Smart Digital Futures 2023

AMSTA | HCIS | IDT | InMed | SEEL | STS

Conference Programme

14-16 June 2023
Rome, Italy

Contents

Chairs Welcome

Welcome to the Smart Digital Futures 2023 (SDF-23) multi-theme conference held at the Aran Mantegna Hotel in Rome, Italy during 14-16 June 2023.

SDF-23 is an amalgamation of six KES conferences: Agent and Multi-Agent Systems - Technology and Applications (KES-AMSTA-23), Intelligent Decision Technologies (KES-IDT-23), Human Centred Intelligent Systems (KES-HCIS-23), Innovation in Medicine and Healthcare (KES-InMed-23), Smart Education and e-Learning (KES-SEEL-23) and Smart Transportation Systems (KES-STS-23). Although the conferences share a common forum, each one has its own Chair and International Programme Committee.

SDF-23 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 163 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:

- Prof. Yen-Wei Chen, Ritsumeikan University, Japan (title of talk: 'Semi-supervised Deep Learning in Medical Imaging')
- Prof. Gennaro Cordasco, University of Campania "Luigi Vanvitelli", Italy (title of talk: 'Detecting individuals' emotional states and personality traits through the machine learning processing of non-invasive online handwriting and drawing samples')
- Prof. Andrzej Czyżewski, Gdańsk University of Technology, Poland (title of talk: 'Multimedia industrial and medical applications supported by machine learning')
- Prof. Bożena Kostek. Gdańsk University of Technology, Poland (title of talk: 'Data, Information, Knowledge, Wisdom Pyramid concept revisited in the context of deep learning')
- Prof. Karlheinz Blank, Reutlingen University, Germany (title of talk: 'From Data to Value! AI as a building block of a smart digital future!')

We thank the General Chairs and Programme Chairs of the SDF-23 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.

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Keynote Talks

Prof. Yen-Wei Chen
Ritsumeikan University, Japan

Semi-supervised Deep Learning in Medical Imaging

Abstract: Recently, deep learning (DL) plays important roles in many academic and industrial areas especially in computer vision and image recognition. Deep learning uses a neural network with deep structure to build a high-level feature space. It learns data-driven, highly representative, hierarchical image features, which have proven to be superior to conventional hand-crafted low-level features and mid-level features. In ILSVRC2015 (an Annual competition of image classification at large scale), higher recognition accuracy by deep learning than human has been achieved. Deep learning (DL) has also been applied to medical image analysis. Compared with DL-based natural image analysis, there are several challenges in DL-based medical image analysis due to their high dimensionality and limited number of labeled training samples. We proposed several semi-supervised deep learning techniques for computer-aided diagnosis and surgery support including medical image segmentation, medical image detection and medical image recognition. In this talk, I will talk about current progress and futures of computer-aided diagnosis and surgery support with deep learning.

Biography: Yen-Wei Chen received the B.E. degree in 1985 from Kobe Univ., Kobe, Japan, the M.E. degree in 1987, and the D.E. degree in 1990, both from Osaka Univ., Osaka, Japan. He was a research fellow with the Institute for Laser Technology, Osaka, from 1991 to 1994. From Oct. 1994 to Mar. 2004, he was an associate Professor and a professor with the Department of Electrical and Electronic Engineering, Univ. of the Ryukyus, Okinawa, Japan. He is currently a professor with the college of Information Science and Engineering, Ritsumeikan University, Japan. He is the founder and the first director of Center of Advanced ICT for Medicine and Healthcare, Ritsumeikan University.

His research interests include medical image analysis, computer vision and computational intelligence. He has published more than 300 research papers in a number of leading journals and leading conferences including IEEE Trans. Image Processing, IEEE Trans. Medical Imaging, Pattern Recognition. He has received many distinguished awards including ICPR2012 Best Scientific Paper Award, 2014 JAMIT Best Paper Award. He is/was a leader of numerous national and industrial research projects.

