Smart Digital Futures 2024

AMSTA | HCIS | IDT | InMed | SEEL |

Conference Programme

19-21 June 2024
Santa Cruz, Madeira, Portugal

Contents

Chairs Welcome

Welcome to the Smart Digital Futures 2024 (SDF-24) multi-theme conference held at the Vila Galé Hotel in Santa Cruz, Portugal during 19-21 June 2024.

SDF-24 is an amalgamation of six KES conferences: Agent and Multi-Agent Systems - Technology and Applications (KES-AMSTA-24), Intelligent Decision Technologies (KES-IDT-24), Human Centred Intelligent Systems (KES-HCIS-24), Innovation in Medicine and Healthcare (KES-InMed-24), Smart Education and e-Learning (KES-SEEL-24) and Smart Transportation Systems (KES-STS-24). Although the conferences share a common forum, each one has its own Chair and International Programme Committee.

SDF-24 was intended to be, as far as possible, a conference with physical attendance of delegates. However, to allow for those unable to travel to the conference location, provision was made for an element of virtual attendance. In either case delegates could submit a paper and present it to conference delegates.

The best papers submitted to the conference were presented and published in several volumes of proceedings in the Smart Innovation Systems and Technology series by Springer-Verlag.

Smart Digital Futures was organised as part of the KES International conference portfolio. 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 and brokerage of knowledge. The KES community consists of several thousand experts, scientists, academics, engineers, students and practitioners who participate in KES activities. KES runs conferences in different countries of the world on leading edge topics including Intelligent Systems, Sustainability in Energy and Buildings, Innovation, Knowledge Transfer and Enterprise, and Digital Media. KES provides routes to publication, such as journals, book series, and online publications, both through its own media and in conjunction with major publishers. KES also provides knowledge transfer services and consultancy.

The aim of Smart Digital Futures was to bring together researchers working at the leading edge of developments in smart systems and intelligent technology theory and applications. This programme contains 156 papers, each selected after full peer review by members of the International Programme Committees of the conferences.

We thank the keynote speakers for providing informative accounts of the latest research in their areas:

- o Dr. Iván Macía, Vicomtech, Spain (title of talk: 'Multi-modal data analysis and AI enabling personalized and precision medicine')
- o Prof. Hiroshi Takahashi, Keio University, Japan (title of talk: 'Financial and business economic research through artificial intelligence')
- o Assoc. Prof. Dr. Roman Sperka, Silesian University, Czech Republic (title of talk: 'Process mining applications')
- o Prof Ivan Luković, University of Belgrade, Serbia (title of talk: 'New Education Perspectives - How to Profile Experts for a Digital Economy Era')

We thank the General Chairs and Programme Chairs of the SDF-24 conferences for their hard work and dedication. We appreciate the efforts of those organising and chairing special sessions, members of the International Programme Committees and reviewers and we thank them. We are grateful to authors for the papers they have contributed to the conference, and to delegates for their attendance and we give them our thanks.

Finally, we thank the KES International administration team for their efforts.

We hope you find the conference useful and informative, we wish you all well, and we look forward to seeing you at another of our events in the future.

R.J. Howlett and L.C. Jain
Smart Digital Futures Conference Series Chairs

Prof Robert J. Howlett
Executive Chair
KES International Research UK and
'Aurel Vlaicu' University of Arad,
Romania

Prof Lakhmi C. Jain
Chair (International Relations) & Founder,
KES International
Liverpool Hope University, UK

Prof Gordan Jezic

General Co-Chair
AMSTA-24

Dr Jessica Chen-
Burger
General Co-Chair
AMSTA-24

Prof Irek
Czarnowski
General Chair
IDT-24

Prof Alfred
Zimmermann
General Chair
HCIS-24

Prof Yen-Wei Chen
General Chair
InMed-24
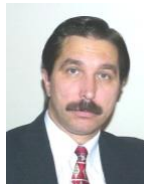
Prof Vladimir Uskov
General Chair
SEEL-24

Prof Xiaobo Qu
General Chair
STS-24

Faye Alexander
Director
KES International

Jonathan Flearmoy
Director
KES International

AMSTA-24

Organisation

Honorary Chairs
Prof. Ignac Lovrek, University of Zagreb, Croatia
Prof. Lakhmi C. Jain, KES International, UK & Liverpool Hope University, UK

Executive Chair
Prof. Robert J. Howlett, KES International Research UK and 'Aurel Vlaicu' University of Arad, Romania

General Co-Chairs
Prof. Gordan Jezic, University of Zagreb, Croatia
Dr. Jessica Chen-Burger, Heriot-Watt University, Scotland, UK

Programme Co-Chairs
Prof. Mario Kusek, University of Zagreb, Croatia
Assoc. Prof. Roman Sperka, Silesian University in Opava, Czech Republic

Publicity Chairs
Dr. Pavle Skocir, University of Zagreb, Croatia
Ivan Kralj, University of Zagreb, Croatia
Dr. Michal Halaska, Silesian University in Opava, Czech Republic

International Programme Committee

Name	Affiliation
Prof. Patricia Anthony	Lincoln University, New Zealand
Dr. Alanis Arnulfo	Tecnológico Nacional de México/ campus, México
Prof. Ahmad Taher Azar	College of Computer & Information Sciences (CCIS), Prince Sultan University, Saudi Arabia.
Assoc. Prof. Marina Bagić Babac	University of Zagreb, Croatia
Prof. Dariusz Barbucha	Gdynia Maritime University, Poland
Prof. Monica Bianchini	Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche Università degli Studi di Siena, Italy
Prof.Bruno Blaskovic	Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia
Dr. Jessica Chen-Burger	Computer Science, Heriot-Watt University, UK
Assoc. Prof. Frantisek Capkovic	Institute of Informatics, Slovak Academy of Sciences, Bratislava, Slovakia
Prof. Željka Car	University of Zagreb Faculty of Electrical Engineering and Computing, Croatia
Assoc. Prof. Matteo Cristani	University of Verona, Italy
Prof. Margarita N. Favorskaya	Reshetnev Siberian State University of Science and Technology, Russian Federation
Dr. Michal Halaška	Silesian University in Opava, Czech Republic
Prof. Tzung-Pei Hong	National University of Kaohsiung, Taiwan
Prof. Dragan Jevtic	University of Zagreb, Croatia
Prof. Arkadiusz Kawa	Łukasiewicz - Poznań Institute of Technology
Prof. Mario, Kusek	University of Zagreb, Faculty of Electrical Engineering and Computing
Prof. Adrianna Kozierkiewicz	Wrocław University of Science and Technology
Prof. Konrad Kułakowski	AGH University of Krakow, Poland
Prof. Manuel Mazzara	Innopolis University, Russia
Dr. Frano Skopljanac-Macina	University of Zagreb, Croatia
Prof. René Mandiau	LAMIH, Univ Polytechnique Hauts-de-France
Dr. Jose M. Molina	Universidad Carlos III de Madrid
Dr. Eiji Murakami	Azbil kimmon Co, Japan
Dr. Luis Gustavo Nardin	MINES Saint-Étienne, France
Prof. Radu-Emil Precup	Politehnica University of Timisoara, Romania
Prof.Marcos G. Quiles	Federal University of São Paulo (UNIFESP), Brazil

Name	Affiliation
Prof. Bahrami Mohammad Reza	Innopolis University, Innopolis, Russia Laboratory of Cyberphysical Systems
Prof. Roman Sperka	Silesian University in Opava, Czech Republic
Prof. Taketoshi Ushiama	Kyushu University, Japan
Prof. Hiroshi Takahashi	Keio Unviersity, Japan
Prof. Jordi Vallverdú	ICREA - UAB
Assist. Prof.Ivona Zakarija	University of Dubrovnik, Croatia
Dr. Mahdi Zargayouna	Université Gustave Eiffel, France

HCIS-24

Organisation

Honorary Chairs
Prof. Toyohide Watanabe, Nagoya University, Japan
Prof. Lakhmi C. Jain, KES International, UK & Liverpool Hope University, UK

Executive Chair
Prof. Robert J. Howlett, KES International Research UK and 'Aurel Vlaicu' University of Arad, Romania

General Chairs
Prof. Alfred Zimmermann, Reutlingen University, Germany
Prof. Rainer Schmidt, Munich University of Applied Sciences, Germany

Programme Chairs
Prof. Yoshimasa Masuda, Carnegie Mellon University, USA and Keio University, Japan
Prof. Abdellah Chehri, Royal Military College of Canada, Canada

International Programme Committee

Name	Affiliation
Prof. Ahmad Taher Azar	College of Computer & Information Sciences (CCIS), Prince Sultan University, Saudi Arabia.
Prof. Marco Aiello	University of Stuttgart, Germany
Dr. Vivek Bannore	KES UniSA, Australlia
Prof. Monica Bianchini	Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche Università degli Studi di Siena
Dr. Karlheinz Blank	arborsys, Germany
Dr. Oliver Bossert	Partner
Prof. Giacomo Cabri	university of Modena and Reggio Emilia
Dr.Giuseppe Caggianese	National Research Council of Italy (CNR) Institute for High Performance Computing and Networking (ICAR)
Dr. Dinu Dragan	University of Novi Sad, Faculty of Technical Sciences, Computer and Control Department
Prof. Vincent Hilaire	UTBM
Prof. Katsuhiro Honda	Osaka Metropolitan University,Japan
Prof. Christos Grecos	Arkansas State University
Prof. Emilio Insfran	Universitat Politècnica de València, Spain
Assoc. Prof. Maya Iwano	Yamaguchi University, Japan
Assoc. Prof. Dr. Eiji Kano	Ritsumeikan Asia Pacific University
Dr. Mustafa Asim Kazancigil	Yeditepe University, Istanbul, Turkey
Prof. Boris Kovalerchuk	Department of Computer Science Central Washington University, Ellensbur
Prof. Stefano Marrone	Università della Campania, Italy
Prof. Dr. Yoshimasa Masuda	Carnegie Mellon University, USA / Tokyo University of Science, Keio University, Japan
Prof. Lyudmila Mihaylova	The University of Sheffield, Uk
Prof. Vincenzo Moscato	University of Naples Federico II, Italy
Dr. Marco Palomino	University of Aberdeen
Prof. Radu-Emil Precup	Politehnica University of Timisoara, Romania
DR Milos Savic	University of Novi Sad, Serbia
Dr. Stefano Silvestri	Institute of High Performance Computing and Networking, Italy
Prof. Eulalia Szmidt	systems Research Institute Polish Academy of Sciences
Prof. Taketoshi Ushiama	Kyushu University, Japan

