

Contents

Chairs' Welcome	1
Organisation	3
International Programme Committee	4
General and Thematic Track Sessions	11
Invited Sessions	12
Plenary Talks	14
Simulation, IA & Mixed Reality within Industry 4.0.....	14
Complex Systems: a new science born in the XXth century	16
Artificial Intelligence in Cyber-Physical Systems	17
3D Shape Recovery and Pattern Classification Using Neural Network Learning.....	19
The Need of Machine Learning for Industrie 4.0.....	21
Conference Timetable	23
Presentation Schedule	29
G01A: Theoretical Foundations.....	29
G01B: Theoretical Foundations.....	30
G02A/G03B: Intelligent Applications and Technologies.....	31
G02B: Intelligent Applications	32
G03A: Emergent Intelligent Technologies.....	33
T02A: Natural language Processing.....	34
IS25: Digital city science	35
IS11: Networks for Innovation, Knowledge Creation and Sharing	36
IS07: Chance Discovery and Market of Data	37
G01C: Theoretical Foundations.....	38
G01D / T03: Theoretical Foundations and Collaborative Agents	39
G02C: Intelligent Applications.....	40
G03C: Emergent Intelligent Technologies	41
T02B: Natural language Processing	42
IS02: Application of Knowledge Engineering in Large-Scale Systems.....	43
IS06: Human factors for communication & intelligent systems.....	44
IS17: Advances from Heuristics to Hyperheuristics.....	45
WS01: Combinations of Intelligent Methods and Applications.....	46
T01: Knowledge Technologies	47
IS03: Numerical Modelling and Recognition Techniques	48
IS04: Data Science for Big Data	49
IS08: Computational Intelligence System and Applications	50
IS10: Smart Education: Active Learning using ICT and e-Learning	51
IS12: Intelligent Healthcare Informatics.....	53
IS13: Supervised versus Unsupervised Methods for Intelligent Text Processing	54

IS16: Immunity-Based Systems: Resilient Computing and Formation
Science 56

IS18: New Generation Computing in Life Sciences and Engineering..... 57

G01E: Theoretical Foundations 58

G03D: Emergent Intelligent Technologies..... 59

IS05A: Intelligent Transportation Systems 60

IS09A: Knowledge-Based Systems for e-Business 61

IS14: Skill Acquisition and Ubiquitous Human Computer Interaction 62

IS15A: Pattern Recognition: Trends, Applications and Challenges..... 63

IS19: Knowledge-based Learning and Education Support System 64

IS27A: Intelligent Decision Support Techniques in the Age of Internet of
Things 65

G01F: Theoretical Foundations 66

G03: Emergent Intelligent Technologies 67

IS01 / IS20 / IS28 68

IS22 / IS23 / IS24 69

IS05B / IS09A 70

IS21A: Identification 2.0 and modeling for Industry 71

IS21B: Identification 2.0 and modeling for Industry..... 72

IS15B / IS27B 73

IS29: Enterprise and Business Applications in Big Data Scale 74

Chairs' Welcome

We are pleased to welcome you to the 21st International Conference on Knowledge - Based and Intelligent Information & Engineering Systems (KES 2017), organised by the LSIS (Laboratoire des Sciences de l'Information et des Systèmes from Marseille, France) and KES International and held on September 6th to 8th, 2017 at the Saint Charles campus of Aix-Marseille University, next to the Vieux Port in Marseille.

KES 2017 is the 21st 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 three general tracks, three thematic tracks and 29 special sessions on specific topics. Two workshops were also available for submissions. Accepted and presented papers highlighted the new trends and challenges of intelligent and knowledge-based systems. Each paper was peer reviewed by at least two members of the International Program Committee. A very high number of submissions were received. From them, 240 high-quality papers were accepted for oral presentation and publication in *Procedia Computer Science*. The quality of the research presented is reflected by the indexing of these proceedings in CPCi (ISI conferences), Engineering Index, and Scopus.

The conference chairs would like to express their gratitude to the Keynote Speakers: Professors Agostino Bruzzone (Italy), Pierre Collet (France), Anne Håkansson (Sweden), Yuji Iwahori (Japan) and Christoph Reich (Germany).

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.

We hope and intend that KES2017 will make a significant contribution to international research collaboration and understanding, an essential task for the promotion of scientific joint work and excellence.

Professor Cecilia Zanni-Merk
Professor Claudia Frydman
Professor Robert J. Howlett and
Professor Lakhmi C. Jain
KES2017 Conference Chairs

Organisation

Honorary Chair:

Prof Lakhmi Jain, Bournemouth University, UK and Canberra University, Australia

General Chairs:

Prof Cecilia Zanni-Merk, INSA Rouen Normandie / LITIS Laboratory, France

Prof Claudia Frydman, Aix-Marseille University / LSIS laboratory, France

Executive Chair

Prof Robert J. Howlett, Bournemouth University, UK

Programme Chairs:

General Track Programme Chairs

Dr Carlos Toro, ARTC (Advanced Remanufacturing and Technology Centre) - A*Star (Singapore)

Prof Edward Szczerbicki, The University of Newcastle, Australia

Invited Sessions Programme Chair

Dr Yulia Hicks, Cardiff University, Wales, UK

KES Conference Series

KES2017 is part of the KES Conference Series

Conference Series Chairs:

L.C.Jain and R.J.Howlett

KES International

The organisation and operation of KES2017 is the responsibility of KES International.

International Programme Committee

Name	Affiliation
Prof. Akinori Abe	Chiba University, Japan
Dr. Jair Minoro Abe	Paulista University & University of São Paulo - Brazil
Dr. Walid Adly Atteya Abdo	Ein Shams University, Egypt
Prof. Yoshinori Adachi	Chubu University, Japan
Prof. Andrew Adamatzky	Unconventional Computing Centre, University of the West of England, Bristol, UK
Flora Amato	University of Naples Federico II
Dr. Alessia Amelio, Ph.D.	DIMES University of Calabria, Italy
Prof. Elisabeth Rakus-Andersson	Blekinge Institute of Technology, Department of Mathematics and Science, Sweden
Prof. Masayoshi Aritsugi	Kumamoto University, Japan
Dr. Piotr Artiemjew	University Warmia and Mazury, Poland
Dr. Ahmad Taher Azar	Faculty of Computers and Information, Benha University, Egypt
Prof. Natalia Bachtadze	Institute of Control Science of Russian Academy of Science, Russia
Prof. N.N. Bakhtadze	V.A. Trapeznikov Institute of Control Sciences, Moscow, Russia
Prof. Valentina E. Balas	Aurel Vlaicu University of Arad, Romania
Dr. Vivek Bannore	KES UniSA, Australia
Assist. Prof. Manish Bhardwaj	SRM University, India
Prof. Monica Bianchini	Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche - Università degli Studi di Siena Italy
Dr. Francesco Bianconi	University of Perugia, Italy
Prof. Isabelle Bichindaritz	State University of New York at Oswego, USA
Dr. Zaki Brahma	Sousse university, Tunisia
Dr. Gloria Bordogna	National Research Council of Italy, Italy
Prof. Sadok Bouamama	FCIT, University of Jeddah, KSA
Assist. Prof. Darko Brodić, Ph.D.	University of Belgrade, Serbia
Prof. Dumitru Dan Burdescu	University of Craiova, Romania
Assoc. Prof. Frantisek Capkovic	Institute of Informatics, Slovak Academy of Sciences, Slovakia
Prof. Michele Ceccarelli	University of Sannio, Italy

Name	Affiliation
Assoc. Prof. Dr. Adrian-Gabriel Chifu	Aix-Marseille Université, LSIS - France
Assist. Prof. Chintan Bhatt	Charotar University of Science And Technology (CHARUSAT), India
Prof. Stelvio Cimato	Dipartimento di Informatica Università degli studi di Milano Crema (CR) - Italy
Assoc. Prof. Paulo Cortez	University of Minho, Portugal
Dr. Paolo Crippa	Department of Information Engineering, Università Politecnica delle Marche, Ancona, Italy
Prof. Boguslaw Cyganek	AGH University of Science and Technology, Poland
Dr. Janos Botzheim	Tokyo Metropolitan University, Japan
Prof. Alfonso Mateos Caballero	Universidad Politécnica de Madrid, Spain
Prof. Andre Ponce de Leon F. de Carvalho	University of Sao Paulo, Brazil
Prof. Alfredo Cuzzocrea	ICAR-CNR & University of Calabria, Italy
Pankaj Deshwal	Division of Management, Netaji Subhas Institute of Technology, University of Delhi, India
Assoc. Prof. Diefang Chou	Tzu Chi University, Taiwan
Dr. Liya Ding	National University of Singapore, Singapore
Prof. Mark Embrechts	Rensselaer Polytechnic Institute, Troy, USA
Assoc. Prof. Anna Esposito	Seconda Università di Napoli, Dipartimento di Psicologia, Italy
Dr. Alena V. Favorskaya	Moscow Institute of Physics and Technology, Russia
Prof. Margarita Favorskaya	Siberian State Aerospace University, Russian Federation, Russia
Prof. Gianluigi Ferrari	University of Parma, Italy
Assoc. Prof. Dr. France Sébastien Fournier	Aix-Marseille Université, LSIS - France
Prof. Manuel Graña	Universidad del Pais Vasco, Spain
Dr. Foteini Grivokostopoulou	University of Patras, Greece
Prof. Otoniel Mario López Granado	Universidad Miguel Hernández, Spain
Prof. Anne Håkansson	KTH Royal Institute of Technology, Sweden
Prof Saman K. Halgamuge	Melbourne School of Engineering, Australia
Dr. Moez Hammami	University of Tunis, Tunisia
Prof. Ronald Hartung	Franklin University and The Design Knowledge Company, USA

Name	Affiliation
Prof. Hiroshi Hasegawa	Department of Machinery & Control Systems, College of Systems Engineering and Science, Shibaura Institute of Technology, Japan
Prof. Ioannis Hatzilygeroudis	Department of Computer Engineering & Informatics, University of Patras, Greece
Dr. Yuki Hayashi	Osaka Prefecture University, Japan
Prof. Atsuo Hazeyama	Tokyo Gakugei University, Japan
Dr. Yulia A Hicks	Cardiff University, UK
Dr. Dawn. E. Holmes	University of California, Santa Barbara, USA
Prof. Katsuhiro Honda	Osaka Prefecture University, Japan
Asso.Prof.Dr. Daocheng Hong	Fudan University, ECNU & Victoria University, China
Distinguished Prof. Wei-Chiang Hong	Oriental Institute of Technology, Taiwan
Prof. Tzung-Pei Hong	National University of Kaohsiung, Taiwan
Prof R.J.Howlett	Bournemouth University, UK
Prof. Xiangpei Hu	Dalian University of Technology, Dalian, China
Prof. Ryutaro Ichise	National institute of Informatics, Japan
Dr. Shraddha Ingale	Pune University, India
Prof. Nobuhiro Inuzuka	Nagoya Institute of Technology, Japan
Assoc. Prof. Dr. Radu Tudor Ionescu	University of Bucharest, Romania
Prof. Dr. Yoshiteru Ishida	Toyohashi University of Technology, Japan
Prof. Mirjana Ivanovic	University of Novi Sad, Serbia
Prof. Yuji Iwahori	Chubu University, Japan
Prof. Ryszard Janicki	McMaster University, Hamilton, Ontario, Canada
Prof. Piotr Jedrzejowicz	Gdynia Maritime University, Department of Information Systems, Poland
Prof. Vladimir Jotsov	ULSIT - Sofia, Bulgaria
Prof. Hideyuki Kanematsu	National Institute of Technology, Suzuka College, Japan
Prof. Asoka Karunananda	University of Moratuwa, Sri Lanka
Prof. Nikos Karacapilidis	University of Patras, Greece
Prof. Radoslaw Piotr Katarzyniak	Wroclaw University of Technology, Poland
Assoc. Prof. Hiroko Kanoh	Yamagata University, Japan
Dr. Arkadiusz Kawa	Poznan University of Economics & Business, Poland
Prof. Hiroharu Kawanaka	Mie University, Japan

Name	Affiliation
Prof. Frank Klawonn	Ostfalia University, Wolfenbuettel, Germany
Prof. Tomoko Kojiri	Kansai University, Japan
Prof. Boris Kovalerchuk	Central Washington University, USA
Assist Prof. Pancerz Krzysztof	University of Rzeszow, Poland
Dr. Konrad Kułakowski	AGH University of Science and Technology, Poland
Prof. Mario Kusek	University of Zagreb, Croatia
Prof. Noriyuki Kushiro	Kyushu Institute of Technology, Japan
Prof. Kazuhiro Kuwabara	Ritsumeikan University, Japan
Dr. CP Lim	Deakin University, Australia
Prof. Chengjun Liu	New Jersey Institute of Technology, USA
Prof. Ignac Lovrek	University of Zagreb, Croatia
Prof. Dr. Gloria Phillips-Wren	Loyola University Maryland, USA
Neel Mani	ADAPT Centre, School of Computing, Dublin City University, Dublin, Ireland
Prof. Yoshiyuki Matsumoto	Shimonoseki City University, Japan
Dr. Kenji Matsuura	Tokushima University, Japan
Prof. Radko Mesiar	Slovak University of Technology Bratislava, Slovakia
Dr. Lyudmila Mihaylova	University of Sheffield, UK
Assist. Prof. Hirokazu Miura	Wakayama University, Japan
Dr. Daniel Moldt	University of Hamburg, Department of Informatics, Germany
Prof. Jose M. Molina	University Carlos III of Madrid, Spain
Prof. Stefania Montani	DISIT, Computer Science Institute, Universita' del Piemonte Orientale, Alessandria, Italy
Dr. Esmiralda Moradian	Stockholm University, Sweden
Dr. Antonio Moreno	Univ. Rovira i Virgili (URV), Spain
Prof. Mikhail Moshkov	KAUST, Saudi Arabia
Dr. Muhammad Marwan Muhammad Fuad	Aarhus Univrsity, Denmark
Prof. Mohamed A. Moustafa Hassan	Elec. Power Dept., Cairo University, Giza, Egypt
Prof. Dr, DSc. Andrew Nafalski	University of South Australia, Australia
Assist. Prof. Katsuko T. Nakahira	Nagaoka Institute of Technology, Japan
Prof. Grzegorz Nalepa	AGH University of Science and Technology, Poland
Dr. Sergey Nesterov	University of South Australia, Australia