Prof. Gennaro Cordasco
University of Campania "Luigi Vanvitelli", Italy

Detecting individuals' emotional states and personality traits through the machine learning processing of non-invasive online handwriting and drawing samples

Abstract: The importance of detecting early signs of illnesses can be extended to the detection of negative emotions as well as personality traits since emotions such as depression, anxiety, and stress, as well as personality traits, influence individuals' health and behaviors. We present an innovative approach to detect negative emotions (such as depression, anxiety, and stress), cognitive impairments and personality traits, through handwriting and drawing features. Our approach is non invasive and consists in collecting individual's handwriting/drawing samples through a computerized platform and predict individuals' emotional states and personality traits through machine-learning approaches.

Biography: Gennaro Cordasco received a PhD degree in Computer Science from Salerno University (IT). Gennaro has been Research-Scholar at the Theoretical Aspect of Parallel and Distributed Systems TAPADS) Lab, University of Massachusetts at Amherst MA, USA (Mar-Nov 2005), doing research activity under the supervision of the Distinguished Professor A.L. Rosenberg.

From 2006 to 2011, he has been Post-Doc at Salerno University, doing research activity at the ISISLab laboratory.

From 2011 to 2020, he has been Assistant Professor at the Dipartimento di Psicologia, University della Campania "L. Vanvitelli" (IT).

Gennaro is currently an Associate Professor in Computer Science at the Dipartimento di Psicologia, University della Campania "L. Vanvitelli" and an affiliate of the International Institute for Advanced Scientific Studies, Italy. His research interests focus on Information diffusion in Networks, Agent-based simulations and optimizations, Handwriting analysis and Emotion recognition.

Prof. Andrzej Czyżewski
Gdańsk University of Technology, Poland

Multimedia industrial and medical applications supported by machine learning

Abstract: This article outlines a keynote paper presented at the Intelligent Decision Technologies conference providing a part of the KES Multi-theme Conference "Smart Digital Futures" organized in Rome on June 14-16, 2023. It briefly discusses projects related to traffic control using developed intelligent traffic signs and diagnosing the health of wind turbine mechanisms and multimodal biometric authentication for banking branches to provide selected examples of industrial applications of intelligent decision technologies. In addition, the developed medical applications for communicating with the surroundings by unconscious people, advanced analyzing disordered speech, and an advanced non-contact respiratory-circulatory radar are presented, using intelligent data analysis and machine learning.

Biography: Prof. Andrzej Czyżewski has headed the Multimedia Systems Department at Gdańsk University of Technology for more than 30 years. He is the author of more than 600 publications that have appeared in print in scientific journals and conference proceedings, as well as three books and 30 patents, and co-author of more than a dozen solutions implemented in production.

His research interests revolve around issues related to data engineering, signal processing, machine learning, and their numerous interdisciplinary applications. Under the leadership of prof. Andrzej Czyzewski at Gdańsk University of Technology, more than 40 research projects have been carried out to date, including seven international projects.

Prof. Bożena Kostek
Gdańsk University of Technology, Poland

Data, Information, Knowledge, Wisdom Pyramid concept revisited in the context of deep learning

Abstract: In this presentation, the data, information, knowledge, and wisdom (DIKW) pyramid is revisited in the context of deep learning applied to machine learning-based audio signal processing. A discussion on the DIKW schema is carried out, resulting in a proposal that may supplement the original concept. Parallels between DIWK pertaining to audio processing are presented based on examples of the case studies performed by the author and her collaborators. The studies shown refer to the challenge concerning the notion that classification performed by machine learning (ML) is/or should be better than human-based expertise. Conclusions are also presented.

Biography: BOZENA KOSTEK is a professor and head of the Audio and Acoustics Laboratory at Gdansk University of Technology (GUT), Poland. She is a corresponding member of the Polish Academy of Sciences, a Fellow of the Acoustical Society of America, and the Audio Engineering Society. Her research activities are interdisciplinary; however, the main research interests focus on cognitive bases of hearing and vision, intelligent signal processing, music information retrieval, musical informatics, Quality-of-Experience, human-computer-interaction (HCI), as well as applications of machine learning and computational intelligence to the mentioned domains. She published more than 600 scientific papers in journals and at conferences. She also authored or coauthored some technological solutions (40). She led a number of research projects sponsored by the Polish Ministry of Science and Education, the Polish National Centre for R&D, and the National Science Centre, as well as participated in EU projects. Prof. Bożena Kostek has been a guest speaker, session, and panel organizer at conferences held in many countries worldwide. Prof. Kostek acted as Editor-In-Chief for the Journal of the Audio Engineering Society (JAES) and the Archives of Acoustics. In 2013 she served as Associate Editor of the IEEE Transactions on Audio, Speech and Language. Under her guidance, 20 Ph.D. students supported their doctoral theses and 320 M.Sc. and Eng. works. She is the recipient of many prestigious awards, including two 1st prizes from the Prime Minister of Poland, several prizes from the Minister of Science, an award from the Polish Academy of Sciences, and a Distinguished Service Medal Award from the Audio Engineering Society.