IDT-24

Organisation

Honorary Chairs
Prof. Lakhmi C. Jain, KES International, UK & Liverpool Hope University, UK
Prof. Gloria Wren-Phillips, Loyola University, USA

Executive Chair
Prof. Robert J. Howlett, KES International Research UK and 'Aurel Vlaicu' University of Arad, Romania

General Chair:
Prof. Ireneusz Czarnowski, Gdynia Maritime University, Poland

Programme Chairs
Prof. Jose L. Salmeron, University Pablo de Olavide, Seville, Spain
Dr. Antonio J. Tallon-Ballesteros, University of Seville, Spain

Publicity Chairs
Dr. Iza Wierzbowska, Gdynia Maritime University, Poland
Prof. Alfonso Mateos Caballero, Universidad Politécnica de Madrid, Spain

International Programme Committee

Name	Affiliation
Prof. Jair Minoro Abe	Paulista University
Dr. Piotr Artiemjew	University of Warmia and Mazury, Poland
Prof. Ahmad Taher Azar	College of Computer & Information Sciences (CCIS), Prince Sultan University, Saudi Arabia.
Prof. Valentina Emilia Balas	Aurel Vlaicu University of Arad, Romania
Prof. Dariusz Barbucha	Gdynia Maritime University, Poland
Prof. Alina Barbulescu	Ovidius University of Constanta,Romania
Prof. Monica Bianchini	Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche Università degli Studi di Siena
Dr. Amitava Chatterjee	Electrical Engg Deptt, Jadavpur University, India
Dr. Gloria Cerasela Crisan	Vasile Alecsandri University of Bacau, Bacau, ROMANIA
Assoc Prof. Matteo Cristani	University of Verona, Italy
Dr. Dinu Dragan	University of Novi Sad, Faculty of Technical Sciences, Computer and Control Department
Prof. Agnieszka Duraj	nstitute of Information Technology, Lodz University of Technology
Prof. Margarita N. Favorskaya	Reshetnev Siberian State University of Science and Technology, Russian Federation
Dr. Mauro Gaggero	National Research Council of Italy (CNR) Institute for High Performance Computing and Networking (ICAR)
Prof. Christos Grecos	Arkansas State University, USA
Dr. Dawn E. Holmes	University of California, Santa Barbara
Prof. Katsuhiro Honda	Osaka Metropolitan University
Prof. Tzung-Pei Hong	National University of Kaohsiung, Japan
Dr. Mika Sato-Ilic	Institute of Systems and Information Engineering University of Tsukuba, Japan
Prof.Yuji Iwahori	Chubu University, Japan
Prof. Dragan Jevtic	University of Zagreb, Croatia
Prof. Nikos Karacapilidis	University of Patras, Greece
Prof. Małgorzata Przybyła-Kasperek	University of Silesia in Katowice, Poland
Prof.Aleksandar Kovačević	Faculty of Technical Sciences, University of Novi Sad, Serbia
Prof. Marek Kretowski	Bialystok University of Technology, Poland

Name	Affiliation
Prof. Vladimir Kurbalija	University of Novi Sad, Serbia
Prof. Alfonso Mateos	Universidad Politécnica de Madrid, Spain
Dr. Michele Mastroianni	University of Salerno, Italy
Prof. Lyudmila Mihaylova	The university of Sheffield, UK
Dr. Suneeta Mohanty	KIIT Deemed to be University, India
Prof Mikhail Moshkov	King Abdullah University of Science and Technology, Saudi Arabia
Dr. Shunei Norikumo	DOSHISHA UNIVERSITY, Faculty of Economics. Kyoto, JAPAN
Prof. Marek R. Ogiela	GH University of Krakow, Poland
Prof. Dr. Takao Ohya	Kokushikan University, Japan
Prof. Jeng-Shyang Pan	National Kaohsiung University of Applied Sciences, Taiwan
Dr. Isidoros Perikos	University of Patras, Greece
Dr. Camelia Pintea	TU Cluj-Napoca, Romania
Prof. Radu-Emil Precup	Politehnica University of Timisoara, Romania
Prof. Jim Prentzas	Democritus University of Thrace, Greece
Dr. Pei-Chun Lin	Department of Information Engineering and Computer Science, Feng Chia University
Prof. Ana Respicio	LASIGE, Faculdade de Ciências, Universidade de Lisboa
Dr. Gerasimos Rigatos	Industrial Systems Institute, Greece
Prof. Hadi Saleh	Department of Software Engineering, Moscow, Russian Federation
Dr. Milos Savic	University of Novi Sad, Serbia
Prof. Adriana Burlea-Schiopoiu	University of Craiova, Romania
Prof. Marek Sikora	Silesian University of Technology, Łukasiewicz Research Network - EMAG Institute
Mr. Bharat Singh	Big Data Analyst, Hildesheim
Dr. Urszula Stańczyk	Silesian University of Technology, Gliwice, Poland
Dr. Ruxandra Stoean	University of Craiova, Romania
Dr. Catalin Stoean	University of Craiova, Romania
Prof. Piotr Szymczyk	AGH University of Krakow, Poland
Prof. Masakazu Takahashi	Yamaguchi University, Japan
Prof. Jan Treur	Full professor of AI, Social AI Group, Vrije Universiteit Amsterdam

Name	Affiliation
Prof. Christos Tjortjis	School of Science and Technology, International Hellenic University
Prof. Eiji Uchino	Yamaguchi University
Dr. Junzo Watada	Waseda University, Japan
Dr. Fen Wang	Central Washington University, USA
Prof. Gloria Phillips-Wren	Loyola University Maryland
Prof. Yoshiyuki Yabuuchi	Shimonoseki City University, Japan
Prof. Hiroyuki Yoshida	Massachusetts General Hospital and Harvard Medical School, USA
Prof. Gian Piero Zarri	STIH Laboratory, Sorbonne University, Paris, France
Dr. Beata Zielosko	University of Silesia, Katowice, Poland
Prof. Alfred Zimmerman	Reutlingen University, Germany
Dr. Sergey V. Zykov	HSE University, Moscow, Russia

InMed-24

Organisation

Honorary Chair
Prof. Lakhmi C. Jain, KES International, UK & Liverpool Hope University, UK

Executive Chair
Prof. Robert J. Howlett, KES International Research UK and 'Aurel Vlaicu' University of Arad, Romania

General Chair
Prof. Yen-Wei Chen, Ritsumeikan University, Japan

Programme Chair
Prof. Satoshi Tanaka, Ritsumeikan University, Japan

International Programme Committee

Name	Affiliation
Dr. Arnulfo Alanis Garza	Technological Institute of Tijuana, Mexico
Prof. Ahmad Taher Azar	Prince Sultan University, Saudia Arabia
Assoc. Prof. Smaranda Belciug	University of Craiova, Romania
Prof. Isabelle Bichindaritz	State University of New York at Oswego, USA
Prof. Giosue' Lo Bosco	University of Palermo, Italy
Dr. Christopher Buckingham	Aston University, UK
Dr. Amir H. Foruzan	Shahed University, Iran
Assoc. Prof Anca Ignat	Faculty of Computer Science, University ”Alexandru Ioan Cuza” of Iasi, Romania
Prof. Rashimi Jain	Montclair State University, USA
Assoc. Prof. Bill Kapralos	Ontario Tech University, Canada
Assoc. Prof. Liang Li	Ritsumeikan University, Japan
Prof. Jingbing Li	Hainan University, China
Prof. Dr. Yoshimasa Masuda	Yamaguchi University, Japan
Prof. Rashid Mehmood	King Abdul Aziz University, Saudia Arabia
Prof. Dr. Mayuri Mehta	Sarvajanik College of Engineering and Technology, India
Prof. Victor Mitrana	Polytechnic University of Madrid, Spain
Prof. Dr. Marek Ogiela	AGH University of Science and Technology, Poland
Dr. Marco Pota	Institute for High Performance Computing and Networking (ICAR) - National Research Council of Italy (CNR)
Dr. Vijayalakshmi Ramasamy	University of Wisconsin - Parkside, Wisconsin, USA
Prof. Marcello Sanguineti	University of Naples, Italy
Dr. Cesar Sanin	University of Newcastle, Australia
Dr. Catalin Stoean	University of Craiova, Romania
Assoc. Prof. Ruxandra Stoean	University of Craiova, Romania
Prof. Kazuyoshi Tagawa	Aichi University of Technology, Japan
Prof. Satoshi Tanaka	Ritsumeikan University, Japan
Prof. Eiji Uchino	Yamaguchi University, Japan
Prof. Hiroyuki Yoshida	Harvard Medical School / Massachusetts General Hospital, USA

SEEL-24

Organisation

Honorary Chair
Prof. Lakhmi C. Jain, KES International, UK & Liverpool Hope University, UK

Executive Chair
Prof. Robert Howlett, KES International Research UK and 'Aurel Vlaicu' University of Arad, Romania

General Chair
Prof. Vladimir Uskov, Bradley University, U.S.A.