Name	Affiliation
Assoc. Prof. Ioannis K. Nikolos	School of Production Engineering and Management, Technical University of Crete, Chania, Greece
Dr. Piotr Nikończuk	West Pomeranian University of Technology, Szczecin Faculty of Maritime Technology and Transport, Poland
Shastri L Nimmagadda	School of Information Systems, Curtin Business School, Curtin University, Perth, Australia
Prof. Kazunori Nishino	Kyushu Institute of Technology, Japan
Prof. Jörg Rainer NOENNIG	HafenCity Universität Hamburg (HCU): CityScienceLab, Germany
Dr. Housseem Eddine Nouri	University of Tunis, Tunisia
Prof. Roy Oberhauser	Aalen University, German
Prof. Nobuyuki Ogawa	National Institute of Technology, Gifu College, Japan
Prof. Yukio Ohsawa	Univesity of Tokyo, Japan
Dr. Osvaldo Luiz Oliveira	Faccamp, Brazil
Prof. Kenta Oku	Ryukoku University, Japan
Prof. Cezary Orłowski	WSB University in Gdańsk, Poland
Dr. Wiesław Paja	University of Rzeszow, Poland
Prof. Marcin Paprzycki	Polish Academy of Sciences, Poland
Prof. Manuel González Penedo	Centro Tecnológico de Información y Comunicaciones (CITIC); Universidad de A Coruña, Spain
Dr. Isidoros Perikos	University of Patras, Greece
Prof. Petra Perner	Institute of Computer Vision and applied Computer Sciences Leipzig, Germany
Prof. Georg Peters	Munich University of Applied Sciences, Germany
Prof. Alfredo Petrosino	University of Naples Parthenope, Italy
Prof. Lech T. Polkowski	Polish-Japanese Institute of Information Technology, Warszawa, Poland
Assoc. Prof. Dr. Marius Popescu	University of Bucharest, Romania
Prof. Luigi Portinale	University of Piemonte Orientale, Italy
Prof. Jim Prentzas	Democritus University of Thrace, Greece
Prof. Anca Ralescu	EECS Department, University of Cincinnati, USA
Dr. Rajesh Reghunadhan	Central University of Bihar, India
Prof. Ana Respício	Universidade de Lisboa, Portugal
Dr. Marina Resta	Department of Economics and Business Studies, university of Genova, Italy

Name	Affiliation
Dr. Goce Ristanoski	Data61, CSIRO, Australia
Dr. Fernando Roda	CIFASIS (Centro Internacional Franco Argentino de Ciencias de la Información y de Sistemas) - CONICET - UNR, Rosario, Argentina
Dr. Fabrice Rossi	SAMM Université Paris 1, France
Prof. Jose Hiroki Saito	UFSCar/FACCAMP, Brazil
Prof. Virgilijus Sakalauskas	Vilnius University, Department of Informatics, Lithuania
Prof. Marcello Sanguineti	University of Genova, Italy
Dr. Hirosato Seki	Osaka University, Japan
Prof. Rafał Scherer	Częstochowa University of Technology, Poland
Dr. Rainer Schmidt	University of Rostock, Germany
Dr. Milan Simic	RMIT University, School of Engineering, Melbourne, Australia
Prof. Andrzej Sluzek	Khalifa University, Abu Dhabi, UAE
Assoc. Prof. Masato Soga	Wakayama University, Japan
Dr. Roman Sperka	Silesian University in Opava, Czech Republic
Dr. Maria Spichkova	RMIT University, School of Science, Japan
Dr. Urszula Stanczyk	Silesian University of Technology, Gliwice, Poland
Assoc. Prof. Ruxandra Stoean	University of Craiova, Romania
Prof. Toshiharu Sugawara	Waseda University, Japan
Assoc. Prof. Lijun Sun	Dalian University of Technology, Dalian, China
Dr. Nobuo Suzuki	Advanced Telecommunications Research Institute International, Japan
Prof. Edward Szczerbicki	University of Newcastle, Australia
Prof. Eulalia Szmidt	Polish Academy of Sciences, Warsaw, Poland
Dr. Piotr Szczuko	Faculty of Electronics, Telecommunications, and Informatics, Gdańsk University of Technology, Poland
Assoc. Prof. Dr. Haruhiko Takase	Mie University, Japan
Dr. Prof. Masakazu Takahashi	Yamaguchi University, Japan
Prof. Hirokazu Taki	Wakayama University, Japan
Prof. Dr. Mieko Tanaka-Yamawaki	Meiji University, Japan
Dr. Dilhan Thilakarathne	VU University Amsterdam, Netherlands
Dr. Masahiro Tokumitsu	National Institute of Technology, Yonago College, Japan
Dr. Carlos Toro	Vicomtech-IK4 research Centre, Spain

Name	Affiliation
Prof. Ljiljana Trajkovic	Simon Fraser University, Canada
Assist. Prof. Thrasyvoulos Tsiatsos	University of Thessaloniki, Greece
Prof. Kazuhiko Tsuda	The University of TSUKUBA, Tokyo
Prof. Shusaku Tsumoto	Shimane University, Japan
Dr. Jeffrey W. Tweedale	Defence Science and Technology Organisation, Australia
Dr. Angelina Tzacheva	University of North Carolina at Charlotte, USA
Prof. Eiji Uchino	Yamaguchi University, Japan
Prof. Taketoshi Ushima	Kyushu Univeristy, Japan
Dr. Pandian Vasant	Universiti Teknologi PETRONAS, Tronoh, Malaysia
Dr Neil Vaughan BSc (Hons) PhD	Bournemouth University, UK
Prof. Junzo Watada	Waseda University, Japan
Prof. Toyohide Watanabe	Nagoya Industrial Science Research Institute, Japan
Assoc. Prof. Dr. Yuji Watanabe	Nagoya City University, Japan
Assistant Prof. Paja Wieslaw	University of Rzeszow, Poland
Prof. Michał Woźniak	Wroclaw University of Science and Technology, Poland
Prof. Yoshiyuki Yabuuchi	Shimonoseki City University, Japan
Prof. Katsutoshi Yada	Kansai University, Japan
Prof. Kuniaki Yajima	National Institute of Technology, Sendai College, Japan
Prof. Takahira Yamaguchi	Keio University, Japan
Prof. Dr. Shuichiro Yamamoto	Nagoya University, Japan
Assist. Prof. Ryosuke Yamanishi	Ritsumeikan University, Japan
Prof. Atsuko K. Yamazaki, Ph.D.	Faculty of Engineering, Shibaura Institute of Technology, Japan
Dr. Gregory Zacharewicz	IMS Université de Bordeaux, France
Prof. Oleg Zaikin	Warsaw School of Computer Science, Poland
Prof. Gesa Ziemer	HafenCity University Hamburg, Germany
Prof. Alfred Zimmermann	Reutlingen University, Germany
Dr. Sergey V. Zykov	National Research University – Higher School of Economics, Russia - and - MEPhI National Nuclear Research University, Russia

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
T02	Natural Language Processing	Prof. Girish Nath Jha
T03	Collaborative Agents	Nathalie Chaignaud & Julien Saunier

Invited Sessions

Code	Session	Session Chair
WS01	WORKSHOP: 7th International Workshop on Combinations of Intelligent Methods and Applications	Assoc. Prof. Ioannis Hatzilygeroudis
IS01	Applications of Knowledge Based and Artificial Intelligence in Electric Power Systems	Prof. Mohamed A. Moustafa Hassan
IS02	Knowledge Engineering in Large-Scale Systems	Dr. Sergey V. Zykov
IS03	Numerical Modelling and Recognition Techniques	Prof. Margarita N. Favorskaya & Dr. Alena V. Favorskaya
IS04	Data Science for Big Data	Prof. Katsutoshi Yada & Prof. Takahira Yamaguchi
IS05	Intelligent Transportation Systems	Dr. Milan Simic
IS06	Human factors for communication & intelligent systems	Prof. Atsuko K. Yamazaki, Ph.D.
IS07	Chance Discovery and Market of Data	Prof. Akinori Abe, Prof. Yukio Ohsawa & Prof. Noriyuki Kushiuro
IS08	Computational Intelligence System and Applications	Prof. Yuji Iwahori, Prof. Yoshinori Adachi, Prof. Nobuhiro Inuzuka & Assist. Prof. Ryosuke Yamanishi
IS09	Knowledge-Based Systems for e-Business	Prof. Kazuhiko Tsuda & Prof. Masakazu Takahashi
IS10	Smart Education: Active Learning using ICT and e-Learning	Prof. Nobuyuki Ogawa, Prof. Hideyuki Kanematsu, Prof. Kuniaki Yajima, Assist. Prof. Katsuko T. Nakahira & Prof. Kazunori Nishino
IS11	Networks for Innovation, Knowledge Creation and Sharing	Prof. Dr. Shuichiro Yamamoto
IS12	Intelligent Healthcare Informatics	Dr. Yulia A Hicks, Assistant Prof. Dr. Hiroharu Kawanaka & Associate Prof. Dr. Haruhiko Takase
IS13	Supervised versus Unsupervised Methods for Intelligent Text Processing	Assoc. Prof. Dr. Adrian-Gabriel Chifu, Assoc. Prof. Dr. Sébastien Fournier, Assoc. Prof. Dr. Radu Tudor Ionescu & Assoc. Prof. Dr. Marius Popescu

Code	Session	Session Chair
IS14	Skill Acquisition and Ubiquitous Human Computer Interaction	Assoc. Prof. Masato Soga, Assist. Prof. Hirokazu Miura & Prof. Hirokazu Taki
IS15	Pattern Recognition: Trends, Applications and Challenges	Dr. Alessia Amelio, Ph.D. & Assist. Prof. Darko Brodić, Ph.D.
IS16	Immunity-Based Systems: Resilient Computing and Formation Science	Prof. Dr. Yoshiteru Ishida & Assoc. Prof. Dr. Yuji Watanabe
IS17	Advances from Heuristics to Hyperheuristics: new trends and applications in hard optimization and constraint reasoning	Prof. Sadok Bouamama & Dr. Moez Hammami
IS18	New Generation Computing in Life Sciences and Engineering	Prof. Elisabeth Rakus-Andersson & Dr. Piotr Nikończuk
IS19	Knowledge-based Learning and Education Support System: Design and Function	Prof. Tomoko Kojiri, Yuki Hayashi & Prof. Toyohide Watanabe
IS20	Cyber-Physical Systems and Applications	Prof. Anne Hakansson, Prof. Ronald Hartung, Dr. Esmiralda Moradian & Dr. Carlos Toro
IS21	Identification 2.0 and modeling for Industry	Prof. N.N. Bakhtadze & Prof. O.A. Zaikin
IS22	Contemporary issues on Computer education	Assoc. Prof. Hiroko Kanoh, Prof. Toyohide Watanabe & Assoc. Prof. Dienfang Chou
IS23	Soft Computing Approach for Business	Prof. Yoshiyuki Yabuuchi, Prof. Junzo Watada & Prof. Yoshiyuki Matsumoto
IS24	Innovative Artificial Intelligence Technologies	Dr. Jeffrey Tweedale
IS25	DIGITAL CITY SCIENCE: Modeling and Decision Support Tools for Urban Systems	Prof. Jörg Rainer Noennig & Prof. Gesa Ziemer
IS26	Knowledge and data engineering in medicine and health care	Assistant Prof. Paja Wieslaw & Assist Prof. Pancierz Krzysztof
IS27	Intelligent Decision Support Techniques in the Age of Internet of Things	Prof. Xiangpei Hu & Assoc. Prof. Lijun Sun
IS28	Intelligent Language and Information Processing	Flora Amato
IS29	Enterprise and Business Applications in Big Data Scale	Neel Mani, Pankaj Deshwal, Dr. Shastri L Nimmagadda & Prof. Junzo Watada

Plenary Talks

Prof Agostino G. Bruzzone

University of Genoa, Italy

Simulation, IA & Mixed Reality within Industry 4.0

Abstract: Industry 4.0 is currently an hotspot, therefore the new technologies are providing opportunities to further develop the industrial processes; in this sector the use of Simulation and SoftComputing Solution combined with Mixed Reality are enabling real changes. The Presentation will provide an overview of facts versus tales and will propose a set of projects and examples where these approaches have been effectively applied. In some case previous Researches on Human Behavior Modelling and in Intelligent Agents have been readapted to support the evolution of Industrial Processes.



Biography: Agostino G. Bruzzone began his engineering studies at the Italian Naval Academy with the Faculty of Pisa. After successfully completing this phase, he transferred to the University of Genoa where he earned his PhD in Mechanical Engineering.

Since early '90, he has taught "Theories and Techniques of Automatic Control" and in 1992 he has become a member of the industrial simulation work group at the ITIM University of Genoa.

Currently he works in the Department of Industrial Production, Thermo-Energy, Engineering and Mathematical Modelling (DIME, formerly DIPTTEM, DIPEM, DIP and ITIM) at the University of Genoa as Full Professor.

He is with the Simulation Team MITIM DIPTTEM Genoa, Director for the McLeod Institute of Simulation Science (an Institution with 28 Centers distributed worldwide: Brazil, China, USA, UK, Italy, France, Germany, Canada, Spain etc.) and he is General Director of M&S Net an International Network involving 34 Centers.

He is founder member and president of the Liophant Simulation and Simulation Team. He is active in the field of simulator-based applications for industrial plants, developing new methodologies and intelligent system integration techniques. He has utilized extensively simulation techniques in logistics, industrial plants, harbor terminals, marine sector and sailboat racing sectors.

He has written more than 250 scientific papers in International Journals and Conferences, in addition to books, technical/professional reports in partnerships with major companies (i.e. IBM, Fiat Group, Contship, Solvay) and agencies (i.e. NASA,

European Defence Agency, NATO, National Center for Simulation, Italian MoD, Italian Navy, US Army).

Agostino Bruzzone is in charge as Director of the Technical Council of "SIMulation applications in Management, PLanning & forEcaSTing" for the Society of Computer Simulation International.