Prof. Karlheinz Blank
Reutlingen University, Germany

From Data to Value! AI as a building block of a smart digital future!

Abstract: In his talk, Karlheinz Blank focuses on how to utilize good ideas to bring benefits to small businesses, rather than examining big innovations by tech leaders like Steve Jobs or Elon Musk. He emphasizes the importance of analyzing data, monitoring quality and production to enhance efficiency in a plant. The goal is to generate greater value through more efficient use of resources. He invites entrepreneurs, production managers, technical experts and users to join workshops, where he offers ways for each participant to incorporate AI into their business in small, manageable steps. Karlheinz Blank believes that many small steps will lead to a smarter, digital future.

Biography: Karlheinz Blank is an Honorary Professor at Reutlingen University's Computer Science Faculty and at the Herman Hollerith Zentrum. He has been teaching Artificial Intelligence, Project Management, Business Computing, and Enterprise Architecture Management for over 20 years.
His goal is to derive value from data in various areas such as production, companies, value chains, and society. By utilizing AI methods, he aims to improve efficiency, quality, and reduce risks and ecological impact. He believes that simple solutions are the best and that a good idea only becomes a real innovation when it is used effectively and scaled up. Since September 2022, he has been working as an independent IT consultant, offering advice to small, medium, and large companies on how to utilize AI and digitalization in various application areas. He works with Arborsys.de to help companies achieve their digital goals.
From 1997 to 2022, Karlheinz Blank worked at T-Systems as a portfolio and innovation manager, executive consultant, project manager, and IT architect in the automotive OEM industry. During this time, he focused on incorporating AI into projects.
From 1991 to 1996, he worked as a project manager at Daimler Research in Ulm and at the Research Institute for Application-Oriented Knowledge Processing (FAW) in Ulm. His main area of focus was User Modelling.

Schedule – Wednesday 14 June

	Room 1	Room 2	Room 3	Room 4	Room 5
	Opening Ceremony Prof Robert J Howlett & Prof Lakhmi Jain 9:00 - 9:15				
	Keynote Speaker 1 Prof. Karlheinz Blank Talk Title: From Data to Value! AI as a building block of a smart digital future! 9:15 - 10:15				
	Networking Break 10:15-10:45				
Session Details	AMSTA-01 Business Economics and Agent-Based Modeling Chair: Prof. Hiroshi Takahashi	IDT-01 General track Chair: Prof. Ireneusz Czarnowski	HCIS-03 Edge Computing Technologies for Mobile Computing and Internet of Things Chair: Prof. Abdellah Chehri	INMED-01 Deep Learning in Medical Imaging I Chairs: Iván Macía Oliver, Yen-Wei Chen	STS-01 Data-driven solution for transport systems Chair: Ruo JIA
CEST Time	10:45-12:45 CEST	10:45-12:45 CEST	10:45-12:45 CEST	10:45-12:45 CEST	10:45-12:45 CEST

	Room 1	Room 2	Room 3	Room 4	Room 5
	Lunch Break 12:45-13:45				
	Keynote Speaker 2 Prof. Gennaro Cordasco Talk Title: Detecting individuals' emotional states and personality traits through the machine learning processing of non-invasive online handwriting and drawing samples 13:45 - 14:45				
	Networking Break 14:45-15:15				
Session Details	AMSTA-02 Multi-Agent Systems Chair: Prof. Mario Kusek	IDT-02 Recent Development of Multivariate Analysis and Model Selection Chairs: Dr. Rei Monden and Dr. Mariko Yamamura	STS-02 New Public Transit Chair: Omkar Parishwad	INMED-02 Deep Learning in Medical Imaging II Chairs: Iván Macía Oliver and Prof. Yen-Wei Chen	SEEL-01 Smart University Chairs: Dr. Haya Shamir and Dr. Ekaterina Prasolova-Førland
CEST Time	15:15 - 17:15 CEST	15:15 - 17:15 CEST	15:15 - 17:15 CEST	15:15 - 17:15 CEST	15:15 - 17:15 CEST