Publicity Co-Chairs (Europe)
Prof. Jerzy Rutkowski, Silesean University of Technology, Poland
Prof. Danguole Rutkauskeine, Ph.D., Kaunas University of Technology, Lithuania
Prof. Marina Lapyonok, Ed.D., Ural State Pedagogical University, Russia
Prof. Ekaterina Prasolova-Forland, Ph.D, Norwegian University of Science and Technology, Norway

Publicity Co-Chairs (Asia)
Prof. Wernhuar Tarng, Ph.D., National Hsinchu University of Education, Taiwan
Prof. Yoshimi Teshigawara, Ph.D., Tokyo Denki University, Japan

International Programme Committee

Name	Affiliation
Dr. Jeffrey P. Bakken	Bradley University, USA
Prof. Nunzio Casalino	Guglielmo Marconi University and Luiss Guido Carli -Business School
Prof. Robertas Damaševičius	Vytautas Magnus University, Kaunas, Lithuania
Dr. Vladimir Dimitrieski	University of Novi Sad, Faculty of Technical Sciences
Prof. Lyudmila Glukhova	Volga Region State University of Service, Togliatti city
Dr. Svetlana Gudkova	Togliatti State University, Togliatti city
Dr. Karsten Henke	Ilmenau University of Technology
Prof. Daocheng Hong	East China Normal University
Dr. PETER ILIC	University of Aizu, Japan
Prof. Alexander Ivannikov	institute for Design Problems in Microelectronics of Russian Academy of Sciences
Dr. Aleksandra Klasnja-Milicevic	University of Novi Sad, Faculty of Sciences, Department of Mathematics and Informatics, Serbia
Dr. Gara Miranda	Universidad de La Laguna,Tenerife
Prof. Andrew Nafalski	University of South Australia
Prof. Dr. Takao Ohya	Kokushikan University, Japan
Dr. Mrutyunjaya Panda	Utkal University, Bhubaneswar, Odisha, India
Dr. Isidoros Perikos	University of Patras, Greece
Prof. Petra Poulova	University of Hradec Kralove, Faculty of Informatics and Management
Prof. Adriana Burlea-Schiopoiu	University of Craiova, Romania
Prof Vladimir Serdyukov	Bauman Moscow State Technical University, Russia
Prof. Margarita Stankova	New Bulgarian University, Bulgaria
Dr. Ruxandra Stoean	University of Craiova, Romania
Prof. Yoshiyuki Yabuuchi	Shimonoseki City University

STS-24

Organisation

Honorary Chair
Prof. Lakhmi C. Jain, KES International, UK & Liverpool Hope University, UK

Executive Chair:
Prof. Robert J. Howlett, KES International Research UK and 'Aurel Vlaicu' University of Arad, Romania

General Chairs:
Prof. Yiming Bie, Jilin University, China
Prof. Xiaobo Qu, Chalmers University of Technology, Sweden
Assist. Prof. Kun Gao, Chalmers University of Technology, Sweden

International Programme Committee

Name	Affiliation
Dr. Jelena Andric	Volvo Group
Prof Ahmad Taher Azar	Prince Sultan University, Saudia Arabia
Prof. Yiming Bie	Jilin University, China
Assist. Prof. Jyotir Moy Chatterjee	Asia Pacific University of Technology & Innovation, Malaysia
Dr. Amitava Chatterjee	Jadavpur University, India
Dr Shaohua Cui	Chalmers University of Technology, Sweden
Dr. Said Easa	Toronto Metropolitan University, Canada
Assoc. Prof. Chuanyun Fu	Harbin Institute of Technology, China
Assist. Prof. Kun Gao	Chalmers University of Technology, Sweden
Prof. Ronghui Liu	University of Leeds, UK
Assoc. Prof. Chaoru Lu	Oslo Metropolitan University, Norway
Dr Arsalan Najafi	Chalmers University of Technology, Sweden
Dr Mingyang Pei	South China University of Technology, China
Dr Radu-Emil Precup	Universitatea Politehnica Timișoara, Romania
Assoc. Prof. Weiwei Qi	South China University of Technology, China
Dr Raul Roman	Universitatea Politehnica Timișoara, Romania
Prof. Luca Studer	Politecnico di Milano, Italy
Dr Jelena Svorcan	University of Belgrade
Prof. Huizhao Tu	Tongji University, China
Dr. Jiaming Wu	Chalmers University of Technology, Sweden
Prof. Bo Yu	Tongji University, China
Dr. Zuduo Zheng	University of Queensland, Australia

Keynote Talks

Dr. Iván Macía
Director of the Department of Digital Health and Biomedical Technologies, Vicomtech, Spain

Multi-modal data analysis and AI enabling personalized and precision medicine

Abstract: In the context of an increased pressure of health systems, personalized and precision medicine have the promise to deliver better prevention and intervention strategies targeted to individuals. Approaches have evolved from a personalization based on clinical variables and individual preferences to precision diagnostics and targeted therapies based on the analysis of individual genes or phenotypic traits. At the same time, there is a revolution in digital diagnostic technologies, improving existing techniques, e.g. medical imaging or genomics, or novel techniques providing deeper insights for better disease diagnosis and prognosis. The amount of information generated is huge and ever growing, however, much of it is barely exploited. Novel artificial intelligence technologies, with emphasis on deep learning, are capable of processing and integrating such vast amounts of multi-modality information, either obtained in research studies or from clinical practice, promising a great impact in novel approaches to disease prevention, diagnosis, prognosis and intervention. In this talk, and overview and examples of different approaches and their advantages will be provided in several areas of disease and clinical processes.

Biography: Dr Macía holds an Industrial Engineering degree (2002) and an Industrial Automation and Electronics Engineering degree (2003) from the University of Navarra (Spain), and a PhD in Computer Science and Artificial Intelligence from the University of the Basque Country UPV-EHU (2012) with a Doctoral thesis in the field of Medical Image Analysis with Artificial Intelligence, where he specialized in vascular image analysis.

He has developed most of his research career in Vicomtech applied research centre (San Sebastian, Spain) where he started in 2003 working in digital technologies for the health domain. Since 2014, he holds the position of Director of the Digital Health and Biomedical Technologies Department, leading a group of 35 researchers in 5 research areas: Digital Health, Predictive and Precision Medicine, Digital Biomedical Devices, Image Analysis and Deep Learning and Big Data for Healthcare. At present time the Department takes part in 7 EU funded projects by H2020 and Horizon Europe.

He also leads the Digital Health research group at the Biogipuzkoa Health Research Institute, a multidisciplinary group of clinicians and engineers, and is part of the UPV-EHU Computational Intelligence Group.

He has 20 years of experience in R&I in the development of computer-aided diagnostic systems, Data Analytics and Artificial Intelligence in the biomedical sector, and responsible for several medical image analysis products on the market, and received the European Quality Innovation of the Year Award (2015) in Social and Healthcare Sector by the Finnish Quality Association. He has been responsible for multiple R&I projects and in collaboration with companies, technology centres, academia, health and scientific institutions, as well as responsible for the development of various software libraries and solutions currently in use as assets of Vicomtech. He is also the author of more than 50 publications in impact journals and congresses in the mentioned areas.

He acted as general Project Coordinator of DESIREE Project Decision Support and Information Management System for Breast Cancer-, funded by H2020 (Grant Agreement nº 690238). At present time he is Principal Investigator from Vicomtech in the LUCIA Project - Understanding Lung Cancer related risk factors and their Impact-funded by Horizon Europe in the Mission Cancer (Grant Agreement nº 101096473) where he leads the definition of the LUCIA software ecosystem, data analytics and application development and the Risk factors AI modelling activities.

Prof. Hiroshi Takahashi
Graduate School of Business Administration, Keio University, Japan

Financial and business economic research through artificial intelligence

Abstract: The progress of artificial intelligence technology has attracted broad attention across different sectors, including business and academia, prompting discussions on the application of information technology from various viewpoints, covering society, organizations, and individuals. Finance is also among these fields. In finance, several initiatives are in progress in various areas, such as corporate finance, which emphasizes aspects like corporate investments and governance, asset pricing, focusing on the development of asset prices, and asset management. This talk will offer an outline of several analyses and case studies, primarily in the domains of financial and business economics.

Biography: Professor of Finance, Graduate School of Business Administration, Keio University / Keio Business School, Japan. Hiroshi TAKAHASHI received his BA in 1994 from Department of Applied Physics, School of Engineering, the University of Tokyo, Japan. He received his M.S. degree and Ph.D. degree from University of Tsukuba, Japan. He was a researcher at Fuji Film co., ltd., a senior researcher at Sumitomo Mitsui Trust Bank (former the Mitsui Trust and Banking co., ltd.), an associate professor at Okayama University, and an associate professor at Keio University from 2008 to 2014. He was a visiting researcher at Kiel University, Germany in 2007. He has been a professor at Graduate School of Business Administration, Keio University, Japan since 2014. He has served as the chairperson of the Coordination Council for Industry-Government-Academia Consultations on the Promotion of Utilization of Big Data, etc., Ministry of Internal Affairs and Communications (MIC), a member of the editorial board of the Securities Analysts Journal, and Director of the Journal of the Japan Society for Management Information Science. His research interests include Finance, Computer Science, and Management Science.