He has served as a member of International Technical and Organization Committees (i.e. AI Application of IASTED, AI Conference, ESS, ESM, AMS, etc.) and as a General Coordinator of several scientific initiatives (i.e. General Chair of Simulation in Industry Conference, "Summer Computer Simulation Conference", "International Mediterranean Modelling Multiconference", International Workshop on Applied Modeling & Simulation and Web Based Simulation Conference, Program Chair of the Workshop in Harbor and Logistics Modeling, Guest Editor for Special Issue of Harbor and Maritime Simulation and "Supply Chain Simulation" in International Journals, Member of the Editorial Board of Simulation, Program Chair of Engineering Application in WCSS and Track Chair for Manufacturing in SCSC, among others).

Prof Pierre Collet

Strasbourg University, France

Complex Systems: a new science born in the XXth century

Abstract: In the beginning of the XXth century, scientists proved that Newtonian Physics was not capable of representing the world around because it was based on mathematics. A new science had then to be invented, having as an aim to find new models to represent the world around us, in between the infinitely small and the infinitely large, by reconstructing models from observed data. The objective of the new science of Complex Systems is to understand multi-scale dynamics on the frontier of chaos, in order to predict (in probability) what could happen and not what will happen (cf. Ilya Prigogine, 1977 Nobel Laureate) at the level of the planet ecosphere (climate, economy, education, health, etc...). Starting from observed data, it is possible to reconstruct models to simulate and try to prevent catastrophes in an adapted manner. This talk will show examples of emergent behaviour and particularly, the emergence of collective intelligence.



Biography: Pierre Collet is Professor of Computer Science at Strasbourg University. President of the French Association for Artificial Evolution from 2003 to 2008 and head of the BFO (Bioinformatics, Data-Mining and Optimization) research team from 2007 to 2011, Prof. Pierre Collet was the head of the Department of Computer Science of the Strasbourg University from 2011 to 2015. He is now the coordinator of the Complex Systems Digital Campus UNESCO UniTwin, a large network of

more than 120 universities around the world that are developing the new science of Complex Systems. He was the Organisation Chair of CS-DC'15, the first world e-conference on Complex Systems and is now head of the CSTB (Complex Systems and Translational Biology) research team at ICube Laboratory (CNRS 7357 UMR). Pierre Collet's research specializes on Complex Systems, education and health ecosystems, and massively parallel artificial evolution using massively parallel GPU cards. The EASEA (EASy Specification of Evolutionary Algorithms) platform developed in his group was the winner of the GECCO 2012 GPUs for Genetic and Evolutionary Computation competition, with automatic speedups over x400. Along with S. Tsutsui, Pierre Collet edited the first book on Massively Parallel Evolutionary Computation on GPUs (Springer 2013).

Docent/Associate Professor Anne Håkansson

KTH Royal Institute of Technology, Stockholm, Sweden

Artificial Intelligence in Cyber-Physical Systems

Abstract: Cyber-Physical Systems (CPS) are powerful systems that provide holistic solutions for hardware and software incorporating physical components, such as sensors, and computational algorithms. To make CPS more powerful, Artificial Intelligence (AI) technology has been applied in Cyber-physical systems to create "Smart CPS". New smart CPSs are developed for different sectors, such as energy and buildings (e.g., BIM), transportation (like self-driving cars), healthcare and manufacturing (i.e., Industri 4.0) to handle problems, such as limited resources, energy consumptions, automated decision-making, delay-tolerant media and communication. There are still a lot of challenges for AI in CPS: for example, finding, integrating, and managing services/data carried by CPS is a challenge; Human beings need access to the information carried by the CPS to interact and cooperate with components and software within and between CPS. New development methodologies, models, tools and infrastructures are required to face challenges of new requirements of CPS. This influences the environment with, e.g., security, integrity, and privacy issues. This talk will provide an overview of CPS and AI techniques for CPS, as well as discuss smart CPS that includes AI-technologies to perform complex tasks.



Biography: Anne Håkansson is Docent/Associate Professor in the Computer Science at KTH Royal Institute of Technology, Sweden. Her research interests center on modeling and visualizing knowledge and reasoning strategies in expert systems, and knowledge-based systems; search algorithms using meta-agents in multi-agent systems; smart services in cyber-physical systems, as well as senses-combinations in smart systems.

She has been director of programs, and studies at Uppsala University and Stockholm University Sweden and is the director of degree projects at Information and Communication Technology School, KTH. She received the B.S. degree in Computer Science from Uppsala University, Uppsala, Sweden, in 1993, the M.S degree in Computer Science from Uppsala University, Uppsala, Sweden in 1996, and the Ph.D. degree in Computer Science from the Uppsala University, Uppsala, Sweden, in 2004 and Docent degree Computer Science from the Uppsala University, Uppsala, Sweden, in 2006.

Associate Professor Anne Håkansson is co-author of three books, and two proceedings and is the author and co-author of numerous papers. She has chaired

two conferences: the Third KES International Symposium, Uppsala, Sweden, (KES-AMSTA 2009) and the Fourth International Conference on Sustainability in Energy and Buildings, Stockholm, Sweden (SEB12). She was awarded Award for outstanding contributions to KES 2012.

Prof Yuji Iwahori

Chubu University, Japan

3D Shape Recovery and Pattern Classification Using Neural Network Learning

Abstract: In the computer vision and machine learning fields, image recognition and its application technologies are more and more becoming popular in recent years. In this talk, 3D shape recovery and pattern classification approaches using neural network learning are introduced from the background to its recent application which we have developed for the supporting purpose of the medical diagnosis in recent years. Some approaches about 3D shape recovery and automatic detection of polyp from endoscope image are presented with introducing neural network and pattern classification technologies, where how shape of polyp is recovered and how polyp is detected with machine learning approach are shown. Shape recovery approach is based on the shape-from-shading approach and learning and modification of surface orientation are done with neural network. Automatic polyp detection and classification of Benign or malignant polyp are overall based on the machine learning approaches including SVM and CNN with many learning data and generalization.



Biography: Yuji Iwahori received B.S. degree from Dept. of Computer Science, Nagoya Institute of Technology (Japan), M.S. degree and Ph.D. degree from the Dept. of Electrical and Electronics, Tokyo Institute of Technology (Japan) in 1985 and 1988, respectively. He joined Educational Center for Information Processing, Nagoya Institute of Technology as a research associate in 1988, an associate professor in 1992 and became a professor of Center for Information and Media

Studies, Nagoya Institute of Technology in 2002. He has joined Chubu University (Japan) as a professor since 2004 and he has acted the head of Graduate Program of Computer Science, Chubu University. In the meanwhile, he has been a visiting researcher of Laboratory of Computational Intelligence of UBC Computer Science, Canada since 1991. He has also been a research collaborator with Indian Institute of Technology Guwahati (IITG) since 2010 and the same with Dept. of Computer Engineering, Chulalongkorn University (Thailand) since 2014. He has also been a research collaborator with Harbin University of Science and Technology (HUST), China since 2014. In the research of medical images, he has collaborated with Dept. of Gastroenterology, Aichi Medical University (Japan) since 2010 to develop the endoscope research project and with Nagoya Institute of Technology and Dept. of Biomedical Sciences, Chubu University to develop the cell research project. His

research interests include Computer Vision, Image Recognition, Neural Network, Bioinformatics, Biomedical Imaging and Application of Artificial Intelligence. He got KES 2008 Best Paper Award and KES 2013 Best Paper Award from KES International. He is also program committee member of international conferences, KES, KES IDT, IEEE/ACIS ICIS, CSII, ICPRAM, NCTA, IEEE BIBE, IEEE SITIS, HI-BI-BI, PATTERNS, SIGNAL, ACIVS etc. with reviewer of several kinds of journal papers including KES Journal, IEEE TNNLS, Springer MTAP (Multimedia Tools and Applications) and so on.

Prof Christoph Reich

University of Applied Science in Furtwangen (HFU), Germany

The Need of Machine Learning for Industrie 4.0

Abstract: Typical applications of Cyber-Physical System (CPS), tightly integrated with the Internet, often associated as Industry 4.0, are monitoring production lines, do remote diagnosis of machines, are predicting machine maintenance, or optimize production. All of these applications process their data in the Cloud and compared to traditional industry manufacturing, create added value by increasing productivity and profitability.

Generally machine learning can revolutionize manufacturing in many ways. Of particular interest and focus of this paper is the usage of machine learning in condition monitoring to provide manufacturers with Overall Equipment Effectiveness (OEE), in determining which factors have most and least impact to the quality of products, increase production yields, and do maintenance prediction of machines. But, nevertheless, machine learning can also be used to enhance the protection of production or machine data and to increase the security of CPSs.

The paper discusses how Industry 4.0 can profit from machine learning methods. It starts with possible machine learning data resources in a CPS, proposes a scalable infrastructure to collect the data, analyses and prepares the data for further processing by machine learning methods. Special machine learning methods are discussed to detect abnormal behaviour of production, of machines, of communication, of data usage, etc.. and finally points out the importance of usability of machine learning method for domain experts.



Biography: Prof. Dr. Christoph Reich is professor at the faculty of computer science at the university of applied science in Furtwangen (HFU) and teaches in the field of distributed systems, Cloud Computing, IT security. He is CIO of the HFU Information- and Media Centre, that is the scientific director for the IT data centre, Online-Services, Learning-Services, and library department. He is head of the Institute of Cloud Computing and IT-Security (IfCCITS; wolke.hs-furtwangen.de). Several research

projects have been done or still running under the supervision of Prof. Reich.

One of the BMBF-founded projects, Security Audit as a Service (SAaaS), goal was to develop an software architecture provided as a Software as a Service, which enables an auditor to do a security audit of a Cloud Computing infrastructure. The FP7 EU project A4Cloud ended 2016 brought accountability to the cloud provider. Our part of the project is to implement an evidence framework, working on an assertion tool and build an audit tool to show the accountability of the cloud infrastructure. The current

project HALFBACK tries to ensure high-availability production (HAP) processes by predicting machine and tool failures, product quality losses, resources flow problems, etc.. In addition, HAP should be achieved by an optimized and intelligent way of scheduling maintenance at the right time, replacing components in non-productive times, re-scheduling production processes, and even relocating production to another company.

To summarize, Christoph Reich's research interests are in Cloud Computing, Industry 4.0, IT-Security and Data Privacy.

Conference Timetable

Wednesday									
Lecture Theatre									
8.00-9.15	Registration								
9.15-9.30	Opening Ceremony Prof Cecilia Zanni-Merk, Prof Claudia Frydman Prof Robert J Howlett, Prof Lakhmi Jain								
9.30-10.30	Keynote Speaker 1 Agostino Bruzzone <i>Simulation, IA & Mixed Reality within Industry 4.0</i> Chair: Claudia Frydman								
10.30-11.00	Coffee								
11.00-13.00	Lecture Theatre	Room 401	Room 402	Room 403	Room 404	Room 405	Room 406	Room 407	Room 408
	G01A: Theoretical Foundations	G01B: Theoretical Foundations	G02A/G03B: Intelligent Applications and Technologies	G02B: Intelligent Applications	G03A: Emergent Intelligent Technologies	T02A: Natural language Processing	IS25: Digital city science	IS11: Networks for Innovation, Knowledge Creation and Sharing	IS07: Chance Discovery and Market of Data
	Cecilia Zanni-Merk	Claudia Frydman	Anne Hakansson	Carlos Toro	Ron Hartung	Girish Jha	Jorg Noennig	Shuichiro Yamamoto	Akinori Abe
	k17gen-007	k17gen-057	k17gen-158	k17gen-001	k17gen-126	k17gen-122	k17is-201	k17is-011	k17is-006
	k17gen-013	k17gen-064	k17gen-159	k17gen-030	k17gen-134	k17gen-130	k17is-203	k17is-034	k17is-160
	k17gen-018	k17gen-077	k17gen-162	k17gen-039	k17gen-137	k17gen-149	k17is-204	k17is-038	k17is-170
	k17gen-028	k17gen-081	k17gen-008	k17gen-050	k17gen-138	k17gen-177	k17is-205	k17is-040	k17is-172
	k17gen-034	k17gen-090	k17gen-009	k17gen-071	k17gen-143	k17gen-185	k17is-208		k17is-174
	k17gen-035	k17gen-091	k17gen-023	k17gen-078	k17gen-147		k17is-209		k17is-177
									k17is-178
13.00-14.00	Lunch								

Wednesday		Lecture Theatre
14.00-15.00		<p>Keynote Speaker 2 Pierre Collet <i>Complex Systems: a new science born in the XXth century</i> Chair: Cecilia Zanni-Merk</p>
15.00-15.30		Coffee
Boat leaves 17.00 returns 19.30		Boat Trip

Thursday									
Lecture Theatre									
8.30-9.30	Registration								
9.30-10.30	Keynote Speaker 3 Anne Håkansson Artificial Intelligence in Cyber-physical Systems Chair: Cecilia Zanni-Merk								
10.30-11.00	Coffee								
11.00-13.00	Lecture Theatre	Room 401	Room 402	Room 403	Room 404	Room 405	Room 406	Room 407	Room 408
	G01C: Theoretical Foundations	G01D / T03: Theoretical Foundations and Collaborative Agents	G02C: Intelligent Applications	G03C: Emergent Intelligent Technologies	T02B: Natural language Processing	IS02: Application of Knowledge Engineering in Large-Scale Systems	IS06: Human factors for communication & intelligent systems	IS17: Advances from Heuristics to Hyperheuristics	WS01: Combinations of Intelligent Methods and Applications
	<i>Claudia Frydman</i>	<i>Cecilia Zanni-Merk</i>	<i>Carlos Toro</i>	<i>Ron Hartung</i>	<i>Girish Jha</i>	<i>Sergey V. Zykov</i>	<i>Atsuko Yamazaki</i>	<i>Sadok Bouamama</i>	<i>Ioannis Hatzilygeroudis</i>
	k17gen-036	k17gen-168	k17gen-085	k17gen-129	k17gen-003	k17is-089	k17is-051	k17is-021	k17is-218
	k17gen-041	k17gen-178	k17gen-106	k17gen-150	k17gen-042	k17is-098	k17is-077	k17is-026	k17is-220
	k17gen-043	k17gen-188	k17gen-132	k17gen-157	k17gen-063	k17is-099	k17is-088	k17is-068	k17is-221
	k17gen-044	k17gen-019	k17gen-139	k17gen-164	k17gen-070	k17is-100	k17is-090	k17is-078	k17is-222
	k17gen-051	k17gen-086	k17gen-140	k17gen-167	k17gen-093	k17is-110	k17is-137	k17is-081	k17is-223
	k17gen-054		k17gen-153	k17gen-170	k17gen-100	k17is-181	k17is-152	k17is-104	
13.00-14.00	Lunch								

