom B	Nikola Tesla Ballroom C	Plato Room	Aristotle Room	Lavender Room
14.00-16.00	G2E: Intelligent Applications Chair: Dr Yulia Hicks	G1E: Theoretical Foundations of Intelligent Systems Chair: Prof Cecilia Zanni-Merk	G1F/G2F: Theoretical Foundations of Intelligent Systems & Intelligent Applications Chair: Dr. Matteo Cristani	S1D: Symposium on Information Systems and Technologies for Management, Economy and Decision Making Chair: Dr Jarosław Wątróbski	IS14 & IS30: Cyber-Physical Systems and Applications & Intelligent Network Security and Digital Forensics Chair: Prof. Anne Hakansson & Prof. Oliver Popov	IS11: Metaheuristics and multiagent models for flexible manufacturing systems Chair: Dr. Olfa Belkahla Driss	IS16B: Smart Education: Active Learning using ICT and e-Learning Chair: Prof. Nobuyuki Ogawa	IS29B & IS18: Internet-of-Things and Intelligent Systems & Immunity-Based Systems: Resilient Computing for IoT Chairs: Prof. Xiangpei Hu & Prof. Dr. Yoshiteru Ishida
16.30-17.00	Coffee							
17.00	Closing Ceremony							

Presentation Schedule – General Tracks

G1A: Theoretical Foundations of Intelligent Systems

Chair: Prof Cecilia Zanni-Merk

Monday 3 Sept: 11.00-13.00

Ivo Andric Ballroom B

PROSE Paper No	Paper Title / Authors
k18gen-003	Using unsupervised learning methods for enhancing protein structure insight Mr Mihai Teletin, Mrs Silvana Albert, Phd Maria Iuliana Bocicor, Phd Gabriela Czibula
k18gen-012	Representation and processing of multispectral satellite images and sequences Professor Konstantin Vasiliev, Phd Nikita Andriyanov, Assistant Professor Vitaly Dementiev
k18gen-013	Online determinization of large mutating automata Ing. Giovanni Caniato, Prof. Gianfranco Lamperti
k18gen-015	On the influence of categorical features in ranking anomalies using mixed data M. Sc. Mathieu Garchery, Prof. Michael Granitzer
k18gen-018	A hybrid Immigrants schema for particle swarm optimization algorithm Ph. D Student Houda Abadlia, Professor Khaled Ghedira, Assistant Professor Nadia Smairi
k18gen-035	A two-stage hybrid flow shop problem with dedicated machine and release date Ms Zouhour Nabli, Dr Soulef Khalfallah, Pr Ouajdi Korbaa

G1B: Theoretical Foundations of Intelligent Systems

Chair: Prof Cecilia Zanni-Merk

Tuesday 4 Sept: 11.00-13.00

Ivo Andric Ballroom B

PROSE Paper No	Paper Title / Authors
k18gen-024	A Semantic-checking based Model-driven Approach to Serve Multi-organization Collaboration Dr Tiexin Wang, Pro Frederick Benaben, Dr Aurelie Montarnal, Dr Sebastien Truptil
k18gen-025	Evolutionary Optimization Based on Biological Evolution in Plants Dr. Neeraj Gupta, Dr. Mahdi Khosravy, Prof. Nilesch Patel, Prof. Ishwar Sethi
k18gen-026	A Study of Combined Lossy Compression and Seizure Detection on Epileptic EEG Signals Mr Binh Nguyen, Dr Wanli Ma, Dr Dat Tran
k18gen-034	Argued opinion extraction from festivals and cultural events on Twitter Ouertatani Asma Ouertatani Asma, Gesmi Ghada Gesmi Ghada, Latiri Chiraz Latiri Chiraz
k18gen-023	A new incremental relational association rules mining approach Phd Student Diana-lucia Miholca, Phd Student Liana Maria Crivei, Phd Gabriela Czibula
k18gen-037	Analysing Neural Network Topologies: a Game Theoretic Approach M. Sc. Julian Stier, Prof. Dr. Gabriele Gianini, Prof. Dr. Michael Granitzer, Prof. Dr. Konstantin Ziegler

G1C: Theoretical Foundations of Intelligent Systems

Chair: Cecilia Zanni-Merk

Tuesday 4 Sept: 15.30-17.30

Ivo Andric Ballroom B

PROSE Paper No	Paper Title / Authors
k18gen-043	Nash-Pareto Genetic Algorithm for the Frequency Assignment Problem Mrs Fatma Laidoui, Mrs Fatima Benbouzid-Si Tayeb, Mr Nawfel Bengherbia, Mrs Malika Bessedik, Mr Massyl Yacine Khelil
k18gen-048	Effective distributed trust management model for Internet of Things Ms. Hela Maddar
k18gen-057	Four-valued Tableau Calculi for Decision Logic of Rough Set M.a. Yotaro Nakayama, Ph.d. Seiki Akama, Ph.d. Tetsuya Murai
k18gen-061	Mining High-Utility Patterns in Uncertain Tensors Mr. Aurélien Coussat, Dr. Loïc Cerf, Mr. Nicolas Nadisic
k18gen-067	Voice source modelling using modified LF model with reduced parameters Doctor Anis Ben Aicha
k18gen-084	NetSim -- The framework for complex network generator Mr Akanda Wahid -Ul- Ashraf, Prof Marcin Budka, Dr Katarzyna Musial

G1D: Theoretical Foundations of Intelligent Systems

Chair: Prof Cecilia Zanni-Merk

Wednesday 5 Sept: 9.30-11.30

Ivo Andric Ballroom B

PROSE Paper No	Paper Title / Authors
k18gen-079	Cooperative Multi-Agent Systems Using Distributed Reinforcement Learning Techniques Doctor Wiem Zemzem, Professor Moncef Tagina
k18gen-080	ONTOPLC: An ontology-driven methodology for converting PLC industrial plants to IoT Dr. Matteo Cristani, Mr. Florenc Demrozi, Dr. Claudio Tomazzoli
k18gen-074	How to combine spatio-temporal and thematic features in online news for enhanced animal disease surveillance? Miss Sarah Valentin, M Renaud Lancelot, M Mathieu Roche
k18gen-087	Partially Lazy Classification of Cardiovascular Risk via Multi-way Graph Cut Optimization Eng. Karma Fathalla, Dr. Aniko Ekart, Dr. Doina Gherghel
k18gen-093	A simple algorithm for the lexical classification of comparable adjectives Dr. Matteo Cristani, Ms. Ilaria Chitò, Dr. Claudio Tomazzoli, Dr. Margherita Zorzi
k18gen-094	A Multivariate Fuzzy Time Series Resource Forecast Model for Clouds using LSTM and Data Correlation Analysis Dr. Binh Minh Nguyen, Mr. Thang Nguyen, Dr. Giang Nguyen, Mr. Nhuan Tran

G1E: Theoretical Foundations of Intelligent Systems

Chair: Prof Cecilia Zanni-Merk

Wednesday 5 Sept: 14.00-16.00

Ivo Andric Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-095	A Scenario-based Approach; Assuring Effect of Software Product Mr Kazuki Kakimoto, Mr Yuki Ishigaki, Mr Kazuhiro Sogawa, Mr Yasushi Ueda, Mr Hiroki Umeda
k18gen-098	Context Modeling for Industry 4.0: an Ontology-Based Proposal Phd Student Franco Giustozzi, Dr. Julien Saunier, Prof. Cecilia Zanni-merk
k18gen-103	On the Study of Impacts of Brain Conditions on EEG-based Cryptographic Key Generation Systems Mr Dang Nguyen, Dr Wanli Ma, Dr Dharmendra Sharma, Dr Dat Tran
k18gen-115	A Combination of Reduction and Expansion Approaches to Deal with Long Natural Language queries Phd student Mohamed Ettaleb, professor Patrice Bellot, professor Chiraz Latiri
k18gen-119	BigDimETL with NoSQL database Mallek Hana Hana Mallek, Gargouri Faiez Faiez Gargouri, Ghozzi Faiza Faiza Ghozzi, Olivier Teste Olivier Teste
k18gen-116	A Decomposition-based Approach of Global Norms for Hierarchical Normative Systems Phd Student Ezzine Missaoui, Professor Sami Bhiri, Full Professor Vincent Hilaire, Associate Professor Belhassen Mazigh