Assoc. Prof. Dr. Roman Sperka, PhD
Silesian University, School of Business Administration in Karvina, Czech Republic

Process mining applications

Abstract: Process mining stands as a powerful analytical approach deeply rooted in the scrutiny of business data. It involves a meticulous analysis of event logs generated during the execution of business processes to unravel crucial insights into process dynamics, operational efficiency, and adherence to compliance standards. By tapping into the extensive information embedded in these event logs, process mining paints a detailed and objective picture of how business processes unfold within an organization. The methodology encompasses diverse techniques, including process discovery, conformance checking, and performance analysis, aiming to unveil concealed patterns, deviations, and bottlenecks in business operations. Organizations can leverage process mining to optimize workflows, enhance operational efficiency, and ensure compliance with regulations, making it an invaluable tool in sectors such as supply chain management, finance, healthcare, and information technology. Whether identifying inefficiencies in procurement processes or improving patient care pathways, the focus on business data empowers organizations to make informed decisions, fostering transparency, efficiency, and agility in their business processes. The keynote presentation will explore the process mining basic applications.

Biography: Assoc. Prof. Dr. Roman Sperka, PhD is a Head of the Business Economics and Management Department at Silesian University, School of Business Administration in Karvina, Czech Republic and a Dean of the School since 2023. He has participated in several EU and institutional projects. He was a Management Committee member od a COST EU action, CA18115 "Transnational Collaboration on Bullying, Migration and Integration at School Level", 2020 - 2023. He is a Programme Co-Chair of the KES-AMSTA conference and Executive Co-Chair of a DEMSME conference. His primary interests are business process management, agent-based models and simulation in socio-economic systems, process mining and business economics. He has been an author or co-author of more than 100 publications since 2011 (2 books/monographs, 4 journal papers with impact factor, 14 Scopus journal papers, 28 Web of Science conference proceedings papers, and over 450 citations).

Prof Ivan Luković
University of Belgrade, Serbia

New Education Perspectives - How to Profile Experts for a Digital Economy Era

Abstract: Nowadays, modern business includes acquisition and storing enormous data volumes, larger than ever before. Such data represent a significant value that an organization or a society can utilize to reach created goals and provide sustainable development. Unfortunately, a daily practice still intensively points out to the problem of a serious gap between the identified needs for knowledge, on one hand, and inability of the disciplines of Computer Science, Software Engineering, and Artificial Intelligence (CS & SE & AI, for short), combined with the modern software technologies, to address such needs in an effective way, on the other hand. One of the important causes of such phenomenon is in a lack of strongly educated and interdisciplinary oriented experts showing an appropriate level of knowledge both in CS & SE & AI, as well as in the disciplines of Management and Economics, for a specific problem domain. In this presentation, we will address issues on how to come to more flexible and interdisciplinary oriented study models capable of producing various forms of digital managers, as a new profile of experts, ready to cope with digital economy and digital transformation in a modern society. Massive deployment of such experts is a way to significantly raise the level of organization maturity regarding capabilities for: information management, quality management, business processes, and big data analytics.

Biography: Ivan Luković received his diploma degree (5 years) in Informatics from the Faculty of Military and Technical Sciences in Zagreb in 1990. He completed his M.Sc. (former Mr, 2 years) degree at the University of Belgrade, School of Electrical Engineering in 1993, and his Ph.D. at the University of Novi Sad, Faculty of Technical Sciences in 1996. Currently, he works as a Full Professor at the Faculty of Organizational Sciences of the University of Belgrade, where he lectures in several Computer Science and Informatics courses. His research interests are related to Database Systems, Information Systems, Business Intelligence, Software Engineering, and Data Science. He is the author or co-author of over 200 papers, 4 books, and 30 industry projects and software solutions in the area. He supervised 13 completed Ph.D. theses. He created a new set of B.Sc. and M.Sc. study programs in Information Engineering, i.e. Data Science, at the Faculty of Technical Sciences. The programs were accredited for the first time in 2015. Currently, he is a chair of Managing Board of the Computer Science and Information Systems (ComSIS) journal, and a chair of M.Sc. study program in Information Engineering at Faculty of Organizational Sciences. He is also a member of Serbian AI Society.

Schedule – Wednesday 19 June

	Plenary Room	Room 2	Room 3	Room 4	Room 5
	Opening Ceremony Prof Robert J Howlett & Prof Lakhmi Jain 9:00 - 9:15				
	Keynote Speaker 1 Dr. Iván Macía Multi-modal data analysis and AI enabling personalized and precision medicine 9:15 - 10:15				
	Networking Break 10:15-10:45				
Session Details	AMSTA-01 Multi-Agent Systems Prof. Mario Kušek	IDT-01 General Track Prof. Ireneusz Czarnowski	HCIS-01 Human-Centered Systems Prof. Alfred Zimmerman	INMED-01 Deep Learning in Medical Imaging and Multimodal Biomedical Data (1) Iván Macía Oliver	STS-01 Emerging transport technology Kun Gao
BST Time	10:45-12:45	10:45-12:45	10:45-12:45	10:45-12:45	10:45-12:45
	Lunch Break 12:45-13:45				

	Plenary Room	Room 2	Room 3	Room 4	Room 5
	Keynote Speaker 2 Assoc. Prof. Dr. Roman Sperka Process mining applications 13:45 - 14:45				
	Networking Break 14:45-15:15				
Session Details	IDT-02 (IS01) Artificial Intelligence, Machine Learning and Deep Learning in Intelligent Decision Technologies Dr. Mihaela Luca, Prof. Anca Ignat	AMSTA-02 Agent-based Modeling and Simulation Prof. Roman Šperka	HCIS-02 Human-Centered Systems & Artificial intelligence, Machine Learning and deep Learning for Human-Centered Intelligent Systems Dr. Mihaela Luca	INMED-02 Deep Learning in Medical Imaging and Multimodal Biomedical Data (2) Yen-Wei Chen	SEEL-01 Smart Education and e-Learning Dr. Ekaterina Prasolova-Førland & Dr. Olivier Bonnaud
BST Time	15:15 - 17:15	15:15 - 17:15	15:15 - 17:15	15:15 - 17:15	15:15 - 17:15

Schedule – Thursday 20 June

	Plenary Room	Room 2	Room 3	Room 4	Room 5
	Keynote Speaker 3 Prof Ivan Luković New Education Perspectives - How to Profile Experts for a Digital Economy Era 9:00 - 10:00				
	Networking Break 10:00 - 10:30				
Session Details	IDT-03 (IS02) Decision Making Theory for Economics and (IS07) Responsible and Trustworthy Artificial Intelligence Prof. Dr. Takao Ohya, Dr. Alessia Amelio, Prof. Arcangelo Merla	AMSTA-03 Education in Computer Science in the era of Artificial Intelligence I Prof. Manuel Mazzara	STS-02 Traffic safety and behavior Bo Yu	INMED-03 Advanced ICT for Medicine and Healthcare Mihaela Luca	SEEL-02 Smart Education and e-Learning: Modeling and Research Dr. Peter Ilic & Dr. Natalia A. Serdyukova
BST Time	10:30-12:30	10:30-12:30	10:30-12:30	10:30-12:30	10:30-12:30
	Lunch Break 12:30 -13:30				

	Plenary Room	Room 2	Room 3	Room 4	Room 5
	Keynote Speaker 4 Prof. Hiroshi Takahashi Financial and business economic research through artificial intelligence 13:30 - 14:30				
	Networking Break 14:30 - 15:00				
Session Details	IDT-04 General Track Prof. Ireneusz Czarnowski	AMSTA-04 Education in Computer Science in the era of Artificial Intelligence II Prof. Manuel Mazzara	SEEL-03 Smart Pedagogy Dr. Vladimir Uskov & Dr. Jeffrey P. Bakken	INMED-04 Artificial Intelligence for Smart Medicine and Healthcare Donald S Shepard	STS-03 AI and sustainable system Omkar Parishwad
BST Time	15:00 - 17:00	15:00 - 17:00	15:00 - 17:00	15:00 - 17:00	13:00 - 15:30

Schedule – Friday 21 June

	Plenary Room	Room 2	Room 3	Room 4	Room 5
	Morning Networking 09:30 - 10:00				
Session Details	AMSTA-05 Business Economics and Agent-based Modeling I Prof. Hiroshi Takahashi	IDT-05 (IS04) Large-Scale Systems for Intelligent Decision Making and Knowledge Engineering, and (IS06) Reasoning-based Intelligent Applied Systems Prof. Dr. Sergey V. Zykov, Dr. Jair Minoro Abe	HCIS-03 Edge computing Technologies for Mobile Computing and Internet of things & Digital Enterprise Architecture for Human-Centric Intelligent Systems in Manufacturing, Financial, and Others. Liviu Andrei Scutelnicu & Yoshimasa Masuda	INMED-05 Healthcare Data Security Jingbing Li	IDT-06 (IS07) Responsible and Trustworthy Artificial Intelligence Dr. Alessia Amelio, Prof. Arcangelo Merla
BST Time	10:00-12:00	10:00-12:00	10:00-12:00	10:00-12:00	10:00-12:00
	Lunch Break 12:00-13:00				

	Plenary Room	Room 2	Room 3	Room 4	Room 5
Session Details	AMSTA-06 Business Economics and Agent-based Modeling II Prof. Hiroshi Takahashi	IDT-07 (IS08) Statistical Analysis and Model Selection for Complex Structed Data Dr. Rei Monden, Dr. Mariko Yamamura	AMSTA-07 Intelligent Agents in health, wellness and human development environments applied to health Prof. Rosario Baltazar Flores	INMED-06 Digital Technology for Ageing Populations and Healthcare Smaranda Belciug	
BST Time	13:00-15:00	13:00-15:00	13:00-15:00	13:00-15:00	
	Networking Break 15:00 - 15:30				
	Closing Ceremony 15:30 - 15:45				