Thursday		Lecture Theatre							
14.00-15.00		Keynote Speaker 4 Yuji Iwahori 3D Shape Recovery and Pattern Classification Using Neural Network Learning Chair: Claudia Frydman							
15.00-15.30		Coffee							
15.30-17.30	Lecture Theatre	Room 401	Room 402	Room 403	Room 404	Room 405	Room 406	Room 407	Room 408
	T01: Knowledge Technologies	IS03: Numerical Modelling and Recognition Techniques	IS04: Data Science for Big Data	IS08: Computational Intelligence System and Applications	IS10: Smart Education: Active Learning using ICT and e-Learning	IS12: Intelligent Healthcare Informatics	IS13: Supervised versus Unsupervised Methods for Intelligent Text Processing	IS16: Immunity-Based Systems: Resilient Computing and Formation Science	IS18: New Generation Computing in Life Sciences and Engineering
	Anne Hakansson	Margarita Favorskaya	Katsutoshi Yada	Yuji Iwahori	Nobuyuki Ogawa	Yulia Hicks	Adrian-Gabriel Chifu	Yoshiteru Ishida	E. Rakus-Andersson
	k17gen-016	k17is-019	k17is-027	k17is-046	k17is-001	k17is-007	k17is-037	k17is-171	k17is-112
	k17gen-022	k17is-035	k17is-127	k17is-058	k17is-008	k17is-015	k17is-053	k17is-191	k17is-120
	k17gen-033	k17is-041	k17is-128	k17is-069	k17is-017	k17is-061	k17is-086	k17is-195	k17is-121
	k17gen-045	k17is-042	k17is-189	k17is-073	k17is-055	k17is-097	k17is-109	k17is-206	k17is-155
	k17gen-088	k17is-071	k17is-190	k17is-080	k17is-063	k17is-113	k17is-114	k17is-214	k17is-185
	k17gen-128	k17is-075		k17is-095	k17is-070	k17is-133	k17is-115	k17is-215	k17is-186
	k17gen-154	k17is-076		k17is-118	k17is-111	k17is-161	k17is-116	k17is-217	k17is-198
					k17is-119		k17is-117		k17is-200
19.30		Conference Dinner Arrive 19.30 Be seated to dine 19.45							

Friday	Lecture Theatre	Room 401	Room 402	Room 403	Room 404	Room 405	Room 406	Room 407	Room 408
9.00-9.30	Registration								
9.30-11.30	G01E: Theoretical Foundations	G03D: Emergent Intelligent Technologies	IS05A: Intelligent Transportation Systems	IS09A: Knowledge-Based Systems for e-Business	IS14: Skill Acquisition and Ubiquitous Human Computer Interaction	IS15A: Pattern Recognition: Trends, Applications and Challenges	IS19: Knowledge-based Learning and Education Support System	IS27A: Intelligent Decision Support Techniques in the Age of Internet of Things	
	<i>Cecilia Zanni-Merk</i>	<i>Ron Hartung</i>	<i>Milan Simic</i>	<i>Kazuhiko Tsuda</i>	<i>Masato Soga</i>	<i>Alessia Amelio</i>	<i>Tomoko Kojiri</i>	<i>Xiangpei Hu</i>	
	k17gen-092	k17gen-061	k17is-065	k17is-002	k17is-047	k17is-020	k17is-057	k17is-033	
	k17gen-095	k17gen-068	k17is-091	k17is-052	k17is-049	k17is-138	k17is-122	k17is-087	
	k17gen-104	k17gen-083	k17is-136	k17is-054	k17is-050	k17is-144	k17is-125	k17is-092	
	k17gen-115	k17gen-089	k17is-168	k17is-059	k17is-148	k17is-146	k17is-142	k17is-094	
	k17gen-118	k17gen-094	k17is-182	k17is-062	k17is-149	k17is-151	k17is-145	k17is-105	
	k17gen-119	k17gen-099	k17is-183	k17is-064	k17is-153	k17is-154		k17is-106	
11.30-12.00	Coffee								
12.00-13.00	Lecture Theatre								
	Keynote Speaker 5 Christoph Reich <i>The Need of Machine Learning for Industry 4.0</i> Chair: Cecilia Zanni-Merk								
13.00-14.00	Lunch								

Friday	Lecture Theatre	Room 401	Room 402	Room 403	Room 404	Room 405	Room 406	Room 407	Room 408
14.00-16.00	G01F: Theoretical Foundations	G03: Emergent Intelligent Technologies	IS01 / IS20 / IS28	IS22 / IS23 / IS24	IS05B / IS09A	IS21A: Identification 2.0 and modeling for Industry	IS21B: Identification 2.0 and modeling for Industry	IS15B / IS27B	IS29: Enterprise and Business Applications in Big Data Scale
	<i>Claudia Frydman</i>	<i>Ron Hartung</i>	<i>Mohamed A. Moustafa Hassan / Anne Hakansson / Flora Amato</i>	<i>Hiroko Kanoh / Yoshiyuki Yabuuchi / Jeffrey Tweedale</i>	<i>Milan Simic / Kazuhiko Tsuda</i>	<i>N Bakhtadze</i>	<i>O.A. Zaikin</i>	<i>Alessia Amelio / Xiangpei Hu</i>	<i>Neel Mani</i>
	k17gen-124	k17gen-103	k17is-156	k17is-150	k17is-187	k17is-003	k17is-036	k17is-166	k17is-129
	k17gen-127	k17gen-105	k17is-157	k17is-163	k17is-194	k17is-013	k17is-039	k17is-173	k17is-130
	k17gen-135	k17gen-107	k17is-165	k17is-210	k17is-202	k17is-014	k17is-043	k17is-176	k17is-131
	k17gen-142	k17gen-114	k17is-107	k17is-072	k17is-066	k17is-016	k17is-044	k17is-140	k17is-132
	k17gen-152	k17gen-116	k17is-199	k17is-048	k17is-067	k17is-018	k17is-060	k17is-169	k17is-134
	k17gen-160	k17gen-120	k17is-216	k17is-184	k17is-079	k17is-022	k17is-158	k17is-192	k17is-196
						k17is-030	k17is-159		k17is-207
16.30-17.00	Coffee								
17.00	Closing Ceremony								

Presentation Schedule

Wednesday 6 September

11.00–13.00, Lecture Theatre

G01A: Theoretical Foundations

Chair: Cecilia Zanni-Merk

k17gen-007

Logics and translations for hierarchical model checking

Dr. Norihiro Kamide, Mr. Ryu Yano

k17gen-013

Optimal program for autonomous driving under Bentham- and Nash-type social welfare functions

Dr. Keita Kinjo, Dr. Takeshi Ebina

k17gen-018

Multi Agent model based on Chemical Reaction Optimization with Greedy algorithm for Flexible Job shop Scheduling Problem

Phd Bilel Marzouki, Dr Olfa Belkahla Driss, Pr Khaled GhÈdira

k17gen-028

A Multi-Agent based Hyper-Heuristic Algorithm for the Winner Determination Problem

Dr Ines Sghir, Dr Ines Ben Jaafar, Prof Khaled GhÈdira

k17gen-034

Audit expert system of communication security assessment

Dr. Eng. Grzegorz Grodzki, Prof Henryk Piech

k17gen-035

A Method for Verifying Non-Functional Requirements

Prof. Atsushi Ohnishi, Mr. Yuuma Matsumoto, Ms. Sayaka Shirai

Wednesday 6 September
11.00–13.00, Room 401

G01B: Theoretical Foundations

Chair: Claudia Frydman

k17gen-057

A Design Guideline for Adaptation Decisions in the Autonomic Loop

PhD Student Imen Abdennadher, Dr. Ismael Bouassida Rodriguez, Prof. Mohamed Jmaiel

k17gen-064

A Modified Ant Colony Optimization algorithm for the Distributed Job shop Scheduling Problem

Phd Student Imen Chaouch, Dr Olfa Belkahla Driss, Pr Khaled Ghedira

k17gen-077

Linguistic Data Classification with Combined Comparison Measures

Phd Kalle Saastamoinen

k17gen-081

Swarm-based approach for solving the ambulance routing problem

Dr Takwa Tlili, miss Marwa Harzi, Pr Saoussen Krichen

k17gen-090

An evidential influence-based label propagation algorithm for distributed community detection in social networks

Ph.D. student Mehdi Azaouzi, Pr. Lotfi Ben Romdhane

k17gen-091

Vertical Pattern Mining Algorithm for Multiple Support Thresholds

Assoc.Prof. Belgin Ergenc, Msc. Sadeq Darrab

Wednesday 6 September
11.00–13.00, Room 402

G02A/G03B: Intelligent Applications and Technologies

Chair: Anne Hakansson

k17gen-158

Crowd-based Feature Selection for Document Retrieval in Highly Demanding
Decision-making Scenarios

Msc Julliano Pintas, Phd Luís Correia, Phd Ana Cristina Garcia

k17gen-159

A Topic-Based Hidden Markov Model for Real-Time Spam Tweets Filtering

Mr Mahdi Washha, Dr Manel Mezghani, Mr Aziz Qaroush, Prof Florence Sedes

k17gen-162

Visualizing Large-scale Linked Data with Memo Graph

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

k17gen-008

Gamified learning: A role-playing approach to increase student in-class motivation

Dr.eng. Alexandru Topirceanu

k17gen-009

Decision tree learning used for the classification of student archetypes in online
courses

Dr.eng. Alexandru Topirceanu, Dr. Gabriela Grosseck

k17gen-023

Basic Development of the Active Textbook System consisted of a General book and a
Portable Electronic Terminal

Dr. Shin-nosuke Suzuki, Dr. Yutaro Akimoto, Dr. Manabu Ishihara, Dr. Yukio Kobayashi

Wednesday 6 September

11.00–13.00, Room 403

G02B: Intelligent Applications

Chair: Carlos Toro

k17gen-001

Maximization of Returns under an Average Value-at-Risk Constraint in Fuzzy Asset Management

Prof. Yuji Yoshida

k17gen-030

Object Detection Method in Traffic by On-Board Computer Vision with Time Delay Neural Network

Miss Jittima Varagul, Prof. Toshio Ito, Miss Panit-a-nong Kulprom

k17gen-039

Investigating the Impact of Epilepsy on EEG-based Cryptographic Key Generation Systems

Mr Dang Nguyen, Dr Wanli Ma, Prof Dharmendra Sharma, Dr Dat Tran

k17gen-050

Evaluation of Mobile Interfaces as an Optimization Problem

Phd Ines Gasmı, Prof Mourad Abed, Phd Mabrouka Chouchane, Dr Makram Soui

k17gen-071

Case-based Reasoning for Knowledge Capitalization in Inventive Design Using Latent Semantic Analysis

Ms Pei Zhang, Professor Denis Cavallucci, Doctor Amira Essaid, Professor Cecilia Zanni-merk

k17gen-078

Comparative study of word embedding methods in topic segmentation

Phd Student Marwa Naili, Professor Henda Ben Ghezala, Assistant Professor Anja Habacha Chaibi

Wednesday 6 September
11.00–13.00, Room 404

G03A: Emergent Intelligent Technologies

Chair: Ron Hartung

k17gen-126

Log-Data Clustering Analysis for Dropout Prediction in Beginner Programming Classes

Dr. Shinichi Oeda, Student Genki Hashimoto

k17gen-134

Hybrid modeling approach for contextualized community detection in multilayer social network: emergency management case study

Phd Student Wala Rebhi, Associate Professor Narjès Bellamine Ben Saoud, Assistant Professor Nesrine Ben Yahia

k17gen-137

Automatic Aspect Extraction using Lexical Semantic Knowledge in Code-Mixed Context

Ms Kavita Asnani, Dr Jyoti Pawar

k17gen-138

A Conceptual Framework for Social Business Process Management

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

k17gen-143

Multi-goal Pathfinding in Cyber-Physical-Social Environments: Multi-layer Search over a Semantic Knowledge Graph

Mr Oudom Kem, Professor Flavien Balbo, Mr Pierre Nagellen, Dr Antoine Zimmermann

k17gen-147

Towards an Optimized Scheme for Mobile Subscribers Based on Cloud Computing

Dr Fatma Abdennadher, Professor Maher Ben Jemaa

Wednesday 6 September

11.00–13.00, Room 405

T02A: Natural language Processing

Chair: Girish Jha

k17gen-122

A Classification-based Approach to the Identification of Multiword Expressions (MWEs) in Magahi Applying SVM

Mr. Shivek Kumar, Mr. Pitambar Behera, Dr. Girish Nath Jha

k17gen-130

CrimAr: A Criminal Arabic Ontology for a Benchmark Based Evaluation

Phd Student Imen Bouaziz Mezghanni, Prof Faiez Gargouri

k17gen-149

Combining IR and LDA Topic Modeling for Filtering Microblogs

Phd Student Malek Hajjem, Professor Chiraz Latiri

k17gen-177

Big data analysis to Features Opinions Extraction of customer

Ammar Mars, Mohamed Salah Gouider

k17gen-185

Extracting Product Features for Opinion Mining Using Public Conversations in Twitter

Phd Rania Othman, Phd Rami Belkaroui, Professor Rim Faiz

Wednesday 6 September
11.00–13.00, Room 406

IS25: Digital city science

Chair: Jorg Noennig

k17is-201

How to involve inhabitants in urban design planning by using digital tools? An overview on a state of the art, key challenges and promising approaches
Dr. Sander Münster

k17is-203

A Database for Participation Methods in Urban Development
Dipl.-ing. Benjamin Stelzle, Prof. Dr.-ing. Jörg Rainer Noennig

k17is-204

Cities under observation: Social monitoring in integrated neighbourhood development in Hamburg
Prof. Dr. Jörg Pohlen, - Jenni Strote

k17is-205

Decision-Making on an Urban Co-Design Platform
Dipl.-ing. Benjamin Stelzle, Dipl.-ing. Anja Jannack, Prof. Dr.-ing. Jörg Rainer Noennig

k17is-208

FindingPlaces: HCI Platform for Public Participation in Refugees? Accommodation Process
Mr Ariel Noyman, Mr Tobias Holtz, Mr Johannes Kröger, Mr Kent Larson, Mr Jörg Noennig

k17is-209

DIPAS ? Towards an integrated GIS-based system for civic participation
Dipl.-pol. Claudius Lieven