G1F: Theoretical Foundations of Intelligent Systems

Chair: Dr Matteo Cristani

Wednesday 5 Sept: 14.00-16.00

Nikola Tesla Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-051	Detailed Mathematical Programming Formulations for the Aircraft Landing Problem on a Single and Multiple Runway Configurations Phd Student Meriem Ben Messaoud, Professor Khaled Ghedira, Doctor Meriem Kefi
k18gen-064	A New Framework of Frequent Uncertain Subgraph Mining Mr Mohamed Moussaoui, Prof Jalel Akaichi, Dr Montaceur Zaghdoud

G2A: Intelligent Applications

Chair: Dr Yulia Hicks

Monday 3 Sept: 11.00-13.00

Ivo Andric Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-011	Improvement of Quality for Business Process Modeling driven by Guidelines Phd Student Fouzia Kahloun, Professor Sonia Ayachi Ghannouchi
k18gen-014	Topic-based Classification through Unigram Unmasking Prof. Yaakov Hacohen-kerner, Prof. Avi Rosenfeld, B.sc. Asaf Sabag, B.sc. Maor Tzidkani
k18gen-016	Trading Decision of Taiwan Stocks with the Help of United States Stock Market Professor Chang-biau Yang, Mr. Hung-hsin Chen, Mr. Shih-chan Huang
k18gen-017	Multimodal registration of retinal images using domain-specific landmarks and vessel enhancement Mr Álvaro Hervella, Dr Jorge Novo, Dr Marcos Ortega, Dr José Rouco
k18gen-028	Enhancing the Attractiveness of Learning through Augmented Reality Mr. Adrian Iftene, Mrs. Diana Trandabat
k18gen-032	Automatic CORINE land cover classification from airborne LIDAR data Msc Jesús Balado, Phd Pedro Arias, Phd Lucía Díaz-vilariño, Msc Luis M. González-desantos

G2B: Intelligent Applications

Chair: Dr Yulia Hicks

Tuesday 4 Sept: 11.00-13.00

Ivo Andric Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-033	Genetic Algorithm for Community Detection in Biological Networks Ms. Marwa Ben M'barek, Mr. Walid Bedhiafi, Mrs. Sana Ben Hmida, Mrs. Amel Borgi
k18gen-038	Automatic Characterization of the Serous Retinal Detachment Associated with the Subretinal Fluid Presence in Optical Coherence Tomography Images M.sc Joaquim De Moura, Ph.d Ana Maria Mendonça, Ph.d Jorge Novo, Ph.d Marcos Ortega, Ph.d Susana Penas, Ph.d Jorge Silva
k18gen-040	A hierarchical Deep neural network design for stock returns prediction M. Oussama Lachiheb, Dr. Mohamed Salah Gouider
k18gen-041	Automatic extraction of vascularity measurements using OCT-A images B.sc Macarena Díaz, Ph.d Jorge Novo, Ph.d Marcos Ortega, Ph.d Manuel Penedo
k18gen-046	Scale Genetic Programming for large Data Sets: Case of Higgs Bosons Classification Assistant Professor Sana Ben Hamida, Professor Amel Borgi, Phd Student Hmida Hmida, Professor Marta Rukoz
k18gen-047	A novel keyword rescoring method for improved spoken keyword spotting Mr Ilyes Rebai, Mr Yassine Benayed, Mr Walid Mahdi

G2C: Intelligent Applications

Chair: Prof Vladan Devedzic

Tuesday 4 Sept: 15.30-17.30

Ivo Andric Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-053	Smart Query Optimization Approach In Distributed Environment Mme Hassen Fadoua, Professor Grissa Touzi Amel
k18gen-060	Ischemic Stroke Detection System with Computer Aided Diagnostic Capability Assoc. Prof. Dr. Dzati Athiar Ramli, Ms Najah Ghazali, Ms Lina Tay
k18gen-070	Identifying Fake News and Fake Users on Twitter Mr. Costel-sergiu Atodiresei, Mr. Adrian Iftene, Mr. Alexandru Tanaselea
k18gen-071	Non-Rectangular ROI Extraction and Machine Learning Based Multiple Object Recognition Used for Time-Series Areal Images Obtained Using MAV Dr. Hirokazu Madokoro, Mr. Kainuma Asahi, Prof. Kazuhito Sato
k18gen-072	Automatic Segmentation of Diffuse Retinal Thickening Edemas Using Optical Coherence Tomography Images M.sc Joaquim De Moura, Ph.d Jorge Novo, Ph.d Marcos Ortega, B.sc Gabriela Samagaio
k18gen-083	Fintech Model: The Random Neural Network with Genetic Algorithm Mr Will Serrano

G2D: Intelligent Applications

Chair: Prof Liya Ding

Wednesday 5 Sept: 9.30-11.30

Ivo Andric Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-077	A multi-objective mathematical model for the optimization of the transittability of complex biomolecular networks Mr Ali Ayadi, Prof. François De Bertrand De Beuvron, Prof. Saoussen Krichen, Prof. Cecilia Zanni-merk
k18gen-078	A multi-objective method for optimizing the transittability of complex biomolecular networks Mr Ali Ayadi, Prof. François De Bertrand De Beuvron, Prof. Saoussen Krichen, Prof. Cecilia Zanni-merk
k18gen-073	Multi-expert analysis and validation of objective vascular tortuosity measurements Dr. Lucía Ramos, Ms. María Álvarez, Dr. Jorge Novo, Dr. Marcos Ortega, Ms. Stephanie Romeo, Dr. José Rouco
k18gen-085	GPU Cuda JSEG Segmentation Algorithm associated with Deep Learning Classifier for Electrical Network Images Identification Msc Francisco Fambrini, Professor Luis Mariano Del Val Cura, Professor João Batista Destro-filho, Professor José Hiroki Saito
k18gen-088	Noninvasive Detection of Potentially Precancerous Lesions of Vocal Fold Based on Glottal Wave Signal and SVM Approaches Dr. Anis Ben Aicha
k18gen-092	A study of some fast inpainting methods with application to iris reconstruction Lecturer Doctor Anca Ignat, Student Alexandru Vasiliu

G2E: Intelligent Applications

Chair: Dr Yulia Hicks

Wednesday 5 Sept: 14.00-16.00

Ivo Andric Ballroom B

PROSE Paper No	Paper Title / Authors
k18gen-097	A common-sense based system for Geo-IoT Phd Student Ruben Cantarero, Full Professor Juan C. López, Phd Student Ana Rubio, Phd Student Cristian Traperero, Phd David Villa, Phd Felix J. Villanueva
k18gen-102	Emotional Influences on Cryptographic Key Generation Systems using EEG signals Mr Dang Nguyen, Dr Wanli Ma, Dr Dharmendra Sharma, Dr Dat Tran
k18gen-108	A robust anisotropic edge detection method for carotid ultrasound image processing Phd José Rouco, Md Elsa Azevedo, Phd Aurélio Campilho, Phd Catarina Carvalho, Msc Ana Domingues
k18gen-110	Using the hybrid ILS/VND method for solving the patients scheduling problem in emergency department: a case study Phd Student Marwa Harzi, Professor Jean-françois Condotta, Professor Saoussen Krichen, Associate Professor Issam Nouaouri
k18gen-111	An unsupervised classification approach for hyperspectral images based adaptive spatial and spectral neighborhood selection and graph clustering Ms Manel Ben Salem, Pr Med Salim Bouhlef, Dr Karim Saheb Ettabaa
k18gen-113	Topological Mapping of Neurons using Activities Detected in MEA Recording Signals Master Jose Roberto Campos, Master Francisco Fambrini, Phd João Fernando Mari, Phd Eduardo Rafael Lappa Rodriguez, Phd Jose Hiroki Saito, Phd Luis Mariano Val Cura