AMSTA Paper Presentations

AMSTA-01: Wednesday 19 June 2024
Time: 10:45-12:45
Plenary Room

AMSTA-01: Multi-Agent Systems
Chair: Prof. Mario Kušek

Paper No	Paper Title / Authors
ams24-002	LLM Multi-agent Decision Optimization J. de Curtò, I. de Zarzà and Carlos T. Calafate
ams24-008	The model of benevolence for trust in Multi-agent system Tomasz; Zurek, Adam; Wyner, Tom; Van Engers
ams24-018	Fair Path Generation for Formation Control Combining Ant Colony and Particle Swarmn Optimizations Yoshie; Suzuki, Toshiharu; Sugawara
ams24-015	Preference Definition in a Multi-Agent System Approach for User-centric Internet of Things Smart Environments Katarina; Mandarić, Gordan; Ježić
ams24-035	AI-Driven Nitrogen Stress Management in Cereal Crops via Drone Technology Hailemicael Lulseged; Yimer, Matteo; Cristani, Tewabe Chekole; Workneh, Claudio; Tomazzoli

AMSTA-02: Wednesday 19 June 2024
Time: 15:15-17:15
Room 2

AMSTA-02: Agent-based Modeling and Simulation
Chair: Prof. Roman Šperka

Paper No	Paper Title / Authors
ams24-028	Agent-based simulation for withdrawal of energy-inefficient housing Simon; Gorecki, Seghir; Zerguini, Nathalie; Gaussier, Mamadou; Kaba Traore
ams24-038	Data Augmentation for Business Process Alignment: proof of concept and experimental design Matteo; Cristiani, Mattia; Zorzan, Tewabe; Workneh, Claudio; Tomazzoli
ams24-031	Smart Scheduling in urban Traffic: A Multi-Agent System for Dynamic Vanpooling Negin; Alisoltani, Mahdi; Zargayouna
ams24-030	Resource limitations of business process simulations: literature study Michal; Halaška, Roman; Šperka, Radim; Dolak

* Online session

AMSTA-03: Thursday 20 June 2024
Time: 10:30-12:30
Room 2

AMSTA-03: Education in Computer Science in the era of Artificial Intelligence I
Chair: Prof. Manuel Mazzara

Paper No	Paper Title / Authors
ams24-013	Higher Education Institutions and the Imperative for Transformation in the 21st Century Iouri; Kotorov, Yuliya; Krasylnykova, Manuel; Mazzara, Evgeny; Bobrov
ams24-021	A learning path to Functional Programming (and what students can see on the path) Gorodnyaya; Lidia, Dmitry; Kondratyev, Nikolay; Shilov
ams24-022	Hybrid Attendance Management System: Utilizing Computer Vision and Deep Learning Shirin; Noekhah, Mohammed; Hamid Mahmood, Bawan; Hiwa Mohammed, Mohammad; Reza Bahrami
ams24-012	Empower User Consent: Transparent Data Collection for Learned Profile in Educational Products Gleb; Osotov, Nursultan; Askarbekuly, Manuel; Mazzara
ams24-033	Evidence of Learning in the Presence of AI Tools in Computer Science Higher Education Rabab; Marouf, Iouri; Kotorov, Yuliya; Krasylnykova, Hamna; Aslam
ams24-011	The impact of ChatGPT on Academic Writings Instructons for Computer Science Students Georgy; Gelvanovsky, Ruslan; Saduov

* Online session

AMSTA-04: Thursday 20 June 2024
Time: 15:00-17:00
Room 2

AMSTA-04: Education in Computer Science in the era of Artificial Intelligence II
Chair: Prof. Manuel Mazzara

Paper No	Paper Title / Authors
ams24-023	The Synergy of Electric Vehicle Technology, Artificial Intelligence for Educational Innovation Ahmed; Abid
ams24-032	Training a Product Owner with serious games Pavel; Bakharuev, Paolo; Ciancarini
ams24-034	AI in Educational Assessment, Applications and Implications: A Survey Rawan; Ali, Mohammad; Reza Bahrami
ams24-024	Impact of AI-Powered Platforms on Academic Learning: Exploring the Purpose and Evaluation Used in the Learning Process Liviu-Andrei; Scutelnicu, Marius Ciprian; Ceobanu
ams24-037	Teaching Empirical Methods to Software Engineers Zamira; Kholmatova, Giancarlo; Succi, Navruza; Tulkunova
ams24-036	Teaching Lean software development to Software Engineers Zamira; Kholmatova, Giancarlo; Succi, Navruza; Tulkunova

* Online session

AMSTA-05: Friday 21 June 2024
Time: 10:00-12:00
Plenary Room

AMSTA-05: Business Economics and Agent-based Modeling I
Chair: Prof. Hiroshi Takahashi

Paper No	Paper Title / Authors
ams24-039	Consideration of building a simulator to evaluate methods to maximize the effectiveness of advertising to household Emiko; Watanabe, Eiji; Murakami, Hiroshi; Takahashi
ams24-003	Human-AI-Collaboration SECI Model: The Knowledge Management Takashi; Matsumoto, Ryu; Nishikawa, Chikako; Morimoto
ams24-014	Modeling Agent Awareness After Hirerachical Managerial Training Kyoko; Hayashi, Kazuhiko; Tsuda
ams24-040	Analysis of the Impact on Area Prices using Propensity Score Matching, considering the Proportions of Photovoltaic and Thermal Power Generation simultaneously Hiroo; Horii, Setsuya; Kurahashi

* Online session

AMSTA-06: Friday 21 June 2024
Time: 13:00-15:00
Plenary room

AMSTA-06: Business Economics and Agent-based Modeling II
Chair: Prof. Hiroshi Takahashi

Paper No	Paper Title / Authors
ams24-016	Development of an Application for Extracting Needs Related to Actual Gas Using Text Mining Naoya; Kamiyama, Yuki; Sawai, Iketsu; Go, Kenichiro; Oka, Eiji; Murakami, Hiroshi; Takahashi
ams24-007	Impact of Intelligent Systems in the Home Office on Employee Satisfaction - Lessons learned from the COVID-19 Pandemic Miriam; Kappe, Ralf-Christian; Harting, Christopher; Reichstein
ams24-010	Agile Methodologies in Software Development: a Study of Effective Management Strategies for Companies in the Digital Era Alexey; Smolyakov, Mohammad; Reza Bagrami
ams24-017	Predictive Analysis of Cyclical Sales Data Sayaka; Maeda, Yuto; Shimizu, Kazuhiko; Tsuda

AMSTA-07: Friday 21 June 2024
Time: 13:00-15:00
Room 3

AMSTA-07: Intelligent Agents in health, wellness and human development environments applied to health
Chair: Prof. Rosario Baltazar Flores

Paper No	Paper Title / Authors
ams24-041	EMG Signal Classification Using Machine Learning for Augmentative Assistance in Cerebral Palsy Neri; Ramirez-Lopez, Bograt; Yail Marquez, Arnulfo; Alanis, Jose Sergio; Magdaleno-Palencia
ams24-025	WellnessWave - Platform for the Digitalization of the Romanian Public Medical System Liviu-Andrei; Scutelnicu, Andrei; Balteanu
ams24-042	TRIAGE Predictive Model based on Artificial Neural Networks and Deep Learning Hector Fuentes; Estolano, Arnulfo; Alanis, Efrain; Patino, Bogart; Yail Marquez
ams24-043	Platform for Automated Assessment of Obstetric Ultrasounds, using Machine Learning Jonathan; Sanchez Luna, Arnulfo; Alanis, Efrain; Patino, Bogart; Yail Marquez
ams24-029	Identification of Fonts in Unstructured Environments through Deep Learning Networks Kevin; Perez, Raul; Santiago, Rosario; Baltazar

* Online session

HCIS Paper Presentations

HCIS-01: Wednesday 19 June 2024
Time: 10:45-12:45
Room 3

HCIS-01: Human-Centered Systems
Chairs: Alfred Zimmerman

Paper No	Paper Title / Authors
hcis24-029	Human Centered Intelligent Systems Alfred Zimmermann and Rainer Schmidt
hcis24-020	DIA tool for analysing contracts in Serbian using an R-CNN Dejan Rancic, Miloš Bogdanović, Jelena Kocić and Olivera Pronic Rancic
hcis24-014	The Usage of Language Models for Human Assistance in Production Failure Root Cause Analysis Michael Möhring, Barbara Keller and Daniel Bierhals
hcis24-017	Large Language Model Application Frameworks for Domain-Specific Chatbots Omar Afify, Maurice Neidhart, Leander Schubert, Franjo Tkalec and Alfred Zimmermann
hcis24-027	Digital Transformation and the ioT Project selection system Yana Mitrofanova and Vladimir Chernyh
hcis24-022	Predictive maintenance architecture based on edge devices and lightweight containers Pedro Nunes, Eugénio Rocha and José Santos
hcis24-007	The Impact of Modern Technology and Artificial Intelligence on the Quality of Academic Education in the Context of Generation Z Patryk Kupis and Paweł Nowotko

* Online session

HCIS-02: Wednesday 19 June 2024
Time: 15:15-17:15
Room 3

HCIS-02: Artificial intelligence, Machine Learning and deep Learning for Human-Centered Intelligent Systems
Chairs: Prof. Mihaela Luca

Paper No	Paper Title / Authors
hcis24-010	SMA(i)RT: a Pilot Model of Intelligent Hybrid Ventilation for Retrofits in Small Offices and Housing Jorge Otaegi, Alexander Martín-Garín, Rufino J. Hernández-Minguillón and Iñigo Rodríguez-Vidal
hcis24-013	Digital Strategy Patterns for Next Intelligent Systems and Services Marei Kopf, Ioanna Kouleli, Lara Teuber, Sebnem Yüksel and Alfred Zimmermann
hcis24-008	Considering Human Centred System Design in Relation to Cognitive and Educational Theories Chamara Panakaduwa, Paul Coates and Mustapha Munir
hcis24-024	Vision Paper for Enabling Generative-AI Digital Platform Using AIDAF in Healthcare and Manufacturing Industry Yoshimasa Masuda, Jean Paul Sebastian Piest, Rashmi Jain, Donald Shepard, Osamu Nakamura, Tetsuya Toma and Seiko Shirasaka
hcis24-016	Method for Identifying Business Goals for Generative Artificial Intelligence Applications based on Knowledge Distribution Models and GQM+Strategie Hironori Takeuchi, Ralf-Christian Härting and Shuichiro Yamamoto