Wednesday 6 September

11.00–13.00, Room 407

IS11: Networks for Innovation, Knowledge Creation and Sharing

Chair: Shuichiro Yamamoto

k17is-011

An Evaluation of Requirements Specification Capability Index

Dr. Shuichiro Yamamoto

k17is-034

Preliminary Systematic Literature Review of Software and Systems Traceability

Prof. Haruhiko Kaiya, Prof. Atsuo Hazeyama, Dr. Shinpei Ogata, Prof. Takao Okubo,
Mr. Ryohei Sato, Mr. Takafumi Tanaka

k17is-038

Proposal of GDTC model for global communication on enterprise portal

Mgr/ph.d. Student Yoshimasa Masuda, Cto Thomas Hardjono, Professor Seiko
Shirasaka, Professor Shuichiro Yamamoto

k17is-040

A CASE tool for Goal Dependency Model with Attributes based on An Existing UML

Editor

Prof. Haruhiko Kaiya, Mr. Kazuto Haga

Wednesday 6 September

11.00–13.00, Room 408

IS07: Chance Discovery and Market of Data

Chair: Akinori Abe

k17is-006

Accelerate Information Interpretation in the Organizational Failure Learning

Dr Sanetake Nagayoshi, Dr Jun Nakamura

k17is-160

Feedback of the knowledge obtained through the analysis of learning needs for risk literacy education

Teaching Assistant Tomiko Sata, Professor Yumiko Nara

k17is-170

Initial Practice of Telematics-Based Prognostics for Commercial Vehicles -Analysis

Tool for Building Faults Progress Model for Trucks on Telematics Data-

Prof. Noriyuki Kushiro, Mr. Yusuke Oniduka, Mr. Yoichi Sakurai

k17is-172

Preliminary Case Study on Value Determination of Datasets and Cross-disciplinary Data Collaboration Using Data Jackets

Dr. Teruaki Hayashi, Professor Yukio Ohsawa

k17is-174

Re-discover Values of Data Using Data Jackets by Combining Cluster with Text Analysis

Ms. Yanyuan Zeng, Pro. Yukio Ohsawa

k17is-177

On Shopping Activities from Viewpoint of Preventing Housebound and Dementia

Mr. Yuki Hayashi, Dr. Akinori Abe

k17is-178

Narratology and Creativity

Prof. Akinori Abe

Thursday 7 September
11.00–13.00, Lecture Theatre

G01C: Theoretical Foundations

Chair: Claudia Frydman

k17gen-036

Microgrid Components' Clustering in a Digital Ecosystem Cooperative Framework
Phd Khouloud Salameh, Professor Haritza Camblong, Professor Richard Chbeir,
Professor Ionel Vechiu

k17gen-041

A new feature selection method for nominal classifier based on formal concept analysis
Phd Student Marwa Trabelsi, Professor Mondher Maddouri, Research Teacher Nida Meddouri

k17gen-043

TWINCLE : A Constrained Sequential Rule Mining Algorithm for Event Logs
Mr Benjamin Dalmas, Pr Philippe Fournier-Viger, Pr Sylvie Norre

k17gen-044

Improved anticipatory classifier system with internal memory for POMDPs with aliased states
Prof. Tomohiro Hayashida, Prof. Ichiro Nishizaki, Prof. Shinya Sekizaki, Mr. Hiroaki Takeuchi

k17gen-051

Enhancing assessment of Personalized Multi Agent System through convLSTM
Phd Student Amal Tarifa, Assistant Professor Aroua Hedhili, Associate Professor Wided Lejouad Chaari

k17gen-054

Qos-Driven Architectural Mining for Publish/Subscribe Systems Deployed on MANET
Mrs Emna Fki, Mrs Imen Abdennadher, Mrs Rania Abid, Mrs Imene Lahyani

Thursday 7 September
11.00–13.00, Room 401

G01D / T03: Theoretical Foundations and Collaborative Agents

Chair: Cecilia Zanni-Merk

k17gen-168

A Bi-criteria Ant Colony Optimization For Minimizing Fuel Consumption And Cost Of The Traveling Salesman Problem With Time Windows

Student Islem Kaabachi, Student Dorra Jriji, Professor Saoussen Krichen, Student Fares Madany

k17gen-178

Assessing Organizational Effectiveness of Cooperative Agents

Ph.d Student Kaouther Bouzouita, Dr Wided Lejouad Chaari, Pr Moncef Tagina

k17gen-188

On the study of EEG-based cryptographic key generation

Mr Dang Nguyen, Dr Wanli Ma, Dr Dharmendra Sharma, Dr Dat Tran

k17gen-019

Adaptive Task Allocation Based on Social Utility and Individual Preference in Distributed Environments

Mr Naoki Iijima, Mr Hayano Masashi, Mr Ayumi Sugiyama, Prof. Sugawara Toshiharu

k17gen-086

Modeling a collaborative task with social commitments

Engineer Jean-baptiste Louvet, Phd Nathalie Chaignaud, Phd Guillaume Dubuisson Duplessis, Phd Jean-philippe Kotowicz, Phd Laurent Vercouter

Thursday 7 September
11.00–13.00, Room 402

G02C: Intelligent Applications

Chair: Carlos Toro

k17gen-085

A Novel Selective Encryption Scheme for Medical Images Transmission based-on JPEG Compression Algorithm

Dr. Med Karim Abdmouleh, Pr. Med Salim Bouhleh, Dr. Ali Khalfallah

k17gen-106

CBNSimulator: a simulator tool for understanding the behaviour of complex biomolecular networks using discrete time simulation

Ph.d Ali Ayadi, Prof. François De Bertrand De Beuvron, Prof. Saoussen Krichen, Prof. Cecilia Zani-merk

k17gen-132

A Hybrid of Variable Neighbor Search and Fuzzy Logic for the permutation flowshop scheduling problem with predictive maintenance

Miss Asma Ladj, Mrs Fatima Benbouzid-si Tayeb, Mr Ali Ayoub Dridi, Mr Nacer Selmane, Mr Christophe Varnier

k17gen-139

Scheduling Patients in Emergency Department by Considering Material Resources

Phd Marwa Harzi

k17gen-140

A Smart System to Standardize the Specifications of Haptic Quality Control

Mr Bruno Albert, Dr François De Bertrand De Beuvron, Mr Christophe Knecht, Dr Jean-luc Maire, Pr Maurice Pillet, Pr Cecilia Zanni-merk

k17gen-153

4D Analysis of Facial Ageing Using Dynamic Features

Miss Khtam Al-meyah, Professor David Marshall, Professor Paul Rosin

Thursday 7 September
11.00–13.00, Room 403

G03C: Emergent Intelligent Technologies

Chair: Ron Hartung

k17gen-129

Engineering Polynomial-Time Solutions for Automatic Web Service Composition

Mr Paul Diac

k17gen-150

A new vector space model for image retrieval

Student Karamti Hanen, Professor Gargouri Faiez, Assistant Teacher Tmar Mohamed

k17gen-157

An efficient synchronous indexing technique for full-text retrieval in distributed databases

Dr Fadoua Hassen, Pr Amel Grissa Touzi

k17gen-164

EvalCHOICE: A Decision Support Approach for the Usability Evaluation of Interactive Adaptive Systems

PhD Student Amira Dhouib, Pr. Christophe Kolski, Pr. Mahmoud Neji, Dr. Abdelwaheb Trabelsi

k17gen-167

The Urbanized Bid Process Information System

Phd Sahbi Zahaf, Professor Faiez Gargouri

k17gen-170

Does Transactive Memory Systems Promote Knowledge Integration Directly?

Mr Liyi Zhang, Prof Dr Daocheng Hong

Thursday 7 September
11.00–13.00, Room 404

T02B: Natural language Processing

Chair: Girish Jha

k17gen-003

A Model for Multilingual Terminology Extraction via a Medical Social Network

Mr Mouhamed Gaith Ayadi, Pr Jalel Akaichi, Dr Riadh Bouslimi

k17gen-042

The role of temporal inferences in understanding Arabic text

student Hajer Omri, Pr Lamia Belguith Hadrich, Dr Marieme Ellouze, Dr Zeineb Neji

k17gen-063

Enriching learning materials with semantic roles

Phd Diana Trandabat

k17gen-070

Improving speech recognition using data augmentation and acoustic model fusion

Phd Student Ilyes Rebai, Mr. Yassine Benayed, Mr. Jean-Pierre LorrÈ, Mr. Walid Mahdi

k17gen-093

Integrating Low-rank Approximation and Word Embedding for Feature Transformation in the High-dimensional Text Classification

Mr. Nguyen Hoai Nam Le, Mr. Bao Quoc Ho

k17gen-100

Adaptive Spelling Error Correction Models for Learner English

Dr. Ryo Nagata, Dr. Graham Neubig, Dr. Hiroya Takamura

Thursday 7 September
11.00–13.00, Room 405

IS02: Application of Knowledge Engineering in Large-Scale Systems

Chair: Sergey V. Zykov

k17is-089

The transformations of the radioactive nanoclusters in systems which are intended to protect the radio measuring devices

Associate-professor Hadi Saleh, Associate-professor Abbas Ali, Assistant Kirill Gorshkov, Prof. Oleg Nikitin, Prof. Valery Rau

k17is-098

Architecting a Geo-Enabled CRM: the Way to Seamless Integration

Mr Alexander Sivtsov, Mr Vladislav Abdulmyanov, Mr Nikita Fomichyov

k17is-099

Information system for pharmacotherapy method selection

Dr Georgy Lebedev, PhD Yulia Tikhonova

k17is-100

Software System for Dynamic Athlete Health Monitoring

Dr Georgy Lebedev, Mrs. Alexandra Gureeva, Phd Yulia Tikhonova

k17is-110

The experimental design of the automatic configuration of virtual machines based on the applicative approach

Dr. Sergey Zykov, Dr. Leonid Shumsky, Dr. Alexander Tormasov

k17is-181

Recognition User YouTube Video Viewing Patterns and Improving Prediction of User Preferred YouTube Videos based on Cleaned Viewing History

Prof. Alfredo Cuzzocrea, Prof. Carson Leung

Thursday 7 September
11.00–13.00, Room 406

IS06: Human factors for communication & intelligent systems

Chair: Atsuko Yamazaki

k17is-051

Predicting traffic congestion using driver behavior

Professor Toshio Ito, Student Ryohei Kaneyasu

k17is-077

Effects of the perspectives that influenced the human mental stance in the multiple-to-multiple human-agent interaction

Dr. Yoshimasa Ohmoto, Mr. Toshinari Morimoto, Prof. Toyoaki Nishida

k17is-088

Measurement of the Effect of Digital Play Therapy Using Biological Information

Mr. Atsushi Hoshina, Dr. Irini Giannopulu, Prof. Ryota Horie, Prof. Midori Sugaya

k17is-090

Estimate Emotion with Biological Information for Robot Interaction

Mr. Yuhei Ikeda, Mr. Ryota Horie, Ms. Midori Sugaya

k17is-137

Verification of Amplitude Enhancement Effects on comprehensions of English speeches and brain functions

Mr. Kazukiyo Inada, Prof. Atsuko Yamazaki

k17is-152

A pre-NIRS study of background colour effects on the functions of the frontal lobe

Mr. Muhammad Nur Adilin Mohd Anuardi, Prof. Kaoru Eto, Prof. Atsuko K. Yamazaki

Thursday 7 September
11.00–13.00, Room 407

IS17: Advances from Heuristics to Hyperheuristics

Chair: Sadok Bouamama

k17is-021

Dynamic Distributed PSO joints elites in Multiple Robot Path Planning Systems:
theoretical and practical review of new ideas

Mrs. Asma Ayari, Pr. Sadok Bouamama

k17is-026

Local-Consistency Web Services Composition Approach Based On Harmony Search
Phd Student Hela Fekih, Professor Sadok Bouamama, Doctor Sabri Mtibaa

k17is-068

New Hybrid LEACH Based Approach for Preserving Secured Integrity in Wireless
Sensor Networks

Phd Student Nejla Rouissi, Dr. Hamza Gharsellaoui

k17is-078

Privacy and Security in Internet-based Computing: Cloud Computing, Internet of
Things, Cloud of Things: a review

Phd Student Syrine Sahnim, Dr. Hamza Gharsellaoui

k17is-081

Adapted pruning scheme for the framework of imbalanced data-sets

Ph.D. Ikram Chaabane, Dr. Radhouane Guerhazi, Dr. Mohamed Hammami

k17is-104

Firework Algorithm For Multi-Objective Optimization Of A Multimodal Transportation
Network Problem

Phd Student Mouna Mnif, Prof Sadok Bouamama

Thursday 7 September
11.00–13.00, Room 408

WS01: Combinations of Intelligent Methods and Applications

Chair: Ioannis Hatzilygeroudis

k17is-218

Local search method based on biological knowledge for the biclustering of gene expression data

Phd Ons Maatouk, Assistant Professor Wassim Ayadi, Assistant Professor Hend Bouziri, Professor Beatrice Duval

k17is-220

An Empirical Study of Active Learning for Text Classification

Mr. Stamatis Karlos, Mr. Nikos Fazakis, Dr. Sotiris Kotsiantis, Dr. Kyriakos Sgarbas

k17is-221

Deep Learning Model for Paraphrases Identification of Tweets

Mr Mohammed Jabreel, Mr Saddam Abdulwahab, Dr Antonio Moreno

k17is-222

Using Semi-Supervised Learning Methods for Credit Score Problem

Mr. Vasilis Papastefanopoulos, Phd Student Stamatis Karlos, Dr. Sotiris Kotsiantis

k17is-223

Statistical Analysis and Optimization of Classification Methods of Big Data in Medicine

Master Candidate George Fourfouris, Lab. Professor George Economou, Professor Spiridon Likothanasis