G2F: Intelligent Applications

Chair: Dr Matteo Cristani

Wednesday 5 Sept: 14.00-16.00

Nikola Tesla Ballroom A

PROSE**Paper No****Paper Title / Authors**

k18gen-121	Agent execution platform dedicated to C-ITS Phd Student Chadha Zarari, Professor Flavien Balbo, Professor Khaled Ghedira
k18gen-125	It could rain: weather forecasting as a reasoning process Dr. Matteo Cristani, Mr. Francesco Domenichini, Dr. Francesco Olivieri, Dr. Claudio Tomazzoli, Dr. Margherita Zorzi
k18gen-055	DKDOnto: An Ontology to Support Software Development with Distributed Teams Dr. Rodrigo Rocha,

G3A: Emergent Intelligent Technologies

Chair: Prof Ron Hartung

Monday 3 Sept: 11.00-13.00

Nikola Tesla Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-002	Cross-domain Meta-learning for Time-series Forecasting Mr Abbas Ali, Dr Marcin Budka, Dr Bogdan Gabrys
k18gen-020	Semantic Web Service Composition based on Graph Search Ms. Tucar Liana, Mr Paul Diac
k18gen-031	Tutoring In Project-Based Learning Ms Sonia Amamou, Mrs Lilia Cheniti
k18gen-039	Hand gesture recognition method based on HOG-LBP features for mobile devices Phd Student Housseem Lahiani, Associate Professor Mahmoud Neji
k18gen-045	Cloud SLA Terms Analysis Based On Ontology Student Taher Labidi, Professor Faiez Gargouri, Doctor Achraf Mtibaa
k18gen-054	A Comparative Study of Blind Source Separation for Bioacoustics Sounds based on FastICA, PCA and NMF Assoc. Prof. Dr. Dzati Athiar Ramli, Ms Norsalina Hassan

G3B: Emergent Intelligent Technologies

Chair: Prof Ron Hartung

Tuesday 4 Sept: 11.00-13.00

Nikola Tesla Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-068	Sharpness Enhancement of Finger-Vein Image Based on Modified Unsharp Mask with Log-Gabor Filter Associate Prof. Dr. Dzati Athiar Ramli, Mr. Amir Hajian
k18gen-069	Towards Mapping the Security Challenges of the Internet of Things (IoT) Supply Chain Dr. Tope Omitola, Dr. Gary Wills
k18gen-086	An Enhanced xAPI Data Model Supporting Assessment Analytics Phd Student Azer Noura, Professor Rafik Braham, Assistant Professor Lilia Cheniti-belcadhi
k18gen-089	Spark-based data analytics of sequence motifs in large omics data Prof.dr. Carson Leung, Prof. Adebayo Adetunmbi, Dr Oluwafemi Sarumi
k18gen-096	Fast Spatial Spectral Schroedinger Eigenmaps algorithm for hyperspectral feature extraction PhD Student Asma Fejjari, Professor Ouajdi Korbaa, Doctor Karim Saheb Ettabaa
k18gen-100	A semantic approach for constructing valid composition scenarios of linguistic Web services. Phd Student Mariem Neji, Assistant Bilel Gargouri, Professor Mohammed Jmaiel
k18gen-101	2D Parallel Architecture for Morphological Operators Supporting Multiple Shaped Structuring Elements Phd Student Hajer Elloumi, Assistant Professor Mohamed Krid, Professor Dorra Sellami

G3C: Emergent Intelligent Technologies

Chair: Prof Ron Hartung

Tuesday 4 Sept: 15.30-17.30

Nikola Tesla Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-114	Walking Direction Estimation for Gait Based Applications Phd Student Imen Chtourou, Assistant Professor Emna Fendri, Associate Professor Mohamed Hammami
k18gen-118	An approach to evaluate adherence to the theme and the argumentative structure of essays D.sc. Aluizio Haendchen, D.sc. Hercules Do Prado, Ph.d. Edilson Ferneda, Mr. Jonathan Nau
k18gen-124	Development of a Check Sheet for Code-review towards Improvement of Skill Level of Novice Programmers Dr. Shinichi Oeda, Mr. Hajime Kosaku
k18gen-129	A New Method For Rules Dependency Extraction Ms Abir Boujelben, Ms Ikram Amous

T1A: Knowledge Technology

Chair: Prof Anne Hakansson

Wednesday 5 Sept: 9.30-11.30

Nikola Tesla Ballroom A

PROSE Paper No	Paper Title / Authors
k18gen-008	Representing network knowledge using provenance-aware formalisms for cyber-situational awareness Dr. Leslie Sikos, Dr. Catherine Howard, Dr. Wolfgang Mayer, Mr. Dean Philp, Professor Markus Stumptner, Mr. Shaun Voigt
k18gen-036	An Ontology-driven MapReduce Framework for Association Rules Mining in Massive Data. Phd Student Rania Mkhini Gahar, Assistant Professor Olfa Arfaoui, Full Professor Nejib Ben Hadj-alouane, Associate Professor Minyar Sassi Hidri
k18gen-050	A Semantic Approach for Tweet Categorization Ben Ltaifa Ibtihel Ben Ltaifa, Ben Jemaa Maher Ben Jemaa, Hlaoua Lobna Hlaoua
k18gen-091	Customization of multi-tenant learning process as a service with Business Process Feature Model Phd Azouzi Sameh, Associate Professor Ayachi Ghannouchi Sonia, Assistant Professor Brahmi Zaki
k18gen-120	Refined cloud services discovery based on user model including privacy-preserving access control Phd Student Sarra Abidi, Doctor Mehrez Essafi, Doctor Myriam Fakhri, Professor Henda Hajjami Ben Ghezala
k18gen-122	Data analytics on the board game Go for the Discovery of interesting move sequences Prof.dr. Carson Leung, Dr Alfredo Cuzzocrea, Dr Felix Kanke

Presentation Schedule – Invited Sessions

S1A: Symposium on Information Systems and Technologies for Management, Economy and Decision Making

Chair: Dr Jarosław Wątróbski

Tuesday 4th Sept: 11.00-13.00

Nikola Tesla Ballroom B

PROSE Paper No	Paper Title / Authors
k18is-027	The improvement of data in pairwise comparison matrices Dr Jacek Szybowski
k18is-116	A study on existing and actually used capabilities of mobile technologies Dr Grzegorz Szyjewski, Dr Luiza Fabisiak
k18is-122	TOPSIS and VIKOR methods in study of sustainable development in the EU countries Phd Mateusz Piwowarski, Associate Professor Malgorzata Tarczyska-luniewska, Associate Professor Mariusz Borawski, Associate Professor Danuta Miłaszewicz, Associate Professor Kesra Nermend
k18is-154	Analysis of e-Banking Websites' Quality with the Application of the TOPSIS Method ? A Practical Study Prof Witold Chmielarz, Phd Marek Zborowski
k18is-171	The construction of fundamental portfolio with the use of multivariate approach Prof. Waldemar Tarczyski, Assoc. Prof. Malgorzata Tarczyska-luniewska
k18is-177	On Analysis of e-Banking Websites Quality? Comet Application Prof Witold Chmielarz, Phd Marek Zborowski