HCIS-03: Friday 21 June 2024
Time: 10:45-12:45
Room 3

HCIS-03: Edge computing Technologies for Mobile Computing and Internet of things & Digital Enterprise Architecture for Human-Centric Intelligent Systems in Manufacturing, Financial, and Others.
Chairs: Liviu Andrei Scutelnicu & Yoshimasa Masuda

Paper No	Paper Title / Authors
hcis24-012	Automatic Recommendation of In-Context Media Content to Support Exploratory Research in Journalism Rui Neves-Silva and Paulo Pina
hcis24-025	Evaluation of a Smart University's State of Development Using Industry 4.0 Technologies Yana Mitrofanova, Vladimir Chernyh, Valentina Burenina
hcis24-026	Industry 4.0 Technologies: Integration of Smart Systems Based on Digital Platforms Yana Mitrofanova, Vladimir Chernyh, Valentina Burenina and Tatiana Popova
hcis24-009	Earth Observation Data Management: A Knowledge Graph-based Approach George Domalis, Nikolaos Giarelis, Aris Gioutlakis, Nikos Karacapilidis, Ioannis Livieris and Dimitris Tsakalidis
hcis24-023	Generative Adversarial Networks in Combustion: Flame Image Generation for Clean and Predictive Combustion Modeling using Real Data Marta Chinnici, Chandan Singh, Ah Lian Kor, Alfonso Chinnici, Michael Evans and Paul R. Medwell
hcis24-002	CISO as the driver of an ISMS project in public administrations: Role, tasks, and localisation of the CISO Frank Moses and Kurt Sandkuhl
hcis24-018	The Role of Large Language Models in Evolving Digital Landscapes: A Subject-Oriented Analysis Lucas Greif and Matthes Elstermann
hcis24-004	A Comparative Study on Endometriosis Diagnosis Automatic Detection Between MRI and Ultrasound Liviu Andrei Scutelnicu, Mihaela Luca and Radu Maftei

* Online session

IDT Paper Presentations

IDT-01: Wednesday 19 June 2024
Time: 10:45-12:45
Room 2

IDT-01: General Track
Chair: Prof. Ireneusz Czarnowski

Paper No	Paper Title / Authors
idt24-001	Early Adopters vs. Late Adopters: Estimating Accuracy of Concept Testing by Selecting Respondents Based on Diffusion of Innovations Takumi Kato, Yu Zhu, Yusuke Nagata, Junnosuke Kubo, Tomoya Matsue, Yuta Tanaka, Takahiko Umeyama, Susumu Kamei
idt24-002	Cascading Sum Augmentation: Leveraging Populated Feature Spaces Cristian Simionescu, Robert Herscovici, Cosmin Pascaru
idt24-004	Failure Prediction for Large Anti-Drone System Buket Kazma, Fatih Semiz
idt24-007	Intelligent Augmented Reality System for Optimal Object Placement Bianca-Stefana Popa, Cosmin-Iulian Irimia
idt24-009	Mapping Research Publications Across the World: Looking for Opportunities in AI Santiago Alonso, Abraham Gutiérrez, Jesús Bobadilla
idt24-010	Diagnosis of Active Systems with Candidate Priority Gianfranco Lamperti

IDT-02: Wednesday 19 June 2024
Time: 15:15-17:15
Plenary Room

IDT-02: (IS01) Artificial Intelligence, Machine Learning and Deep Learning in Intelligent Decision Technologies
Chairs: Dr. Mihaela Luca, Prof. Anca Ignat

Paper No	Paper Title / Authors
idt24-013	Skeleton-based Action Recognition for an Automated Test of Embodied Cognition Sayda Elmi, Morris Bell
idt24-024	Advancing Gender Equality in Media: Tackling Stereotypes and Biases with AI Zhan Liu, Anne Darbellay, Nicole Glassey Balet, Valérie Vuille
idt24-032	IoT-Enhanced Tomato Leaf Disease Identification using MLP-Mixer in Agricultural Environments Besma Rabhi, Habib Dhahri, Imen Jdey, Omar Alhajlah
idt24-035	Experiments on Semantic Segmentation of Medical Images with Multilabels Ana-Maria Bumbu, Anca Ignat
idt24-037	Named Entity Recognition for Algerian Arabic Dialect using Multi-dialect-Arabic-BERT based Architectures Manel Affi, Chiraz Latiri

IDT-03: Thursday 20 June 2024
Time: 10:30-12:30
Plenary Room

IDT-03: (IS02) Decision Making Theory for Economics and (IS07) Responsible and Trustworthy Artificial Intelligence
Chairs: Prof. Dr. Takao Ohya, Dr. Alessia Amelio, Prof. Arcangelo Merla

Paper No	Paper Title / Authors
idt24-036	Research on the Use of Cloud-Based AI for Industry-Specific Utilization of Machine Learning and Decision-Making Frameworks Shunei Norikumo
idt24-042	Calculations by Several Methods for D-AHP Including Hierarchical Alternatives Takao Ohya
idt24-044	Evaluating Information by Using Unification among Feature Structures Takafumi Mizuno
idt24-039	Constitutional Challenges and Regulatory Framework: Will the European Union's Artificial Intelligence Act Ensure Adequate Safeguard of Fundamental Rights and Democracy? Pietro Masala
idt24-040	Visual Context-Aware Person Fall Detection Zenjie Li, Aleksander Nagaj, Dimitrios Papadopoulos, Kamal Nasrollahi
idt24-043	Addressing Racial Bias in AI: Towards a More Equitable Future Elisabetta Ferrara

IDT-04: Thursday 20 June 2024
Time: 15:00-17:00
Plenary Room

IDT-04: General Track
Chair: Prof. Ireneusz Czarnowski

Paper No	Paper Title / Authors
idt24-012	An Automated Monitoring System for Controlled Greenhouse Horticulture Matthias Becker, Kinwoon Yeow
idt24-016	Enhancing Music Genre Classification with Artificial Intelligence Tudor-Constantin Pricop, Adrian Iftene
idt24-018	Quick Image Style Transfer with Convolutional Neural Networks Bogdan-Antonio Cretu, Adrian Iftene
idt24-030	Integrating Voice-Operated Chatbots into Virtual Reality: A Case Study on Enhancing User Interaction George-Gabriel Constantinescu, Adrian Iftene
idt24-041	Convergence Analysis of the Population Learning Algorithm Ireneusz Czarnowski

IDT-05: Friday 21 June 2024
Time: 10:00-12:00
Room 2

IDT-05: (IS04) Large-Scale Systems for Intelligent Decision Making and Knowledge Engineering and (IS06) Reasoning-based Intelligent Applied Systems
Chairs: Prof. Dr. Sergey V. Zykov, Dr. Jair Minoro Abe

Paper No	Paper Title / Authors
idt24-014	Crisisology-Based Decision-Making Model in Updating Geographical Information Systems for Regions Boris Ulitin, Eduard Babkin, Sergey V. Zykov
idt24-045	A Survey of Machine Learning's Integration into Traditional Software Risk Management Gerald B. Imbugwa, Tom Gilb, Manuel Mazzara
idt24-046	Advanced Engineering School at Innopolis University: a Global Ecosystem for Future Leaders Manuel Mazzara, Iouri Kotorov, Yuliya Krasylnykov, Nursultan Askarbekuly, Petr Zhdanov, Evgenii Bobrov
idt24-017	A study on Outlier Correction Techniques Using Multi Agent Techniques for the Accurate Predictions of Human Mobility PPG Dinesh Asanka, Masakazu Takahashi, Chathura Rajapakshe
idt24-019	Similitude Assessment Using Iramuteq® Considering the Triad, Corporate Governance and the Risk Samira Sestari do Nascimento, Jair Minoro Abe
idt24-031	Logistical Challenges in Last-mile Deliveries in the Outskirts of the City of São Paulo. An Analysis of the Cargo Theft and Robbery Rates of an E-commerce Company Kenya Vieira Queiroz, Jair Minoro Abe

IDT-06: Friday 21 June 2024
Time: 10:00-12:00
Room 2

IDT-06: (IS07) Responsible and Trustworthy Artificial Intelligence
Chairs: Dr. Alessia Amelio, Prof. Arcangelo Merla

Paper No	Paper Title / Authors
idt24-005	Explaining & Auditing With "Even-If": Uses for Semi-Factual Explanations In AI/ML Eoin M. Kenny, Weipeng Huang, Saugat Aryal, Mark T. Keane
idt24-011	Automatic Classification and Localisation of Ancient Amphorae through Object Detection in Underwater Archeology Lucia Lombardi, Francesco Mercaldo, Antonella Santone
idt24-020	Exploring Stroke Factors Using Approximate Inverse Model Explanations (AIME): A Method for Extracting Relevant Factors from a Stroke Dataset Takafumi Nakanishi
idt24-025	Improving Membership Inference Attacks against Classification Models Shlomit Shachor, Natalia Razinkov, Abigail Goldsteen, Ariel Farkash
idt24-026	AI, law and (neuro-)rights as new human rights? Melania D'Angelosante
idt24-038	Interpretability of Machine Learning Models for Breast Cancer Identification: a Review Ijaz Ahmad, Alessia Amelio, D. H. Gernsback, Arcangelo Merla, Francesca Scozzari