Thursday 7 September
15.30–17.30, Lecture Theatre

T01: Knowledge Technologies

Chair: Anne Hakansson

k17gen-016

Detection of contradictions by relation matching and uncertainty assessment

Dr. Valentina Dragos

k17gen-022

Principal component analysis and cluster analysis for evaluating the natural and anthropogenic territory safety

Phd Tatiana Penkova

k17gen-033

Rewriting and Executing Faceted Queries over Ontology-Enhanced Databases

Dr Tadeusz Pankowski

k17gen-045

Multi-Context Systems for Consistency Validation and Querying of Business Process Models

Dr Nikolaos Lagos, Dr Adrian Mos, Dr Jean-yves Vion-dury

k17gen-088

Automatic approach to enrich database using ontology: Application to the medical domain

Dr Zina Nakhla, Dr Kaouther Nouira

k17gen-128

Towards a Legal Rule-Based System Grounded on the Integration of Criminal Domain Ontology and Rules

Phd Mirna El Ghosh, Prof. Habib Abdulrab, Prof. Mohamad Khalil, Dr. Hala Naja

k17gen-154

Symbolic Approximate Reasoning with Fuzzy and Multi-valued Knowledge

Student Soumaya Moussa, Dr Saoussen Bel Hadj Kacem

Thursday 7 September
15.30–17.30, Room 401

IS03: Numerical Modelling and Recognition Techniques

Chair: Margarita Favorskaya

k17is-019

Structure-based improvement of scene warped locally in digital video stabilization
Prof. Margarita Favorskaya, Dr. Vladimir Buryachenko, Phd Student Anastasia Tomilina

k17is-035

Digital Masking Using Mersenne Matrixes and Its Special Images
Dr. Anton Vostrikov, Prof. Nikolaj Balonin, Dr. Stanislav Chernyshev, Prof. Mikhail Sergeev

k17is-041

Numerical simulation of earthquakes impact on facilities by grid-characteristic method
Dr Alena Favorskaya, Dr Vasily Golubev, Dr Nikolay Khokhlov, Prof Igor Petrov

k17is-042

Numerical simulation of fracturing in geological medium
Dr Alena Favorskaya, Mr Anton Grinevskiy, Prof Igor Petrov

k17is-071

Texture analysis in watermarking paradigms
Prof. Margarita Favorskaya, Prof. Aleksei Popov, Mrs. Anna Pyataeva

k17is-075

Numerical modeling of ultrasound beam forming in elastic medium
Dr Alena Favorskaya, Dr Katerina Beklemysheva, Dr Alexey Ermakov, Dr Alexey Vasyukov

k17is-076

Numerical modeling of influence of ice formations on seismic replies with grid-characteristic method
Dr Alena Favorskaya, Dr Nikolay Khokhlov, Mr Dmitriy Petrov, Ms Polina Stognii

Thursday 7 September
15.30–17.30, Room 402

IS04: Data Science for Big Data

Chair: Katsutoshi Yada

k17is-027

Challenges and Benefits of Deploying Big Data Analytics in the Cloud for Business Intelligence

A/prof Bala Balachandran, Ms Shivika Prasad

k17is-127

The Influence of Customer Movement between Sales Areas on Sales Amount: A Dynamic Bayesian Model of the In-store Customer Movement and Sales Relationship
Dr. Yuta Kaneko, Dr. Shinya Miyazaki, Prof. Katsutoshi Yada

k17is-128

Estimation of customer questionnaire responses from purchase transaction data using canonical correlation analysis

Dr Natsuki Sano, Dr Fuminori Kimura

k17is-189

Implementation of Teacher-Robot Collaboration Lesson Application in PRINTEPS
Mr Shunsuke Akashiba, Dr Takeshi Morita, Mr Chihiro Nishimoto, Mr Naoya Takahashi, Dr Takahira Yamaguchi

k17is-190

A User-Centric Platform PRINTEPS to Develop Integrated Intelligent Applications and Application to Robot Teahouse

2th Grade In Ma Kodai Nakamura, Ph.d. Takeshi Morita, Ph.d. Takahira Yamaguchi

Thursday 7 September
15.30–17.30, Room 403

IS08: Computational Intelligence System and Applications

Chair: Yuji Iwahori

k17is-046

The Difference of Word Importance before and after Bookmark for Novel Abstract in Each Reading Progress

Ms. Haruna Mori, Prof. Junichi Fukumoto, Assoc. Prof. Yoko Nishihara, Assis. Prof. Ryosuke Yamanishi

k17is-058

Analysis of Dialogues Difficulty in Anime Comparing with JLPT Listening Tests

Mr. Junjie Shan, Prof. Junichi Fukumoto, Assoc. Prof. Yoko Nishihara, Assis. Prof. Ryosuke Yamanishi

k17is-069

Statistical Distribution of the Arrowhead Price Fluctuation

Dr. Mieko Tanaka-yamawaki

k17is-073

Tracking with Extraction of Moving Object under Moving Camera Environment

Mr. Daimu Oiwa, Dr. Manas Bhuyan, Dr. Shinji Fukui, Prof. Yuji Iwahori, Prof. Boonserm Kijsirikul, Dr. Tsuyoshi Nakamura

k17is-080

Towards a Distributed Implementation of Chemical Reaction Optimization for the Multi-factory Permutation Flowshop Scheduling Problem

Ms. Hafewa Bargaoui, Mrs Olfa Belkahla Driss, Mr. Khaled Ghédira

k17is-095

Extraction of Cell Nuclei using CNN Features

Mr. Yuya Tsukada, Dr. Kenji Funahashi, Prof. Yuji Iwahori, Prof. Takashi Iwamoto, Ms. Mami Jose, Dr. Jun Ueda

k17is-118

Polyp Shape Recovery Based on Blood Vessel Structure Analysis

Mr. Hiroyasu Usami, Prof. Yoshinori Adachi, Prof. Yuji Iwahori, Prof. Kunio Kasugai, Prof. Naotaka Ogasawara

Thursday 7 September
15.30–17.30, Room 404

IS10: Smart Education: Active Learning using ICT and e-Learning

Chair: Nobuyuki Ogawa

k17is-001

Virtual STEM Activity for Renewable Energy

Professor Dana Barry, Professor Hideyuki Kanematsu, Professor Michael Lawson,
Professor Katsuko Nakahira, Professor Nobuyuki Ogawa

k17is-008

Configuration of the Calculation Question Training System: Offering Questions Based
on the Relationship Between Question Presentation and Difficulty

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

k17is-017

Project-based learning in out-of-class activities: flipped learning based on
communities created in real and virtual spaces

Ms. Kaori Yamashita, Ph.D. Hidetoshi Yasueda

k17is-055

ReactiveWebATN: Web-based Handwriting Note Sharing System for Distance
Learning

Prof. Motoki Miura

k17is-063

Development of Evaluation System of Active Learning Students

Dr. Kuniaki Yajima, Mr. Soru Takahashi

k17is-070

Correlative evaluation of the measurements of experiment skill

Associate Professor Yoshihiro Takeichi, Professor Jun Sato, Professor Kuniaki Yajima

k17is-111

Skype Discussion for PBL Between Two Laboratories and Students
biological/Psychological Responses

Professor Hideyuki Kanematsu, Professor Masashi Kawaguchi, Professor Toshiro
Kobayashi, Professor Nobuyuki Ogawa, Professor Akira Shimizu, Associate Professor
Tatsuya Shirai

k17is-119

Learning Materials Made from Senior Graduates' Viewpoint and the Practical
Engineering Credit Point System

Prof. Phd. Nobuyuki Ogawa, Prof. Akira Shimizu

Thursday 7 September
15.30–17.30, Room 405

IS12: Intelligent Healthcare Informatics

Chair: Yulia Hicks

k17is-007

Automatic vessel detection by means of brightness profile characterization in OCT images

M.sc Joaquim De Moura, Ph.d Jorge Novo, Ph.d Marcos Ortega, Ph.d Manuel Penedo, Ph.d José Rouco

k17is-015

Development of a Sensor System for Monitoring the Behavior of the Elderly Residents

Dr. Jun Sawamoto, Dr. Yuji Koi, Dr. Yoshiya Oda, Dr. Yoshiharu Shumuta

k17is-061

Feature definition, analysis and selection for cystoid region characterization in Optical Coherence Tomography

Dr. Jorge Novo, Mr. De Moura Joaquim, Mr. Plácido Lizancos, Dr. Marcos Ortega, Dr. José Rouco

k17is-097

Clock Drawing Test Interpretation System

Mrs Zainab Harbi, Prof Antony Bayer, Dr Yulia Hicks, Prof Rossitza Setchi

k17is-113

Visual instance-based recommendation system for medical data mining

Phd Student Joris Falip, Dr Amine Aït-younes, Dr Frédéric Blanchard, Pr Brigitte Delemer, Md Alpha Diallo, Pr Michel Herbin

k17is-133

Stable Extraction of Frequent Sub-sequences from Sequential Symbol Input

Mr Kenta Morita, Prof. Hiroharu Kawanaka, Prof. Naoki Morita, Prof. Haruhiko Takase, Prof. Shinji Tsuruoka

k17is-161

Automatic Skin Lesions Classification Using Ontology-Based Semantic Analysis of Optical Standard Images

Phd Student Wiem Abbes, Professor Dorra Sellami

Thursday 7 September
15.30–17.30, Room 406

IS13: Supervised versus Unsupervised Methods for Intelligent Text Processing

Chair: Adrian-Gabriel Chifu

k17is-037

Linguistic classification: T-norms, fuzzy distances and fuzzy distinguishabilities
Phd Student Laura Franzoi, Professor Andrea Sgarro

k17is-053

Predicting the Best System Parameter Configuration: the (Per Parameter Learning)
PPL method
Pr Josiane Mothe, M. Mahdi Washha

k17is-086

Bridging the Native Language and Language Variety Identification Tasks
Msc Marc Franco-salvador, Phd Greg Kondrak, Phd Paolo Rosso

k17is-109

Harnessing Ratings and Aspect-Sentiment to Estimate Contradiction Intensity in
Temporal-Related Reviews
Doctor Ismail Badache, Doctor Adrian-gabriel Chifu, Doctor Sebastien Fournier

k17is-114

HASKER: An efficient algorithm for string kernels. Application to polarity classification
in various languages
Prof. Dr. Radu Tudor Ionescu, Dr. Cristian Grozea, Prof. Dr. Marius Popescu

k17is-115

A Distant Learning Approach for Extracting Hypernym Relations from Wikipedia
Disambiguation Pages
Assistant Professor Mouna Kamel, Research Director Nathalie Aussenac-gilles, Full
Professor Cécile Fabre, Phd Student Adel Ghamnia, Assistant Professor Cassia Trojahn

k17is-116

Sentence selection with neural networks over string kernels
Eng. Mihai Masala, Dr. Traian Rebedea, Eng. Stefan Ruseti

k17is-117

From Image to Text Classification: A Novel Approach based on Clustering Word Embeddings

Prof. Dr. Radu Tudor Ionescu, Drd. Andrei Butnaru

Thursday 7 September
15.30–17.30, Room 407

IS16: Immunity-Based Systems: Resilient Computing and Formation Science

Chair: Yoshiteru Ishida

k17is-171

Performance evaluation of an immunity-enhancing module for server applications

Mr. Mitsunobu Tarao, Dr. Takeshi Okamoto

k17is-191

Design of a Lightweight Intrusion-Tolerant System for Highly Available Servers

Dr Takeshi Okamoto

k17is-195

Data Analysis for Evaluation of Course Design and Improvement of "Cyberethics"

Moodle Online Courses

Dr Hiroshi Ueda, Dr Motonori Nakamura

k17is-206

Social Diversity: A Prototype of a Global and Integrated Telemetry Reception System with Volunteers and an Intelligent Information Processing

Dr. Masahiro Tokumitsu, Dr. Fumio Asai, Mr. Masaki Kusakabe, Dr. Taku Takada, Dr. Makoto Wakabayashi, Prof. Dr. Ishida Yoshiteru

k17is-214

A Novel Technique for Quantifying Clusters in a Spatial Prisoner's Dilemma Based on Small Squares

Dr. Masahiro Tokumitsu, Prof. Dr. Yoshiteru Iashida, Dr. Hironao Koshimizu, Mr. Ryota Matsumoto

k17is-215

Free-will and Turing Test with Multiple Agents: An Example of Chatbot Design

Professor Yoshiteru Ishida, Mr. Ryunosuke Chiba

k17is-217

Long-term influence of user identification based on touch operation on smart phone

Dr. Yuji Watanabe

Thursday 7 September
15.30–17.30, Room 408

IS18: New Generation Computing in Life Sciences and Engineering

Chair: E. Rakus-Andersson

k17is-112

Mobile System of Decision-Making on Road Threats

Phd Jarosław Wątróbski, Phd Krzysztof Małecki

k17is-120

Linguistic Query Based Quality Evaluation of Selected Image Search Engines

Meng Artur Karczmarczyk, Phd Jarosław Jankowski, Meng Wojciech Sałabun

k17is-121

Application of the Fair Secret Exchange Protocols in the Distribution of Electronic Invoices

Phd Jarosław Wątróbski, Meng Artur Karczmarczyk

k17is-155

The new approach to the construction of parametric membership functions for fuzzy sets with unequal supports

Professor Elisabeth Rakus-andersson

k17is-185

Construction and Use of the ANP Decision Model Taking into Account the Experts' Competence

Dr Jarosław Becker, Dr Aneta Becker, MSc Wojciech Sałabun

k17is-186

The Classification of Internet Shop Customers based on the Cluster Analysis and Graph Cellular Automata

Phd Jarosław Wątróbski, Phd Krzysztof Małecki

k17is-198

Local regression algorithms based on centroid clustering methods

Mgr Inż. Marcin Pietrzykowski

k17is-200

Finding Temperature Distribution at Heat Recovery Unit Using Genetic Algorithms

Prof Tomasz Królikowski, Phd Piotr Nikończuk

Friday 8 September
9.30-11.30, Lecture Theatre

G01E: Theoretical Foundations

Chair: Ceciia Zanni-Merk

k17gen-092

Research on Permutation Flow-shop Scheduling Problem based on Improved Genetic Immune Algorithm with vaccinated offspring