S1B: Symposium on Information Systems and Technologies for Management, Economy and Decision Making

Chair: Dr Jarosław Wątróbski

Tuesday 4th Sept: 15.30-17.30

Nikola Tesla Ballroom B

PROSE Paper No	Paper Title / Authors
k18is-179	The procedure of building stable fundamental data base with the use of Matlab software Assoc. Prof. Malgorzata Tarczynska-luniewska
k18is-180	ANP-based analysis of ICT usage in Central European enterprises Dr. Piotr Sulikowski, Dr. Jaroslaw Becker, Dr. Aneta Becker, Dr. Piotr Sulikowski, Dr. Tomasz Zdziebko
k18is-193	Using the COMET Method in the Sustainable City Transport Problem: an Empirical Study of the Electric Powered Cars Dr. Wojciech Sałabun, Phd Artur Karczmarczyk
k18is-049	Knowledge Resources Development Process In Business Process Outsourcing (BPO) Organizations Prof. (associate) Przemysław Różewski, Master Of Science Piotr Janaszkiwicz, Master Of Science Justyna Krysińska, Master Of Science Marcin Prys
k18is-050	Text Summarization For Storytelling: Formal Document Case Prof. (associate) Przemysław Różewski, Master Of Science Piotr Janaszkiwicz, Phd Magdalena Kieruzel, Master Of Science Justyna Krysińska, Phd Tomasz Lipczyński, Master Of Science Marcin Prys
k18is-056	System analysis of human capital for information system development Prof. (associate) Przemysław Różewski, Master Of Science Piotr Janaszkiwicz, Master Of Science Justyna Krysińska, Master Of Science Marcin Prys, Master Of Science Paweł Winięcki

S1C: Symposium on Information Systems and Technologies for Management, Economy and Decision Making

Chair: Dr Jarosław Wątróbski

Wednesday 5th Sept: 09.30-11.30

Nikola Tesla Ballroom B

PROSE Paper No	Paper Title / Authors
k18is-061	Determinants of Using Project Management in The Implementation of Information Systems Prof Witold Chmielarz, PhD Marek Zborowski
k18is-067	Cybersecurity best practices among Polish students Dr Oskar Szumski,
k18is-098	Potentials of changing customer needs in a digital world - a conceptual model and recommendations for action in tourism M.Sc. (Univ.) Christopher Reichstein, Prof. Dr. Ralf-christian Härting
k18is-112	Human-website interaction monitoring in recommender systems Dr. Piotr Sulikowski, Dr. Eliaz Kańtoch, Asst. Dominik Turzyński, Dr. Tomasz Zdziebko
k18is-115	The Concept of Virtual Reality System to Study the Media Message Effectiveness of Social Campaigns Dr. Anna Borawska, Prof. Malgorzata Tarczynska-luniewska, Prof. Mariusz Borawski

S1D: Symposium on Information Systems and Technologies for Management, Economy and Decision Making

Chair: Dr Jarosław Wątróbski

Wednesday 5th Sept: 14.00-16.00

Nikola Tesla Ballroom B

PROSE Paper No	Paper Title / Authors
k18is-118	A New Model for Respected Meetings Dr. Ahmet Demir, Dr. Ihsan Bulut
k18is-130	Selected problems of contemporary research on behavior Prof. Zdzisław Szyjewski, Phd Joanna Szyjewska-bagińska
k18is-132	Mining Neuroscience Data for Social Campaign Evaluation Dr. Anna Borawska
k18is-152	EEG in analysis of the level of interest in social issue advertising Phd Mateusz Piwowarski
k18is-163	Representation of Events and Rules in Gamification Systems Dr Jakub Swacha,
k18is-181	Communication maturity model for organizations realizing EU projects Ph.d. Karolina Muszyńska
k18is-192	An Attempt to Knowledge Conceptualization of Methods and Tools Supporting Ontology Evaluation Process Phd Jaroslaw Watróbski

IS01: Interdisciplinary Approaches in Data Science and Business Intelligence Practice (IADBIP 2018)

Chair: Prof Ivan Luković

Monday 3 Sept: 11.00-13.00

Nikola Tesla Ballroom C

PROSE Paper No	Paper Title / Authors
k18is-051	Data Analytics Systems and SME type - A Design Science Approach Prof. Dr. Patrick Ulrich, Prof. Dr. Wolfgang Becker, M.sc. Alexandra Fibitz, M.sc. Eva Reitelshöfer, M.sc. Felix Schuhknecht
k18is-070	Hardcore Gamer Profiling: Results from an unsupervised learning approach to playing behavior on the Steam platform Student Florian Baumann, Phd Student Hermann Baumgartl, Prof. Dr. Ricardo Buettner, Student Florian Emmert
k18is-101	Potentials of Digital Business Models ? Empirical investigation of data driven impacts in industry Prof. Dr. Ralf-christian Härting, M.sc. (univ.) Christopher Reichstein, B.a. Matthias Schad
k18is-103	National university rankings based on open data: A case study from Serbia Mr Vladimir Ivančević, Prof. Dr Ivan Luković
k18is-119	Near Real-time Autonomous Quality Control for Streaming Environmental Sensor Data Mr. Connor Scully-allison, Dr. Sergiu Dascalu, Mr. Eric Fritzingler, Dr. Frederick Harris Jr., Mr. Vinh Le, Dr. Scotty Strachan

IS02A: Knowledge Engineering in Large-Scale Systems

Chair: Dr Sergey Zykov

Monday 3 Sept: 11.00-13.00

Plato Room

PROSE Paper No	Paper Title / Authors
k18is-002	Software System in Waterloop Pod Ms Dinara Nikolaeva, Ph. D. Rinat Idiyatullin, Bh Ruslan Nikolaev
k18is-053	Application of artificial intelligence methods to recognize pathologies on medical images Prof Georgy Lebedev, Mr Alexander Gromov, Mr Sergey Kachkovskiy, Mr Herman Klimenko, Mr Vadim Konushin, Mr Ilya Ryabkov
k18is-054	Features of the diagnostic information processing for congenital lung malformations in newborns for the automated analysis and surgical navigation systems. Mr Gleb Nemkovskiy, Dr Dmitry Degtyarev, Dr Elena Dorofeeva, Ms Alina Kozlova, Mr Aleksey Prohin, Dr Ulyana Tumanova
k18is-059	The original technique of the collection and adaptation different types of diagnostic information for congenital urinary malformations in newborns for the systems of automated analysis of three-dimensional images and surgical navigation Mr Gleb Nemkovskiy, Mr Ivan Balashov, Dr Vladimir Bychenko, Mr Pavel Kozhin, Dr Yulia Podurovskaya, Mr Alexey Prohin
k18is-062	Application of a prospective assisted reproductive technologies register for calculating the probability of pregnancy Prof Georgy Lebedev, Mr Vladimir Bondarenko, Dr Alexey Kholin, Mr Oleg Malyarenko, Prof Marina Shakhova, Prof Sergey Zykov
k18is-072	Digital technologies to improve effectiveness of pharmacotherapy Dr. Konstantin Koshechkin, Dr. Alexander Polikarpov, Dr. Georgiy Radzievsky