IDT-07: Friday 21 June 2024
Time: 13:00-15:00
Room 2

IDT-07: (IS08) Statistical Analysis and Model Selection for Complex Structed Data
Chairs: Dr. Rei Monden, Dr. Mariko Yamamura

Paper No	Paper Title / Authors
idt24-021	Non-parametric Bias-reduction Estimation of Residual Variance in Varying Coefficient Regression Model Hirokazu Yanagihara, Sanai Shibayama
idt24-022	Coordinate Descent Algorithm of the Group Lasso for Selecting Between-Individual Explanatory Variables in the Three-Mode GMANOVA Model Rei Monden, Keito Horikawa, Isamu Nagai, Hirokazu Yanagihara
idt24-023	Poisson Regression with Categorical Explanatory Variables via Lasso using the Median as a Baseline Mariko Yamamura, Mineaki Ohishi, Hirokazu Yanagihara
idt24-029	Generalized Triply Robust Information Criterion Yoshiyuki Ninomiya
idt24-008	Flexible Detection of Birth Cohort Effects on Cancer Mortality Masayoshi Ishihara, Keisuke Fukui, Tetsuji Tonda
idt24-028	Non-dominated sorting genetic algorithm for multi-objective team orienteering problem with time windows Anouar Haddad, Takwa Tlili and Saoussen Krichen

* Online session

InMed Paper Presentations

INMED-01: Wednesday 19 June 2024
Time: 10:45-12:45
Room 4

INMED-01: Deep Learning in Medical Imaging and Multimodal Biomedical Data (1)
Chair: Iván Macía Oliver

Paper No	Paper Title / Authors
imed24-022	Exploring visual language models as a powerful tool in the diagnosis of Ewing Sarcoma Álvaro Pastor-Naranjo, Pablo Meseguer, Roćıo del Amor, Jose Antonio Lopez-Guerrero, Samuel Navarro, Katia Scotlandi, Antonio Llombart-Bosch, Isidro Machado, Valery Naranjo
imed24-021	MI-VisionShot: Few-shot adaptation of vision-language models for slide-level classification of histopathological images Pablo Meseguer, Roćıo del Amor, and Valery Naranjo
imed24-024	Modality-Aware Graph Reasoning Network for Focal Liver Lesions Classification in Multimodal Magnetic Resonance Imaging Shaocong Mo, Ming Cai, Lanfen Lin, Ruofeng Tong, Fang Wang, Qingqing Chen, Hongjie Hu, and Yen-Wei Chen
imed24-025	A Multi-Type Tissue Heatmaps based Model for Postoperative Early Recurrence Prediction of Hepatocellular Carcinoma Using Histopathological Images Gan Zhan, Fang Wang, Rahul Kumar JAIN, Yinhao Li, Weibin Wang, Qingqing Chen, Lanfen Lin, Hongjie Hu, C. Krishna Mohan, and Yen-Wei Chen

INMED-02: Wednesday 19 June 2024
Time: 15:15-17:15
Room 4

INMED-02: Deep Learning in Medical Imaging and Multimodal Biomedical Data (2)
Chair: Yen-Wei Chen

Paper No	Paper Title / Authors
imed24-027	Alzheimer's disease classification by artificial intelligence using microscopy images of dried human body fluids Javier B′obeda, Jaione Etxebarria–Elezgarai, Laura Valeria Perez-Herrera, Mar′ıa Jesu′s Garc′ıa-Gonz′alez, Eduardo Alonso, Maite Garc′ıa-Sebasti′an, Miren Altuna, Mirian Ecay-Torres, Ainara Estanga, Mikel Tainta, Carolina Lo′pez, Eneko Lopez, Pablo Mart′ınez-Lage, Andreas Seifert, and Karen Lo′pez-Linares
imed24-029	Deep Learning-Based Classification of SOX2 Expression in Breast Cancer Laura Valeria Perez-Herrera, María Jesús García-González, María Dm Vivanco, Iván Macía Oliver and Karen Lopez-Linares
imed24-028	Enhancing Spatiotemporal Analysis with Deep Learning: A review on Electrophysiological Signal to Image Transformation Miriam Guti′errez Fern′andez-Calvillo, Ander Cejudo Taramona, Karen-Linares L′opez, and O′scar Barquero P′erez
imed24-004	Weakly Supervised Segmentation Improves the Estimate of the Choroid Plexus Volume: Application to Multiple Sclerosis Valentina Visani, Loris Nanni Andrea Loreggia, Massimiliano Calabrese, Francesca Benedetta Pizzini, Mattia Veronese, and Marco Castellaro

INMED-03: Thursday 20 June 2024
Time: 10:30-12:30
Room 4

INMED-03: Advanced ICT for Medicine and Healthcare
Chair: Mihaela Luca

Paper No	Paper Title / Authors
imed24-006	A Review of Robotic-Assisted Procedures in Orthopedics Fathima Nidha Faslin1 and Salih Ismail
imed24-036	Joint Space Distance Measurement by Segmentation Utilizing Unet Tomio Goto, Moeko Suzuki, and Koji Funahashi
imed24-019	Improved Liver Lesion Detection Using Foundation Model: A Novel Approach Rahul Kumar JAIN, Shurong CHAI, Takahiro SATO, Ahmed M El-Sayed, Taro WATASUE, Tomohiro NAKAGAWA, Xianhua HAN, Lanfen LIN, Hongjie HU, Xiang RUAN, and Yen-Wei CHEN
imed24-023	An Improved Conditional Diffusion Model for Synthesizing Contrast-enhanced Computed Tomography Images Yulin Yang, Jing Liu, Qingqing Chen, Xian-Hua Han, Yinhao Li, Lanfen Lin, Hongjie Hu, and Yen-Wei Chen

INMED-04: Thursday 20 June 2024
Time: 15:00-17:00
Room 4

INMED-04: Artificial Intelligence for Smart Medicine and Healthcare
Chair: Donald S Shepard

Paper No	Paper Title / Authors
imed24-007	Repairing Missing Activity Labels in Healthcare Process Logs: a machine learning approach Lerina Aversano, Martina Iammarino, Antonella Madau, Debora Montano, and Chiara Verdone
imed24-009	Breast Cancer Prognosis Using Machine Learning and Artificial Intelligence: A Review of Predictive Models in Breast Cancer Metastasis João Rocha-Gomes and Inês Fortuna
imed24-011	Exploratory analysis in the intelligent prediction of sensorineural hearing loss using qualitative features Rene Barahona, Bruno Retama, Javiera Leon, Diego Montenegro, Ignacio Bugueno-Cordova, and Alfonso Ehijo
imed24-031	Combinations of Methodological Enhancements on the Predictive Ability of Machine Learning Models in Glioma Dania A. Ashraf Mohamed, May Ann Grace P. Palisoc, Roland Anthony Z. Tan, Ma Sheila A. Magboo and Vincent Peter C. Magboo
imed24-018	Artificial Intelligence and Digital Financial Incentives to Strengthen Behavioral Approaches for Controlling Type 2 Diabetes in Jamaica: Modeling and Pilot Studies Donald S Shepard, Atiya S Magee, Uche C Ekemezie, Michael Y Chuang, Tiffany J Adams

INMED-05: Friday 21 June 2024
Time: 10:00-12:00
Room 4

INMED-05: Healthcare Data Security
Chair: Jingbing Li

Paper No	Paper Title / Authors
imed24-008	Health Data Security Using PRI: Enhancing Remote Deep Learning for Pervasive Health Monitoring Zeinab Shahbazi and S lawomir Nowaczyk
imed24-016	Robust zero watermarking algorithm for medical images based on DWT and EfficientNet-DCT Jiachen Jiang, Jingbing Li, Jing Liu, Uzair Aslam Bhatti and Yen-Wei Chen
imed24-017	Robust Zero Watermarking Algorithm for Medical Images Based on STAR-TEBLID-DCT Xinlong Wang, Jingbing Li, Jing Liu, Uzair Aslam Bhatti and Yen-Wei Chen
imed24-014	Innovating the Aged Care Industry: Building a Living Lab Ecosystem to Scale Technology Solutions Sonja Pedell, Gareth Priday, Anne Livingstone, George Margelis, Georgina Gould
imed24-010	New horizons for intelligent interpretation of ABRs and BAEPs: A brief review, challenges and opportunities Antonia Quinones, Antonia Roman, Javiera Leo2, Diego Montenegro, Ignacio Bugueno-Cordova, and Alfonso Ehijo
imed24-015	Computer-aided diagnosis model for temporomandibular joint disorder based on CBCT Nan Zheng, Yu Zhao, Guangqing Zhang, Wei Chen, Xiaoying Chang, Xu Qiao, Rui Gao and Shengjun Sun
imed24-033	Automated Diagnosis of Brain Metastases Using Deep Learning Technology Xuemin Fu, Yong Wang, Huixuan Wang, Chuanbao Cheng, Xu Qiao and Yanwei Chen

* Online session

INMED-06: Friday 21 June 2024
Time: 13:00-15:00
Room 4

INMED-06: Digital Technology for Ageing Populations and Healthcare
Chair: Smaranda Belciug

Paper No	Paper Title / Authors
imed24-003	Digital care support for rare diseases: investigation of patient needs in rare diseases & development of a content concept for a white label app Ralf von Baer, Jonas Bretzler and Matthias Rass
imed24-035	Telemedicine Implementation and Challenges in the Post Covid-19 Era Mohammed Alqahtani and Milan Simic
imed24-001	Smart optimization techniques for patient management Smaranda Belciug and Florin Ispas
imed24-014	Innovating the Aged Care Industry: Building a Living Lab Ecosystem to Scale Technology Solutions Sonja Pedell, Gareth Priday, Anne Livingstone, George Margelis and Georgina Gould