Pr. Benbouzid-si Tayeb Fatima, Phd Blizak Ammar, Phd Cheurfi Hamza, Dr Bessedik Malika, Pr Benbouzid Mohamed

k17gen-095

A self-adaptive hybrid algorithm for solving flexible job-shop problem with sequence dependent setup time

Ms Ameni Azzouz, Dr. Lamjed Ben Said, Dr. Meriem Ennigrou

k17gen-104

Fast Kernel Sparse Representation Classifier using Improved Smoothed- l_0 Norm

Assoc. Prof. Dr. Dzati Athiar Ramli, Mr Wan Chien Tan

k17gen-115

MOT Knowledge Model Integration Rules for Knowledge Warehousing

Phd Student Rim Ayadi, Professor Jamel Feki, assistant Yasser Hachaichi

k17gen-118

MeSH-based disambiguation method using an intrinsic information content measure of semantic similarity

Mrs Imen Gabsi, Mrs Kammoun Hager, Mrs Amous Ikram, Miss Brahmi Sarra

k17gen-119

A Hybrid Storage Strategy to Manage the Evolution of an OWL 2 DL Domain Ontology

Eng Leila Bayoudhi, Prof Wassim Jaziri, Dr Najla Sassi

Friday 8 September
9.30-11.30, Room 401

G03D: Emergent Intelligent Technologies

Chair: Ron Hartung

k17gen-061

Mining Negative Correlation Biclusters from Gene Expression Data using Generic Association Rules

Miss Amina Houari, Dr Wassim Ayadi, Pr Sadok Ben Yahia

k17gen-068

PrOnto: an Ontology Driven Business Process Mining Tool

Phd Stefano Bistarelli, Phd Tommaso Di Noia, Phd Marina Mongiello, Phd Student Francesco Nocera

k17gen-083

Graph Planning Based Composition For Adaptable Semantic Web Services

Miss Rihab Ben Lamine, Dr Ikram Amous Ben Amor, Dr Raoudha Ben Jemaa

k17gen-089

Ontology-based e-Portfolio modeling for supporting lifelong competency assessment and development

Mrs Kalthoum Rezgui, Mr Khaled GhÈdira, Mrs HÈdia Mhiri

k17gen-094

Scientometric re-ranking approach to improve search results

Mrs Nedra Ibrahim, Prof Henda Ben GhÈzala, Dr Anja Habacha Chaibi

k17gen-099

Semantic Links Using SKOS Predicates

Mr. Ricardo Avila, Mr. David Araujo, Mr. JosÈ Macedo, Mr. Salom„o Santos, Ms. V,nia Vidal

Friday 8 September
9.30-11.30, Room 402

IS05A: Intelligent Transportation Systems

Chair: Milan Simic

k17is-065

Transient and Steady-State Rotation Center of Vehicle Dynamics

Professor Reza Jazar, Professor M Fard, Professor Ali Khazaei, Lecturer Hormoz Marzbani, Lecturer D. Q. Vo

k17is-091

Calibration Method for Articulated Industrial Robots

Dr Marwan Ali, Ms Fadi Imad, Dr Milan Simic

k17is-136

Modelling of Full Electric and Hybrid Electric Fuel Cells Buses

Mr. Ahmad Yulianto, Dr. Milan Simic, Mr. David Taylor, Prof. Pavel Trivailo

k17is-168

Gait Monitoring by Automatic Guided Vehicle

Mr Jeffery Young, Dr Milena Simic, Dr Milan Simic

k17is-182

Numerical Analysis and Improvement of the Heat Exchanger Designed For Co-Generating Units

Dr Marwan Ali, Dr Firas Ismail, Dr Milan Simic

k17is-183

Modelling and Implementation of Humanoid Robot Behaviour

Dr Maria Spichkova, Mr Leroy Clunne-kiely, Mr Bijin Idicula, Mr Luke Payne, Mr Enrico Ronggowarsito, Dr Milan Simic

Friday 8 September
9.30-11.30, Room 403

IS09A: Knowledge-Based Systems for e-Business

Chair: Kazuhiko Tsuda

k17is-002

Classifying and Understanding Prospective Customers via Heterogeneity of Supermarket Stores

Mr. Takamasa Tanaka, Dr. Tsuda Kazuhiko, Mr. Saigo Takumi, Mr. Hamaguchi Tomohiro

k17is-052

Related Verification of Emotional Value and Company Brand Emitted from Pure Recall

Master Takumi Kato, Dr. Kazuhiko Tsuda

k17is-054

A Study on Validity Detection for Shipping Decision in the Mail-order Industry

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

k17is-059

A Method for the Construction of Customer Behavioral Modeling Knowledge for B2B Event Marketing Strategy

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

k17is-062

A Study of software estimation factors extracted using covariance structure analysis

Mr Tsuyoshi Shida, Prof Kazuhiko Tsuda

k17is-064

Radio Wave Environment Analysis at Different Locations Based on Frequent Pattern Mining

Dr. Nobuo Suzuki, Dr. Hiromi Matsuno

Friday 8 September
9.30-11.30, Room 404

IS14: Skill Acquisition and Ubiquitous Human Computer Interaction

Chair: Masato Soga

k17is-047

Human Robot Communication with Facilitators for Care Robot Innovation

Professor Taizo Miyachi, Research Scientist Takashi Furuhata, Lecturer Saiko Iga

k17is-049

Measurement of brain activity on force adjustment skill acquisition by using EEG

Mr. Masahiro Hakoda, Dr. Noriyuki Matsuda, Dr. Hirokazu Miura, Prof. Hirokazu Taki, Prof. Fumitaka Uchio

k17is-050

LeBonGeste: basketball training by entertaining

Dr Olivier Nocent, Dr Eric Bittar, Mr Pierre-eloi Desprez, Mr Benoit Grisonnet, Mr Anil Soilih

k17is-148

A Mobile Robot for Following, Watching and Detecting Falls for Elderly Care

Associate Professor, Midori Sugaya

k17is-149

Rehabilitation Robot for Elderly with Estimation of Stride

Associate Professor Midori Sugaya

k17is-153

Investigation of Model Human Processor by EEG measurement

Mr. Toshitaka Higashino, Mr. Yudai Asano, Dr. Masato Soga

Friday 8 September
9.30-11.30, Room 405

IS15A: Pattern Recognition: Trends, Applications and Challenges

Chair: Alessia Amelio

k17is-020

Size Characterisation of Edible Bird Nest Impurities: A Preliminary Study

Dr Kam Meng Goh, - Daniel Joo Ern Koe, Associate Professor Weng Kin Lai, - Por Han Ting, Dr Jee Keen Raymond Wong

k17is-138

Discrimination of Different Serbian Pronunciations from Shtokavian Dialect

Prof. Darko Brodic, Dr. Alessia Amelio

k17is-144

Personality Assessment using Twitter Tweets

Dr. Nadeem Ahmad, Mr. Jawaid Siddique

k17is-146

Pattern Discovery on Geographical Co-invention

Dr. Der-shiuan Lee

k17is-151

Performance Analysis of Statistical Pattern Recognition Methods in KEEL

Mr Zulfiqar Ali, Dr. Khurram Shahzad, Dr. Waseem Shahzad

k17is-154

Classifying environmental sounds using image recognition networks

Prof. Lars Lundberg, Mr. Venkatesh Boddapati, Mr. Andrej Petef, Dr. Jim Rasmusson

Friday 8 September
9.30-11.30, Room 406

IS19: Knowledge-based Learning and Education Support System

Chair: Tomoko Kojiri

k17is-057

Fostering Computational Thinking in Primary School through a LEGO-based Music Notation

Ph.d. Luca Andrea Ludovico, Ph.d. Adriano Baratè, Prof. Dario Malchiodi

k17is-122

Handiness of device-free response analyzer systems in the classroom

Mr. Manabu Ito, Mr. Motoki Miura

k17is-125

Automatic data integration from Moodle course logs to pivot tables for time series cross section analysis

Dr. Konomu Dobashi

k17is-142

Advice Sharing Environment for Acquiring Motor Skill

Mr. Hisashi Fujii, Dr. Tomoko Kojiri

k17is-145

Dialogue System for Fostering Way of Thinking Based on Physical Theory in Dynamics

Mr. Takuya Wada, Dr. Tomoko Kojiri

Friday 8 September
9.30-11.30, Room 407

IS27A: Intelligent Decision Support Techniques in the Age of Internet of Things

Chair: Xiangpei Hu

k17is-033

Carbon reduction in the location routing problem with heterogeneous fleet, simultaneous pickup-delivery and time windows

Prof. Xuping Wang, Sm Xinyu Li

k17is-087

Markdown pricing or bundling for complementary products in the presence of strategic consumers

Associate Professor Sijie Li, PhD Candidate Lingzhi Shao, Assistant Professor Haiyan You

k17is-092

Human Resource Allocation Model Based on Inverse Optimization with Consideration of Competency Disadvantage Structure

Associate Professor Lili Zhang

k17is-094

Extracting Causal Relations from Emergency Cases Based on Conditional Random Fields

Professor Jiangnan Qiu, Student Ling Luo, Phd Student Liwei Xu, Graduate Student Jie Zhai

k17is-105

A Knowledge-based Tree-like Representation for Inventory Routing Problem in the Distribution System of Oil Products

Dr. Lijun Sun, Graduate Student Yaxian Zhou

k17is-106

The Correlation Research between Voluntary Information Disclosure and Corporate Value of Listed companies of Internet of Things

Professor Weiling Su, Student Xin Fang

Friday 8 September
14.00-16.00, Lecture Theatre

G01F: Theoretical Foundations

Chair: Claudia Frydman

k17gen-124

A Novel Cognitive Cycle for Fault Diagnosis in Infrastructural Systems

Dr. Hrishikesh Sharma, Dr. Hiranmay Ghosh, Dr. Balamuralidhar Purushotham

k17gen-127

Belief Measure of Expertise for Experts Detection in Question Answering

Communities: case study Stack Overflow

Phd Student Dorra Attiaoui, Professor Boutheina Ben Yaghlane, Professor Arnaud Martin

k17gen-135

Ontology-based system for patient monitoring with connected objects

Ms Ahlem Rhayem, Mr Faiez Gargouri, Ms Ben Salah Mayssa, Mr Mohamed Ben Ahmed Mhiri

k17gen-142

Modeling Dynamic Aspects of Sensitive Business Processes for Knowledge Localization

Mrs Mariam Ben Hassen, Professor Faiez Gargouri, Associate Professor Mohamed Turki

k17gen-152

A Co-evolutionary Decomposition-based Chemical Reaction Algorithm for Bi-level Combinatorial Optimization Problems

Phd Abir Chaabani, Professor Slim Bechikh, Professor Ben Said Lamjed

k17gen-160

Impact of selection methods on the diversity of many-objective Pareto set approximations

Prof. Luis Martí, Prof. Emma Hart, Prof. Nayat Sánchez-pi, Prof. Eduardo Segredo

Friday 8 September
14.00-16.00, Room 401

G03: Emergent Intelligent Technologies

Chair: Ron Hartung

k17gen-103

Curumim: A Serendipitous Recommender System based on Human Curiosity
Phd Candidate Alan Menk, Ms. Rebeca Ferreira, Prof. Dr. Laura Sebastia

k17gen-105

Extreme Learning Machine based weighting for decision rule in Collaborative Representation Classifier
Assoc. Prof. Dr. Dzati Athiar Ramli, Mr Wan Chien Tan

k17gen-107

BNO: An ontology for describing the behaviour of complex biomolecular networks
Ph.d Ali Ayadi, Prof. François De Bertrand De Beuvron, Prof. Saoussen Krichen, Prof. Cecilia Zani-merk

k17gen-114

A task-oriented and parameterized (semi) autonomous navigation framework for the development of simulation systems
Eng Juliana Brondani, Phd Edison De Freitas, Phd Luis Silva

k17gen-116

Robust human action recognition system using Laban Movement Analysis
Phd Student Insaf Ajili, Assistant Professor Didier Jean-yves, Professor Malik Mallem

k17gen-120

Topical cohesion of communities on Twitter
Mr Guillaume Gadek, Mr Stephan Brunessaux, Dr Khaled Khelif, Prof Nicolas Malandain, Prof Alexandre Pauchet, Prof Laurent Vercouter

Friday 8 September
14.00-16.00, Room 402

IS01 / IS20 / IS28

Chairs: Mohamed A. Moustafa Hassan / Anne Hakansson / Flora Amato

k17is-156

Scenario analysis of management processes in the prevention and the elimination of consequences of man-made disasters

Professor Vladimir Kulba, Professor Natalia Bakhtadze, Doctor Igor Chernov,
Professor Alexey Shelkov, Professor Oleg Zaikin

k17is-157

General-System Approach to the Development of Complex Activity Technology
Professor Dmitry Novikov, Professor Mikhail Belov

k17is-165

Simultaneous Data Management in Sensor-Based Systems using Metadata,
Disaggregation and Processing
Msc Mathias Persson, Prof Anne Häkansson

k17is-107

Designing Recommender System: Conceptual Framework and Practical
Implementation
Phd Student Maryam Jallouli, Prof Ikram Amous, Dr Sonia Lajmi

k17is-199

Evaluating Convolutional Neural Network for Effective Mobile Malware Detection
Dr. Fiammetta Marulli, Dr. Fabio Martinelli, Dr. Francesco Mercaldo

k17is-216

Diabetes Mellitus Affected Patients Classification and Diagnosis through Machine
Learning Techniques
Mr Francesco Mercaldo, Ms Vittoria Nardone, Prof. Antonella Santone

Friday 8 September
14.00-16.00, Room 403

IS22 / IS23 / IS24

Chairs: Hiroko Kanoh/ Yoshiyuki Yabuuchi / Jeffrey Tweedale

k17is-150

An analysis of the relationship between immediate response syndrome and the Big Five Personality Scale using structural equation models: A Japanese case study

Dr. Kazumasa Mori, Prof. Hitoshi Umemura

k17is-163

Trend of Immediate Response Syndrome Viewed from Visual Synchronization Task

Professor Kyota Aoki, Professor Masahiko Fuse, Professor Hiroko Kanoh

k17is-210

Immediate Response Syndrome and acceptance of AI robots --Comparison between Japan and Taiwan