IS02B: Knowledge Engineering in Large-Scale Systems

Chair: Dr Sergey Zykov

Tuesday 4 Sept: 11.00-13.00

Plato Room

PROSE Paper No	Paper Title / Authors
k18is-075	Scope for the Application of Blockchain in the Public Healthcare of the Russian Federation Dr Konstantin Koshechkin, Dr German Klimenko, Dr Pavel Kozhin, Dr Ilya Ryabkov
k18is-133	Applicative-based automatic configuration management for virtual machines Dr. Sergey Zykov, Dr. Leonid Shumsky, Prof. Alexander Tormasov, - Anatoly Tykushin
k18is-145	Item-Centric Mining of Frequent Patterns from Big Uncertain Data Prof. Alfredo Cuzzocrea, Prof. Carson Leung

IS03: Intelligent Transportation Systems

Chair: Dr Milan Simic

Monday 3 Sept: 11.00-13.00

Aristotle Room

PROSE Paper No	Paper Title / Authors
k18is-001	Autodriver Autonomous Vehicles Control Strategy Professor Reza Jazar, Senior Lecturer Hamid Khayyam, Lecturer Hormoz Marzbani, Senior Lecturer Milan Simic, Lecturer Ching Nok To, Lecturer Dai Vo Quoc
k18is-151	Motor imagery based EEG features visualization for BCI applications Ms Madiha Tariq, Dr Milan Simic, Prof Pavel Trivailo
k18is-170	Enhancing the User Experience With Vertical Transportation Solutions Dr Maria Spichkova, Mr Peng Chen, Mr Alber Christianto, Mr Jun Feng, Ms Annie Vuong, Ms Osheen Walawedura

IS04: Data Science for Big Data

Chair: Prof Katsutoshi Yada

Monday 3 Sept: 11.00-13.00

Aristotle Room

PROSE Paper No	Paper Title / Authors
k18is-023	Incentive Mechanism of Medical Data Provider of Health Data Bank Prof. Lindu Zhao, Ms. Jianxia Gong, Ms. Lijun Zhou
k18is-136	Framework of highly secure transaction management for affiliate services of video advertising Prof. Motoi Iwashita, Prof. Shigeaki Tanimoto, Ms. Kana Tsuchiya
k18is-153	Implementing Multi-Robot Cafe by PRINTEPS with Service Quality Dimensions Dr. Takeshi Morita, Ms. Naho Kashiwagi, Prof. Dr. Hideo Suzuki, Prof. Dr. Takahira Yamaguchi, Dr. Ayanori Yorozu

IS07A: Numerical Modelling and Recognition Techniques

Chair: Prof Margarita Favorskaya

Tuesday 4 Sept: 11.00-13.00

Lavender Room

PROSE Paper No	Paper Title / Authors
k18is-005	Modelling the non-stationary videos for performance assessment of frame reconstruction Prof. Margarita Favorskaya, Dr. Vladimir Buryachenko
k18is-010	No-reference quality assessment of blurred frames Prof. Margarita Favorskaya, Phd Alexander Proskurin
k18is-035	Use of symmetric Hadamard and Mersenne matrices in digital image processing Dr. Anton Vostrikov, Prof. Nikolaj Balonin, Mr. Alexander Sergeev, Prof. Mikhail Sergeev
k18is-038	Two approaches to the calculation of air subdomains: theoretical estimation and practical results Dr Alena Favorskaya, Dr Vasiliy Golubev, Dr Nikolay Khokhlov
k18is-039	Explanation the difference in destructed areas simulated using various failure criteria by the wave dynamics analysis Dr Alena Favorskaya, Dr Vasiliy Golubev, PhD Student Daniil Grigorievyh
k18is-040	Modeling the impact of wheelsets with flat spots on a railway track Dr Alena Favorskaya, Dr Nikolay Khokhlov

IS07B: Numerical Modelling and Recognition Techniques

Chair: Prof Margarita Favorskaya

Tuesday 4 Sept: 15.30-17.30

Lavender Room

PROSE Paper No	Paper Title / Authors
k18is-041	The use of multiple waves to obtain information on an underlying geological structure Dr Alena Favorskaya
k18is-065	MRI Brain's Tumor Edge Detection Based on Fuzzy C-Means PhD Mikhail Kurako, PhD student Yousif Hamad, assoc. prof. Svetlana Kirillova, prof. Konstantin Simonov, assoc. prof. Alexander Zotin
k18is-068	Numerical simulation of destruction processes by the grid-characteristic method Dr Vasily Golubev, Dr Alena Favorskaya, PhD Student Daniil Grigorievych, Dr Nikolay Khokhlov
k18is-095	Verification and Online Updating of Decision Making Control Logic for Onboard Real-Time Control Systems Prof. Andrey Tyugashev, Rector Dmitrii Zheleznov
k18is-113	Environmental risk zones mapping using satellite monitoring data PhD Mikhail Kurako, Prof. Valentin Kashkin, Prof. Konstantin Simonov, Assoc. Prof. Alexander Zotin, Phd Dmitriy Zuev
k18is-064	Some Aspects on Complementarity and Heterodoxy in Non-Classical Logics Dr Jair Abe, Phd Seiki Akama, Dr João Inácio Da Silva Filho, Phd Kazumi Nakamatsu

IS09: Networks for Innovation, Knowledge Creation and Sharing

Chair: Prof Shuichiro Yamamoto

Monday 3 Sept: 11.00-13.00

Lavender Room

PROSE Paper No	Paper Title / Authors
k18is-045	Proposal of Integrated Reference Model For Realization of Dream and Transformation Dr. Ryu Katayama
k18is-047	A Composite Dependability for Enterprise Architecture Dr. Shuichiro Yamamoto, Dr. Shuji Morisaki, Phd Student Qiang Zhi
k18is-055	Two-Stage Third-Party Review Proposal In SoftWare Development Manager Haruhiro Tsuchiya, Software Engineer Naoko Kobayashi, Software Engineer Yuko Murakami, Software Engineer Jiaqi Wan, Professor Dr. Shuichiro Yamamoto, Software Engineer Tomoyuki Yanagisawa
k18is-063	Meta-Requirements for Information System Requirements: Lesson Learned from Software Ecosystem Researches Prof. Haruhiko Kaiya
k18is-024	Obtaining Exhaustive Answer Set for Q&A-based Inquiry System using Customer Behavior and Service Function Modeling Dr. Hironori Takeuchi, Mr. Shiki Akihara, Dr. Satoshi Masuda, Mr. Kohtaroh Miyamoto

IS10: Knowledge and data engineering in medicine and health care

Chair: Prof Wieslaw Paja

Monday 3 Sept: 11.00-13.00

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PROSE Paper No	Paper Title / Authors
k18is-022	Research on Hybrid Information Evaluation Type Watching Technology for the Improvement of QOL of the Elderly Dr. Jun Sawamoto, Dr. Manabu Kurosawa, Dr. Yoji Taniguchi, Mr. Kota Watanabe, Dr. Hiroshi Yajima
k18is-036	On the development of an open and collaborative bioinformatics research environment Prof. Nikos Karacapilidis, Dr. Alexandros Kanterakis, Dr. Lefteris Koumakis, Dr. George Potamias
k18is-169	Determining Importance of Ranges of MMPI Scales Using Fuzzification and Relevant Attribute Selection Dr Krzysztof Pancierz, Mr Jerzy Gomula, Dr Wieslaw Paja, Mr Jaromir Sarzynski
k18is-176	Experiments with Consistency-Based Preprocessing of MMPI Data for Classification Tasks Dr Krzysztof Pancierz, Mr Jerzy Gomula

IS11: Metaheuristics and multiagent models for flexible manufacturing systems

Chair: Dr. Olfa Belkahla Driss

Wednesday 5th Sept: 14.00-16.00

Plato Room

**PROSE
Paper No****Paper Title / Authors****k18is-085**

An effective heuristic for the single-machine scheduling problem with flexible maintenance under human resource constraints