* Online session

SEEL Paper Presentations

SEEL-01: Wednesday 19 June 2024
Time: 15:15 - 17-15
Room 5

SEEL-01: Smart Education and e-Learning
Co-Chairs: Dr. Ekaterina Prasolova-Førland & Dr. Olivier Bonnaud

Paper No	Paper Title / Authors
	Welcome to the SEEL-2023 international conference Dr. Vladimir Uskov
SEEL24-017	Experiential Learning and Empathy in Extended Reality for Teaching Protection of Civilians Chryssa Themeli, Ekaterina Prasolova-Førland, Leif Martin Hokstad, Stian Kjeksrud
SEEL24-012	Smart Technology Enhanced Teaching and Learning of Programming – Several Case Studies Mirjana Ivanovic, Aleksandra Klašnja-Milićević
SEEL24-010	Strengths and Weaknesses of the Smart Education in the Frame of Microelectronics Engineering Olivier Bonnaud
SEEL24-020	Affordances of Technology-enhanced Learning in Heritage Tourism – Exploratory Study Miloslava Černá, Anna Borkovcová, Petra Poulová
SEEL24-015	Informatics Curriculum Development: Teacher Feedback Ivana Simonova, Lukas Cirus, Katerina Kostolanyova
SEEL24-001	Teaching Smart Metrology through Monte Carlo Simulations Francois Kany

SEEL-02: Thursday 20 June 2024
Time: 10:30 - 12:30
Room 5

SEEL-02: *Smart Education and e-Learning: Modeling and Research*
Co-Chairs: Dr. Peter Ilic & Dr. Natalia A. Serdyukova

Paper No	Paper Title / Authors
SEEL24-025	Mapping Students' Digital Eco-System Usage Patterns Using Kernel-Based Principal Component Analysis to Inform Course Design Peter Ilic, Mika Sato-Ilic
SEEL24-013	What Is the Impact of Screen Time on the Development of Communication in Children with Autism Spectrum Disorder (ASD)? Possible Trajectories Margarita Stankova, Georgi Tuparov, Polina Mihova
SEEL24-011	Intelligent Information System for Simulation and Management Decision Lyudmila V. Glukhova, Olga A. Filippova, Svetlana D. Syrotyuk, Svetlana A. Gudkova, Yuliya S. Munirova
SEEL24-006	The Chaotic Presystem's Digital Management Natalia A. Serdyukova, Vladimir I. Serdyukov, Olga A. Kusminova, Svetlana I. Shishkina
SEEL24-016	Management Approach For Digital Maturity of Smart Education Systems: Robustness Lyudmila V. Glukhova, Anna A. Sherstobitova, Svetlana A. Gudkova, Anton A. Gudkov

* Online session

SEEL-03: Thursday 20 June 2024
Time: 15:00 - 17:00
Room 3

SEEL-03: Smart Pedagogy
Co-Chairs: Dr. Vladimir Uskov & Dr. Jeffrey P. Bakken

Paper No	Paper Title / Authors
SEEL24-018	Smart Pedagogy: Challenge-Based Learning in Graduate Computing Curriculum Vladimir L. Uskov
SEEL24-008	Randomized Control Trial of an Early Learning CAI on Literacy Skills Across Demographic Factors Haya Shamir, Mikayla Tom, David Pocklington, Alexander Houchins, Erik Yoder
SEEL24-014	Building a Reference Architecture for Integrating Emerging Technologies in Instructional Design Ioannis E. Livieris, Georgios Domalis, Nikos Karacapilidis, Christoforos Karachristos, Vassilis Komis, Dimitris Tsakalidi, Andromachi Filippidi
SEEL24-019	Smart Pedagogy: A Bibliometric Analysis Abhishek Singh, Madhu Mitha Velampalli, Jeffrey P. Bakken, Vladimir L. Uskov
SEEL24-007	Preventing Summer Learning Loss: A Randomized Control Trial Haya Shamir, David Pocklington, Erik Yoder, Mikayla Tom, Alexander Houchins
SEEL24-021	Smart University: A Bibliometric Analysis Abhishek Singh, Jeffrey P. Bakken, Vladimir L. Uskov, Madhu Mitha Velampalli

* Online session

STS Paper Presentations

STS-01: Wednesday 19 June 2024
Time: 10:45-12:45
Room 5

STS-01: Emerging transport technology
Chair: Kun Gao

Paper No	Paper Title / Authors
STS24-002	Autonomous Drivability: a Case Study of Swedish Roads Andrei David Radu, Lei Chen and David Leffler
STS24-007	On Trial of Multidisciplinary Optimization to Actualized Level 4 Mobility as a Service (MaaS) Platform Aoi Totsuka, Kaisei Obata, Ryusuke Suzuki and Hiroshi Hasegawa
STS24-003	Accessibility in Sparsely Populated Remote Areas: Key Variables for Informed Regional Planning Victoria Kazieva, Christine Große and Aron Larsson
STS24-010	Shared e-scooter usage trends in a Swedish city: A spatial analysis Omkar Parishwad, Hannes Lillieblad and Arsalan Najafi
STS24-001	Enhancing Urban Logistics through Integrated Public Transit vehicles and Unmanned Aerial Vehicles Shaohua Cui, Jelena Andric and Yongjie Xue
STS24-012	Prediction of state of charge in electric buses using supervised machine learning techniques Arsalan Najafi, Omkar Parishwad and Mingyang Pei

STS-02: Thursday 20 June 2024
Time: 10:30-12:30
Room 3

STS-02: Traffic safety and behavior
Chair: Bo Yu

Paper No	Paper Title / Authors
STS24-009	A Contract-Based Design Methodology for Ensuring Safety in Autonomous Vehicles Dr.Nadra Tabassam, Dr.Martin Fraenzle and Muhammad Waleed Ansari
STS24-004	Driving Risk Evaluation of Commercial Buses Based on Historical GPS Data Guoqing Zhang and Yiming Bie
STS24-011	An interpretable collision risk prediction model for rear-end near-crash scenarios using CatBoost and SHAP Jianqiang Gao, Bo Yu, Yuren Chen and Xiangyu Feng
STS24-014	Robustness Evaluation of Emerging Mixed Traffic Flow in Snowy Weather Using Extreme Value Theory Chuanyun Fu, Huahua Liu and Zhaoyou Lu
STS24-015	Analysis of Visibility for Active Luminous Sign and Reflective Film Sign at Night on Freeway Wenhua Xu, Yue Li, Duntao Wei and Weiwei Qi
STS24-016	Evaluation method of driving forgiveness on highways based on drivers' heart rate increments Jian Ta, Zhenyu Zou, Jiahui Huang and Weiwei Qi

* Online session

STS-03: Thursday 20 June 2024
Time: 13:00-15:00
Room 5

STS-03: AI and sustainable system
Chair: Omkar Parishwad

Paper No	Paper Title / Authors
STS24-008	Framework for Large-Scale Urban Traffic State Estimation Based on AIGC Hongyi Lin, Jiahui Liu, Hanyi Qiu, Danqi Zhao, Liang Wang and Yang Liu
STS24-006	Dynamic Bus Dispatching Method based on Mixed Control Strategy Zhihan Liu, Wenliang Qu and Yiming Bie
STS24-013	AIGC in Urban Traffic: A Paradigm Shift in Large-Scale State Estimation Danqi Zhao, Hanyi Qiu, Mingxing Xu and Liang Wang
STS24-005	Time-of-day Intervals Partition and Dispatching Intervals Optimization for a Bus Route Zhiquan Zhang, Ziyan Liu and Yiming Bie
STS24-017	Evaluating the Mode Shift Impact of Shared E-Scooters: Insights from a Survey in Gothenburg Ruo Jia, Yasmin Musri, Amrutha Jayarajan and Omkar Parishwad

* Online session

KESInternational

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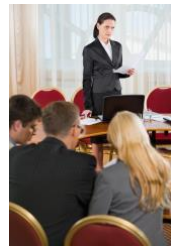
Some of the countries - Australia, Chile, Croatia, England, Germany, Japan, Ireland, Italy, Poland, Portugal, New Zealand, United States, Vietnam, Wales

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.
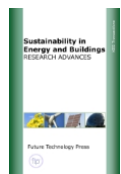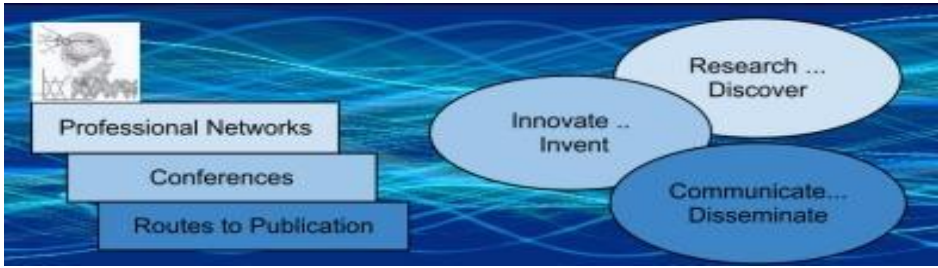
TRAINING AND SHORT COURSES

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 Management Ltd
PO Box 243
Selby
YO8 1DS
United Kingdom
Web Site: http://www.kesinternational.org

Email: enquiry@kesinternational.org
Registered in England and Wales as company no. 11110259

International Conference on Agents and Multi-Agent Systems: Technology and Applications (AMSTA-24)

International Conference on Human Centred Intelligent Systems (HCIS-24)

International Conference on Intelligent Decision Technologies (IDT-24)

International Conference on Innovation in Medicine and Healthcare (InMed-24)

International Conference on Smart Education and E-Learning (SEEL-24)

International Symposium on Smart Transportation Systems (STS-24)

Science and Education Research Council

Springer

Linked in

𝕏 @KESintl