Prof. Hiroko Kanoh

k17is-072

Possibility Grades with Vagueness in Fuzzy Regression Models

Ph.d. Yoshiyuki Yabuuchi

k17is-048

On-the-fly integration of soft and sensor data for enhanced situation assessment

Dr. Valentina Dragos, Dr. Sylvain Gatepaille

k17is-184

Game Data Mining: Clustering and Visualization of Online Game Data in Cyber-Physical Worlds

Prof. Alfredo Cuzzocrea, Prof. Carson Leung

Friday 8 September
14.00-16.00, Room 404

IS05B / IS09A

Chairs: Milan Simic / Kazuhiko Tsuda

k17is-187

Human-centred analysis of the dependencies within sets of proofs

Dr Maria Spichkova, Dr Milan Simic

k17is-194

Managing Transition to Electrical and Autonomous Vehicles

Mr Milan Todorovic, Dr Arun Kumar, Dr Milan Simic

k17is-202

Engine heat sink thermal energy recovery system

Mr Andrew Royale, Dr Petros Lappas, Dr Milan Simic

k17is-066

Problem Presentation of Echo Phenomenon on Social Listening and Proposal of Avoidance Method for It

Ma Daisuke Sakamoto, Prof Kazuhiko Tsuda, Ba Ryo Uchida

k17is-067

An Extraction Method on Differences in User Ratings and Reviews of the Interchangeable Lens Camera

Dr. Yuko Taniguchi, Prof Kazuhiko Tsuda

k17is-079

Text Analysis for Job Matching Quality Improvement

Mr Yasunobu Kino, Mr Norio Furuya, Mr Hiroshi Kuroki, Ms Tomomi Machida, Ms Kanako Takano

Friday 8 September
14.00-16.00, Room 405

IS21A: Identification 2.0 and modeling for Industry

Chair: N Bakhtadze

k17is-003

Modeling production facility as a dynamic integrated interacting objects system
Prof. Gulnara Smirnova, Prof. Ekaterina Korobkova, Prof. Shamil Sabitov, Prof. Rustem Sabitov

k17is-013

The development of data mining methods criteria to identify failures of aircraft control surface actuator
Doctor Georgy Veresnikov, Mr. Alexey Skryabin

k17is-014

Genetic Algorithm for Generating Trajectories of Specified Length for the Onboard Flight Path Safety System
Doctor Elena Kulida, Doctor Valentin Lebedev

k17is-016

Structure identification of continuous nonlinear dynamical systems
Professor Besarion Shanshiashvili, Professor Archil Prangishvili

k17is-018

Iterative Excitation Signal Design for Nonlinear Dynamic Black-Box Models
M.Sc. Tim Heinz, Prof. Oliver Nelles

k17is-022

Motivation and social aspects of competence-based learning process
Professor Oleg Zaikin, Mgr Andrzej Żyławski, Professor Natalia Bakhtadze, Dr Magdalena Malinowska

k17is-030

Determining maneuverable aircraft parameters in preliminary design under conditions of uncertainty
Doctor Georgy Veresnikov, Doctor Ignat Ikryanov, Mr. Oleg Ogorodnicov, Doctor Lyudmila Pankova, Doctor Valeriya Pronina

Friday 8 September
14.00-16.00, Room 406

IS21B: Identification 2.0 and modeling for Industry

Chair: O.A. Zaikin

k17is-036

Mathematical Models of Unsteady Flow Distribution in Gas Transport Systems

Dr. Atlas Akhmetzyanov, - Anton Salnikov

k17is-039

Solution of the equations for one-dimensional, two-phase filtration in porous medium with heat exchange by geometric methods

Dr. Andrey Shevlyakov, Mr. Ivan Boronin

k17is-043

Knowledge-based prediction in process control systems under limited measurement data

Professor Natalia Bakhtadze, Professor Vladimir Lototsky, Professor Boris Pavlov, Doctor Ekaterina Sakrutina, Professor Oleg Zaikin

k17is-044

Intelligent Screening for Diagnostic and Treatment of Cancer Diseases

Professor Natalia Bakhtadze, Professor Vladimir Belenkiy, Doctor Irina Nikulina, Professor Valery Pyatetsky, Doctor Ekaterina Sakrutina

k17is-060

Finite dimensional dynamics for nonlinear filtration equation

Dr. Atlas Akhmetzyanov, Dr. Alexei Kushner, Dr. Valentin Lychagin

k17is-158

Scenario analysis of management processes in the prevention and the elimination of consequences of man-made disasters

Professor Vladimir Kulba, Professor Natalia Bakhtadze, Doctor Igor Chernov, Professor Alexey Shelkov, Professor Oleg Zaikin

k17is-159

General-System Approach to the Development of Complex Activity Technology

Professor Dmitry Novikov, Professor Mikhail Belov

Friday 8 September
14.00-16.00, Room 407

IS15B / IS27B

Chairs: Alessia Amelio / Xiangpei Hu

k17is-166

An ontology-based approach for personalized RESTful Web service discovery

Mrs. Sana Benabdallah Benlamine, Mrs. Hajer Baazaoui Zghal, Mrs. Chirine Ghedira Guegan, Mr. Michael Mrissa

k17is-173

Usability evaluation of adaptive features in smartphones

Mr. Muhammad Waseem Iqbal, Dr. Nadeem Ahmad, Dr. Syed Khuram Shahzad

k17is-176

Automatic classification of laryngeal mechanisms in singing based on the audio signal

Mr Everton Lacerda, Dr Carlos Mello

k17is-140

Online & Intelligent Forewarning Management of Oil & Gas Storage and Transportation Facilities Based on Data Mining

Mr. Tianteng Wang, Mr. Shikai Jin, Prof. Tong Li, Ms. Yingzhi Xia, Mr. Zexi Zhang

k17is-169

Bundle-Pricing Decision Model for Multiple Products

Dr. Yan Fang, Ms. Ying Gao, Dr. Lijun Sun

k17is-192

The IoT-based heart disease monitoring system for pervasive healthcare service

Phd. Chao Li, Dr. Xiangpei Hu, Dr. Lili Zhang

Friday 8 September
14.00-16.00, Room 408

IS29: Enterprise and Business Applications in Big Data Scale

Chair: Neel Mani

k17is-129

Comparative Study of Binary Classification Methods to Analyze a Massive Dataset on Virtual Machine

Mrs. Neelam Naik, Dr. Seema Purohit

k17is-130

Big Data Guided Design Science Information System (DSIS) Development for Sustainability Management and Accounting

Dr Shastri Nimmagadda, Dr Gary Burke, Dr Torsten Reiners

k17is-131

An Upstream Business Data Science in a Big Data Perspective

Dr Shastri Nimmagadda, Dr Torsten Reiners, Dr Amit Rudra

k17is-132

Development of a Total Environmental Data Science Approach in a Big Data Scale

Dr Shastri Nimmagadda, Dr Torsten Reiners, Dr Amit Rudra

k17is-134

Knowledge Acquisition for Electronic Health Records on cloud

Mrs. Dhanamma Jagli, Dr. Subhash Chandra Nalla, Dr. Seema Purohit

k17is-196

A Domain-specific Rule Generation Using Model-Driven Architecture in Controlled Variability Model

Mr. Neel Mani, Dr. Markus Helfert, Dr. Claus Pahl

k17is-207

Online Learning Experience Scale Validation and Its Impact on Learners? Satisfaction

Mr. Pankaj Deshwal, Ms. H.I.n. Himanshi, Mr. Ayush Trivedi

KES International

Knowledge Brokerage | Professional networks | Conferences | Publications | Membership Services

KES INTERNATIONAL

For over a decade the mission of KES International has been to provide a professional community, networking and publication opportunities for all those who work in knowledge-intensive subjects. At KES we are passionate about the dissemination, transfer, sharing & brokerage of knowledge. The KES community consists of several thousand experts, scientists, academics, engineers students and practitioners who participate in KES activities.



KES brings people together to make ... Knowledge Connections.

KES CONFERENCES

For over 20 years KES has run conferences in different countries of the world on leading edge topics -

Intelligent Systems -- *Intelligent Decision Technologies -- Intelligent Interactive Multimedia Systems and Services -- Agent and Multi Agent Systems -- Smart Technology based Education and Training*

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

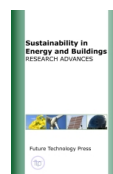
KES JOURNALS

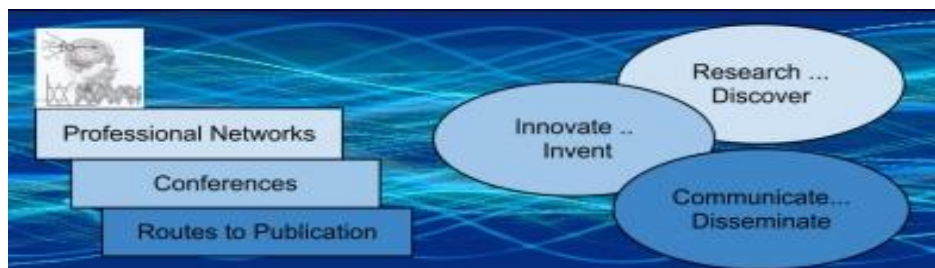
KES edits a range of journals and serials on knowledge intensive subjects -

-- *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*

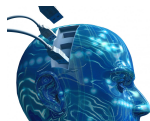
KES TRANSACTIONS -- THE KES OPEN ACCESS LIBRARY

KES Transactions is a book series containing the results of applied and theoretical research on a range of leading-edge topics. The series accepts conference proceedings, edited books and research monographs. Papers contained in KES Transactions may also appear in the KES Open Access Library (KOALA), our own online gold standard open access publishing platform.





TRAINING AND SHORT COURSES



KES can provide live and online training courses on all the topics in its portfolio. KES has good relationships with leading universities and academics around the world, and can harness these to provide excellent personal development and training courses.

DISSEMINATION OF RESEARCH RESULTS

It is essential for research groups to communicate the outcomes of their research to those that can make use of them. But academics do not want to run their own conferences. KES has specialist knowledge of how to run a conference to disseminate research results. Or a research project workshop can be run alongside a conference to increase dissemination to an even wider audience.



THE KES-IKT KNOWLEDGE ALLIANCE



KES works in partnership with the Institute of Knowledge Transfer (IKT), the sole accredited body dedicated to supporting and promoting the *knowledge professional*: those individuals involved in innovation, enterprise, and the transfer, sharing and exchange of knowledge. The IKT accredits the quality of innovation and knowledge transfer processes, practices activities, and training providers, and the professional status of its members.

ABOUT KES

Formed in 2001, KES is an independent worldwide association involving about 5000 professionals, engineers, academics, students and managers, operated on a not-for-profit basis, from a base in the UK. A number of universities around the world contribute to its organisation, operation and academic activities. KES International Operations Ltd is a company limited by guarantee that services the KES International organization.

KES International Operations Ltd

Unit 1k, Photon House, Percy Street, Leeds, West Yorkshire, L12 1EG,
United Kingdom.

Web Site: <http://www.kesinternational.org>

Email: enquiry@kesinternational.org

Registered in England and Wales as company no. 07846911



Calendar of Events 2018 – KES International

We're heading to the Gold Coast, Australia! In 2018

We are delighted to announce that Smart Digital Futures (SDF-18) (incorporating: Innovation in Medicine & Healthcare; Intelligent Decision Technologies; Intelligent Interactive Multimedia Systems & Services; Agent & Multi-agent Systems; Smart Education & E-Learning and Smart Transportation Systems), Sustainability in Energy & Buildings (SEB-18) and Sustainable Design & Manufacturing (SDM-18) will be held on the Gold Coast in Australia in June 2018 – we'd love to see you there!

Save the date:

20-22 June 2018	Smart Digital Futures (SDF-18) (incorporating: Innovation in Medicine & Healthcare; Intelligent Decision Technologies; Intelligent Interactive Multimedia Systems & Services; Agent & Multi-agent Systems; Smart Education & e-Learning and Smart Transportation Systems.
24-26 June 2018	Sustainability in Energy & Buildings (SEB-18)
24-26 June 2018	Sustainable Design & Manufacturing (SDM-18)



The Gold Coast

From the iconic Surfers Paradise beach to the dining precincts of Main Beach and Broadbeach and out to the lush, green hinterland, there's a new experience waiting for you at every turn on the Gold Coast.



Theme parks, world-renowned beaches and year-round sunshine are just a few of the reasons 10.5 million visitors flock to the Gold Coast each year.



Our conferences will be held at the Mantra on View Hotel, right in the heart of Surfers Paradise just 160m from the beach. The hotel's great choice of rooms provide accommodation to suit all delegates and the state-of-the-art conference facilities are set over two levels, one of which adjoins the outdoor terrace and swimming pool. The perfect conference destination!

Find out more at www.kesinternational.org/2018conferences.php

Main Lecture Theater

Coffee-Breaks Lunches

Main Entrance (security check)

Parallel sessions Rooms 401 to 408

Legend:

1. PAVILION CONCERNANCE
2. GRAND AMPHITHÉÂTRE
3. SALLE DE CONFÉRENCES
4. BÂTIMENT ADMINISTRATIF
5. BÂTIMENT 5
6. BIBLIOTHÈQUE UNIVERSITAIRE
7. BÂTIMENT DE CHIMIE
8. BÂTIMENT DE SCIENCES NATURELLES
9. BÂTIMENT DE PHYSIQUE (POLE 30)
10. BÂTIMENT 10
11. CAFÉTERIA ÉTUDIANTS
12. ESPACE VIE - AGENCE COMPTABLE
13. GYMNASIUM
14. CYBERCENTRE
15. BÂTIMENT "ESPACE VIES MATHÉMATIQUES"
16. GROUPE ÉLECTRONIQUE
17. T.O.B.T.
18. GARDIENNE

Other labels: RUE LUCIEN ROLAND, RUE DU NATHAN R.L.A., BOULEVARD GUSTAVE DESPLACES, ENTRÉE PRINCIPALE, PLACE VICTOR HUGO, RESTAURANT UNIVERSITAIRE, GYMNASIUM, CYBERCENTRE, BÂTIMENT 10, BÂTIMENT 11, BÂTIMENT 12, BÂTIMENT 13, BÂTIMENT 14, BÂTIMENT 15, BÂTIMENT 16, BÂTIMENT 17, BÂTIMENT 18.