Mrs Meriem Touat, Mrs Fatima Benbouzid-Si Tayeb, Mr Belaid Benhamou

k18is-088

Solving Distributed and Flexible Job shop Scheduling Problem using a Chemical Reaction Optimization metaheuristic

Mr Bilel Marzouki, Dr Olfa Belkahla Driss, Pr Khaled Ghedira

k18is-102

Dual-Resource Constraints in Classical and Flexible Job Shop Problems: A State-of-the-Art Review

Student Mondher Dhiflaoui, Dr. Olfa Belkahla Driss, Dr. Housseem Eddine Nouri

IS12: Contemporary issues in Computer education

Chair: Prof Hiroko Kanoh

Tuesday 4th Sept: 11.00-13.00

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PROSE Paper No	Paper Title / Authors
k18is-026	An Interval-Type Autocorrelated Fuzzy Time-Series Model Used Other Fuzzification and Its Sequential Reconstruction Prof Yoshiyuki Yabuuchi
k18is-032	Investigation into Parents' Concerns about the Introduction of Programming Education into Japanese Primary School Ms Yukiko Maruyama
k18is-079	Experiences and perspectives of Technology-enhanced learning and teaching in higher education ? Serbian case Prof. Mirjana Ivanovic;, Dr Veljko Aleksić, Mrs Brankica Bratić, Dr Aleksandra Klasnja Milićević, Dr Mandić Milinko
k18is-124	Why do people believe in fake news over the Internet? An understanding from the perspective of existence of the habit of eating and drinking Prof. Hiroko Kanoh
k18is-161	Analysis and classification of university students' educational skills using a computer-assisted web-interviewing questionnaire Dr. Tadanari Taniguchi, Dr. Kurita Daisuke, Dr. Yukiko Maruyama, Dr. Makoto Tanaka

IS13: Chance Discovery and Market of Data

Chair: Prof Akinori Abe

Monday 3 Sept: 11.00-13.00

Nikola Tesla Ballroom B

PROSE Paper No	Paper Title / Authors
k18is-129	The Difference between Variable-based and Context-based Networks of Data Using Data Jackets Dr. Hayashi Teruaki, Professor Ohsawa Yukio
k18is-147	Shift of perceived distance reflecting an organizational culture - revealing through multi-dimensional scaling method Professor Jun Nakamura, Professor Sanetake Nagayoshi
k18is-158	Tool for Extracting Latent Field Overseers' Knowledge for Risk Recognition on Eyes and Algorithm for Structuring Meta and Domain Knowledge from Utterances Prof. Kushiro Noriyuyki, Mr. Fujita Yuji, Mr. Aoyama Yusuke
k18is-160	How to determine the necessary knowledge in the inconsistent situation? Prof. Akinori Abe
k18is-187	Action research for improving the risk literacy of university students: Focusing on the effectiveness of risk communication using Crossroad game Prof. Yumiko Nara

IS14: Cyber-Physical Systems and Applications

Chair: Prof Anne Hakansson

Wednesday 5th Sept: 14.00-16.00

Nikola Tesla Ballroom C

PROSE Paper No	Paper Title / Authors
k18is-141	Contextual Knowledge to Enhance Workplace Hazard Recognition and Interpretation in a Cognitive Vision Platform Miss Caterine Silva De Oliveira, Doctor Cesar Sanin, Professor Edward Szczerbicki
k18is-143	From Knowledge based Vision Systems to Cognitive Vision Systems: A Review Ms. Thamiris Lorena De Souza Alves, Dr. Cesar Sanin, Ms. Caterine Silva De Oliveira, Professor Edward Szczerbicki
k18is-173	Ipsum - An Approach to Smart Volatile ICT-Infrastructures for Smart Cities and Communities Prof Anne Håkansson

IS15: Computational Intelligence System and Applications

Chair: Prof Yuji Iwahori

Tuesday 4th Sept: 11.00-13.00

Nikola Tesla Ballroom C

PROSE Paper No	Paper Title / Authors
k18is-015	Inventory Satisfaction Discrimination Method Utilizing Images and Deep Learning Professor Tsukasa Kudo, Mr. Tenma Kawanaka
k18is-017	A System for Japanese Listening Training Support with Watching Japanese Anime Scenes Student Junjie Shan, Associate Professor Yoko Nishihara, Assistant Professor Ryosuke Yamanishi
k18is-031	Statistical Study of the Sub-second Price Fluctuation in the 2nd Stage of the Arrowhead Market Professor Mieko Tanaka-yamawaki, Dr. Yumihiko Ikura, Professor Masanori Yamanaka
k18is-093	Detection of Words Accepted to Dynamic Abstracts Focusing on Local Variation of Word Frequency Ms. Haruna Mori, Asoc. Prof. Yoko Nishihara, Asoc. Prof. Ryosuke Yamanishi
k18is-121	Defect Classification of Electronic Board Using Dense SIFT and CNN Prof. Yuji Iwahori, Prof. Yoshinori Adachi, Dr. M. Bhuyan, Prof. Boonserm Kijirikul, Miss Tokiko Shiina, Mr. Yohei Takada
k18is-058	Physical and Behavioral Characterization of Human Groups Classified Using Symbolic Pattern Analysis Mr. Kosuke Shima, Prof. Nobuhiro Inuzuka, Prof. Koichi Moriyama, Prof. Atsuko Mutoh

IS16A: Smart Education: Active Learning using ICT and e-Learning

Chair: Prof Nobuyuki Ogawa

Wednesday 5th Sept: 09.30-11.30

Aristotle Room

PROSE Paper No	Paper Title / Authors
k18is-012	Virtual Workshop for Creative Teaching of STEM Courses Research Professor Dana Barry, Professor Hideyuki Kanematsu, Professor Katsuko Nakahira, Professor Nobuyuki Ogawa
k18is-018	A proposal of method to make active learning from class to self-study using active note taking and active textbook system Prof. Shin-nosuke Suzuki, Dr. Yutaro Akimoto, Prof. Manabu Ishihara, Ms Ryohei Kameyama, Dr. Yasuhiro Kobayashi, As Masaya Yamaguchi
k18is-028	Some Psychological Responses Measured by a Commercial Electrooculography Sensor and Its Applicability Dr. Hideyuki Kanematsu, Dr. Dana Barry, Prof. Katsuko Nakahira, Dr. Nobuyuki Ogawa, Prof. Tatsuya Shirai, Dr. Michiko Yoshitake
k18is-030	Behind benefits of using an automated exercise creation system Phd Kalle Saastamoinen, Phd Antti Rissanen
k18is-034	Pilot considerations of brain activity detection based on difference of English words difficulty levels at recognition of English words Mr. Tatsuya Sasaki, Prof. Yoritaka Akimoto, Prof. Katsuko Nakahira

IS16B: Smart Education: Active Learning using ICT and e-Learning

Chair: Prof Nobuyuki Ogawa

Wednesday 5th Sept: 14.00-16.00

Aristotle Room

PROSE Paper No	Paper Title / Authors
k18is-110	English writing eportfolio for university STEM majors Dr. Sunao Fukuanga
k18is-157	Active Learning Strategy at a Collegewide Level in NIT, Gifu College Prof. Ph.d. Nobuyuki Ogawa
k18is-172	Active Learning on Digital Marketing for Advertising A University Museum Exhibition Professor Toshiki Ueda, Professor Ban Hiroshi

IS17: Human factors for communication & intelligent systems

Chair: Dr Atsuko Yamazaki

Tuesday 4th Sept: 15.30-17.30

Nikola Tesla Ballroom C

PROSE Paper No	Paper Title / Authors
k18is-003	Raising driver attentiveness with unconscious learning effect Professor Toshio Ito, Student Shuji Sudo
k18is-080	Effects of facial expressions on impression evaluation for Japanese stuttering voices Professor Atsuko Yamazaki, Mr. Muhammad Nur Adilin Anuardi, Mr. Kazukiyo Inada, Mr. Noriaki Miwa, Mr. Mashu Sanjo
k18is-109	Human Knowledge in Constructing AI Systems -- Neural Logic Networks Approach towards an Explainable AI Professor Liya Ding
k18is-126	Development of web-based learning materials to support assisting-skill acquisition using 3DCG Dr. Kaoru E, Dr. Hiroshi Matsuda, Ms. Hiranchiracheep Suopor, Dr. Hiroshi Takase, Dr. Atsuko Yamazaki, Ms. Hiroko Yoshida
k18is-142	Comparisons of the Effects of Three Background Colours on Brain Functioning and Task Performance Mr. Muhammad Nur Adilin Mohd Anuardi, Prof. Kaoru Eto, Prof. Atsuko K. Yamazaki

IS18: Immunity-Based Systems: Resilient Computing for IoT

Chair: Prof Yoshiteru Ishida

Wednesday 5th Sept: 14.00-16.00

Lavender Room

PROSE Paper No	Paper Title / Authors
k18is-086	Implementation and evaluation of an immunity-enhancing module for ISC BIND9 Dr Takeshi Okamoto, Mr Mitsunobu Tarao
k18is-189	Fake News and their Credibility Evaluation by Dynamic Relational Networks: A Bottom Up Approach Prof. Dr. Yoshiteru Ishida, Ms. Sanae Kuyara
k18is-197	SCORMAdaptiveQuiz: A Implementation of Adaptive e-Learning for Moodle Dr. Hiroshi Ueda, Ms. Masako Furukawa, Dr. Motonori Nakamura, Dr. Kazutsuna Yamaji

IS19: Information Technology Applications in Data Analytics and Software Development

Chair: Dr Gongzhu Hu

Tuesday 4th Sept: 15.30-17.30

Plato Room

PROSE Paper No	Paper Title / Authors
k18is-004	Genetic Algorithm Analysis using the Graph Coloring Method for Solving the University Timetable Problem Dr. Ramzi Haraty, Ms. Maram Assi, Ms. Bahia Halawi
k18is-037	Impacts of Temperature and Humidity variations on RSSI in indoor Wireless Sensor Networks M.sc. Dipl.-ing. Amir Guidara, Prof. Dr.-ing. Maher Ben Jemaa, Prof. Dr.-ing. Faouzi Derbel, Dr.-ing. Ghofrane Fersi
k18is-107	Preserving the Correctness of Dynamic Workflows within a Cloud Environment Phd Fairouz Fakhfakh, Phd Faten Fakhfakh, Dr Hatem Hadj Kacem, Prof Ahmed Hadj Kacem
k18is-108	Formal Verification Approaches for Distributed Algorithms: A Systematic Literature Review Phd Student Faten Fakhfakh, Prof Ahmed Hadj Kacem, Prof Mohamed Mosbah, Dr Mohamed Tounsi
k18is-120	An Educational Science Ride Using a Motion Flight Simulator Platform Professor Sergiu Dascalu, Student Alexander Redei
k18is-144	An ontology-based monitoring system for multi-source environmental observations Mrs Maroua Masmoudi, Mr Bernard Archimede, Mrs Hajer Baazaoui Zghal, Mrs Sana Ben Abdallah Ben Lamine, Mr Mohamed Hedi Karray

IS20A: Knowledge-Based Systems for e-Business

Chair: Prof Kazuhiko Tsuda

Tuesday 4th Sept: 11.00-13.00

Aristotle Room

PROSE Paper No	Paper Title / Authors
k18is-071	A Study on Delivery Evaluation under Asymmetric Information in the Mail-order Industry Dr. Prof. Masakazu Takahashi, Dr. Hiroaki Azuma, Dr. Prof. Kazuhiko Tsuda
k18is-076	Contribution to Purchase Behavior of Voluntary Search Compared to Web Advertisement Mr. Takumi Kato, Prof. Kazuhiko Tsuda
k18is-077	Method of extracting a relation between impact of newspaper article and stock price Mr. Daisuke Katayama, Prof. Kazuhiko Tsuda
k18is-081	A Management Method of the Corporate Brand Image Based on Customers' Perception Mr. Takumi Kato, Prof. Kazuhiko Tsuda
k18is-083	Conceptual Modeling supported by Text Analysis Dr. Yasunobu Kino,
k18is-092	Prediction of Broadband Spectrum Utilization Data for Spectrum Sharing Dr. Nobuo Suzuki, Mr. Tatsuya Yoshioka

IS20B: Knowledge-Based Systems for e-Business

Chair: Prof Kazuhiko Tsuda

Tuesday 4th Sept: 15.30-17.30

Aristotle Room

PROSE Paper No	Paper Title / Authors
k18is-094	Correlation analysis between customer's behaviour on website and actual purchase Mr Satoshi Yoshimaru, Mr Sakamoto Daisuke, Prof Tsuda Kazuhiko, Mr Yazawa Takehiko
k18is-096	Extraction method of the gap between the reputation of reviews and the maker strategy Dr. Yuko Taniguchi, Dr.prof. Kazuhiko Tsuda
k18is-097	Method of extracting appliance pricing factors in e-commerce Dr Tatsuya Ogura, Dr Prof Kazuhiko Tsuda
k18is-105	Social Listening System Using Sentiment Classification for Discovery Support of Hot Topics Ma Daisuke Sakamoto, Ma Naoki Matsushita, Ma Mitsumasa Noda, Prof. Kazuhiko Tsuda
k18is-111	Structured analysis of the evaluation process for adopting open-source software Mr. Shinji Akatsu, Dr. Yoshikatsu Fujita, Mr. Takumi Kato, Dr. Kazuhiko Tsuda

IS23: New Generation Computing in Engineering, Life Science and Economy

Chair: Dr Piotr Nikończuk

Tuesday 4th Sept: 15.30-17.30

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PROSE Paper No	Paper Title / Authors
k18is-073	Fuzzy Matching of OpenAPI Described REST Services Mr. Cong Peng, Dr. Guohua Bai, Dr. Prashant Goswami
k18is-078	Vehicle Classification Based on Multiple Fuzzy C-Means Clustering Using Dimensions and Speed Features Mr Saleh Javadi, Dr. Mattias Dahl, Prof. Mats Pettersson, Mr Muhammad Rameez
k18is-082	Component Selection with Fuzzy Decision Making Mr Johan Silvander,
k18is-162	Fuzzy decision-making model with qualitative states and fuzzified outcomes Professor Elisabeth Rakus-andersson
k18is-185	Knowledge systematization for ontology learning methods Phd Agnieszka Konys,
k18is-186	Towards Knowledge Handling in Ontology-Based Information Extraction Systems Phd Agnieszka Konys

IS26: Skill Acquisition and Ubiquitous Human Computer Interaction

Chair: Prof Masato Soga

Wednesday 5th Sept: 9.30-11.30

Nikola Tesla Ballroom C

PROSE Paper No	Paper Title / Authors
k18is-087	Rolls of facilitator in collaborative active learning for relaxing life Professor Taizo Miyachi, Researcher Takashi Furuhashi, Lecturer Saiko Iga
k18is-114	Towards an adaptable task model within an evolutionary environment Phd Jarraya Mouna, Prof Moussa Faouzi
k18is-166	Development of a AR Drawing System with Point Cloud Data suitable for Real-time Gripping Movement by using Kinect Ba Hiroki Inatome, Dr. Masato Soga
k18is-167	Analysis of brain activity in distance recognition Mr. Shohei Matsui, Dr. Noriyuki Matsuda, Dr. Hirokazu Miura, Dr. Masato Soga, Prof. Hirokazu Taki
k18is-178	Motion Comparison Learning Support Environment for Learner's Motion synchronized with Archived Target Expert's Motion Dr. Masato Soga, Ma Toshihiro Yoshinaga

IS27: Signal and Image Processing Algorithms and Pattern Recognition Techniques for Automated Identification/Classification Systems

Chair: Dr Paolo Crippa

Wednesday 5th Sept: 9.30-11.30

Plato Room

PROSE Paper No	Paper Title / Authors
k18is-048	A Fine-Tuned Convolution Neural Network Based Approach For Phenotype Classification Of Zebrafish Embryo Prof. Ishwar Sethi, Dr. Nilesh Patel, Gaurav Tyagi
k18is-106	I-vector Extraction for Speaker Recognition Based on Dimensionality Reduction Assoc. Prof. Dr. Dzati Athiar Ramli, Ms. Noor Salwani Ibrahim
k18is-138	Position recognition algorithm using a two-stage pattern classification set applied in sleep tracking Ms. Eva Rodriguez De Trujillo, Mr. Maksym Gaiduk, Dr. Ralf Seepold
k18is-148	An acquisition system of in-house parameters from wireless sensors for the identification of an environmental model Dr. Paolo Crippa, Dr. Giorgio Biagetti, Mr. Diego Coccia, Dr. Laura Falaschetti, Prof. Claudio Turchetti
k18is-155	A Comparative Study of Machine Learning Algorithms for Physiological Signal Classification Dr. Paolo Crippa, Dr. Giorgio Biagetti, Dr. Laura Falaschetti, Ms. Giulia Tanoni, Prof. Claudio Turchetti

IS29A: Internet-of-Things and Intelligent Systems

Chair: Prof Xiangpei Hu

Wednesday 5th Sept: 09.30-11.30

Lavender Room

PROSE Paper No	Paper Title / Authors
k18is-123	Reverse Logistic Network Optimization Research for Sharing Bikes Professor Xuping Wang, Master Honghui He, Master Mingming Zhao
k18is-127	Tactical Production and Distribution Planning in Urban Logistics under Vehicle Operational Restrictions Dr. Mu Du, Dr. Xiangpei Hu, Dr. Nan Kong, Dr. Lindu Zhao
k18is-128	Bundling Strategy and Channel Competition in Supply Chains with Complementary Products Associate Prof. Sijie Li, Assistant Prof. Lai Minghui, Associate Prof. Weili Xue
k18is-135	Pricing decisions and environmental assessment in a two-echelon supply chain with returnable transport items Prof. Lindu Zhao, Ms. Min Wang
k18is-137	Analysis of Two-Tier Healthcare Service Systems under Value-Based Competition in China Dr. Xinxin Guo, Prof. Haiyan Wang, M.s. Xuejiu Zhang
k18is-140	A qualitative knowledge representation model and application for crisis event Professor Jiangnan Qiu, Student Huayan Shi, Student Shuning Yang, Student Min Zuo

IS29B: Internet-of-Things and Intelligent Systems

Chair: Prof Xiangpei Hu

Wednesday 5th Sept: 14.00-16.00

Lavender Room

PROSE Paper No	Paper Title / Authors
k18is-149	Integrated optimization model of the urgent order distribution and delivery problem of online pharmacy Ms. Mengqi Yu, Prof. Xiangpei Hu, Mr. Yonggang Li, Ms. Yanling Zhuang
k18is-150	Modeling and verification of supervisory rules in IoT environment Dr. Tao Lu, Ms. Xinye Huo
k18is-156	Order batching and sequencing problem under the pick-and-sort strategy in online supermarkets Mr. Xiaowei Jiang, Prof. Xiangpei Hu, Prof. Lijun Sun, Doc. Yuankai Zhang, Mrs. Yaxian Zhou

IS30: Intelligent Network Security and Digital Forensics

Chair: Prof Oliver Popov

Wednesday 5th Sept: 14.00-16.00

Nikola Tesla Ballroom C

PROSE Paper No	Paper Title / Authors
k18is-134	Enhancing the Cyber Resilience of Critical Infrastructures through an Evaluation Methodology Based on Assurance Cases Ms Dorien Koelemeijer
k18is-146	Investigating the possibility of speeding up Mininet by using Netmap, an alternative Linux packet I/O framework Mr. Ulf Noring
k18is-174	A Methodology to Enhance Industrial Control System Security Mr. Dominic Timpson, Dr. Esmiralda Moradian

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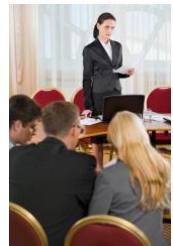
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Sustainable Technology -- *Sustainability in Energy and Buildings, Smart Energy* -- *Sustainable Design and Manufacturing.*

Innovation, Knowledge Transfer, Enterprise and Entrepreneurship -- *Innovation and Knowledge Transfer* -- *Innovation in Medicine and Healthcare*

Digital Media -- *Archiving Tomorrow* -- *Innovation in Music*



Some of the countries - Australia, Chile, Croatia, England, Germany, Japan, Ireland, Italy, Poland, Portugal, New Zealand, United States, Vietnam, Wales

KES JOURNALS

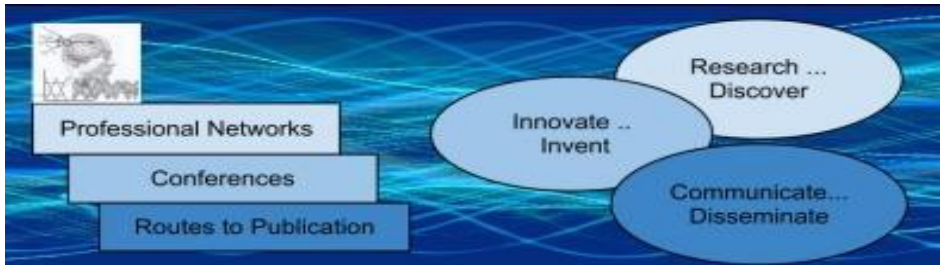
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-- *International Journal of Knowledge Based and Intelligent Engineering Systems* -- *Intelligent Decision Technologies: an International Journal* -- *InImpact: the Journal of Innovation Impact* -- *Sustainability in Energy and Buildings: Research Advances* -- *Advances in Smart Systems Research*

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KES International – 2019 Conferences

SDF-19: 17-19 June 2019

Smart Digital Futures 2019 brings you six of our most popular conferences on various aspects of intelligent systems including Innovation in Medicine & Healthcare (InMed19,) Intelligent Decision Technologies (IDT19) Intelligent Interactive Multimedia Systems & Services (IIMSS19), Agent & Multi-agent Systems (AMSTA19), Smart Education & E-Learning (SEEL19) and Smart Transportation Systems (STS19) on the stunning island of Malta. It will feature a unique and exciting social programme.



SST-19: 3-5 July 2019

Smart sustainable technologies 2019 KES's dual themed conference incorporating:

- Sustainability in Energy and Buildings (SEB-19)
- Sustainable Design and Manufacturing (SDM-19)

Will be held at the stunning **4*** **Superior Danubius Health Spa Resort**, which sits on the beautiful Margaret Island, Budapest.



KES-2019: 3-6 September 2019

We are delighted to announce that 23rd International Conference on Knowledge Based and Intelligent information and Engineering Systems (KES2019) will be held at the **4* Superior Danubius Health Spa Resort** on 'The spa island of Budapest' situated on the river Danube in between Buda and Pest, so we are in a perfect position to explore this incredible and historic city.