Schedule – Thursday 15 June

	Room 1	Room 2	Room 3	Room 4	Room 5
	Keynote Speaker 3 Prof. Yen-Wei Chen Talk Title: Semi-supervised Deep Learning in Medical Imaging 9:00 - 10:00				
	Networking Break 10:00 - 10:30				
Session Details	AMSTA-03 Education in Software Engineering in the post-COVID era I Chairs: Prof. Manuel Mazzara and Hamna Aslam	IDT-03 Reasoning-Based Intelligent Applied Systems and Applied methods of Machine and Deep Learning Chairs: Dr. Jair Minoro Abe and Dr. Nikita Andriyanov	HCIS-01 & 02 Human-Centred Intelligent Systems & Intelligent Transport Systems Chairs: Prof. Alfred Zimmermann & Dr. Milan Simic	INMED-04 Projects, systems, and applications for smart medicine/healthcare Chair: Prof. Yoshimasa Masuda	SEEL-02 Smart University and Smart Education: Case Studies and Research Chairs: Dr. Ludmila Glukhova and Dr. Natalya Serdyukova
CEST Time	10:30-12:30 CEST	10:30-12:30 CEST	10:30-12:30 CEST	10:30-12:30 CEST	10:30-12:30 CEST

	Room 1	Room 2	Room 3	Room 4	Room 5
	Lunch Break 12:30 -13:30				
	Keynote Speaker 4 Prof. Bożena Kostek Talk title: Data, Information, Knowledge, Wisdom Pyramid concept revisited in the context of deep learning 13:30 - 14:30				
	Networking Break 14:30 - 15:00				
Session Details	AMSTA-04 Education in Software Engineering in the post-COVID era II Chairs: Prof. Manuel Mazzara and Hamna Aslam	AMSTA-05 Agent-based Modeling and Simulation Chair: Prof. Roman Sperka	HCIS-04 Digital Enterprise Architecture for Human-Centric Intelligent Systems in Manufacturing, Financial, and Others Chair: Prof. Yoshimasa Masuda	INMED-03 Medical Image Processing Chair: Dr. Mihaela Luca and Assoc. Prof. Tomio Goto	SEEL-03 Smart Business/Company: Case Studies and Research Chairs: Dr. Anna Sherstobitova and Dr. Ludmila Glukhova
CEST Time	15:00 - 17:00 CEST	15:00 - 17:00 CEST	15:00 - 17:00 CEST	15:00 - 17:00 CEST	15:00 - 15:30 CEST
					SEEL-04

	Room 1	Room 2	Room 3	Room 4	Room 5
					Smart Education and e-Learning Chairs Dr. Vladimir Uskov and Dr. Jeffrey P. Bakken
CEST Time					16:00 - 19:00 CEST

Schedule – Friday 16 June

	Room 1	Room 2	Room 3	Room 4	Room 5
	Morning Networking 09:30 - 10:00				
Session Details	AMSTA-06 Education in Software Engineering in the post-COVID era III Chairs: Prof. Manuel Mazzara and Hamna Aslam	IDT-04 Large-Scale Systems for Intelligent Decision Making and Knowledge Engineering and Decision Making Theory for Economics Chairs: Prof. Sergey V. Zykov and Prof. Takao Ohya	STS-03 Driver behavior Chair: Bo Yu	INMED-05 Data Driven Models for Health Care Systems Chair: Dalia Kriksciuniene	INMED-07 Projects, systems, and applications for smart medicine/healthcare & Data Driven Models for Health Care Systems Chair: Prof. Yoshimasa Masuda & Dalia Kriksciuniene
CEST Time	10:00-12:00 CEST	10:00-12:00 CEST	10:00-12:00 CEST	10:00-12:00 CEST	
	Lunch Break 12:00-13:00 CEST				

	Room 1	Room 2	Room 3	Room 4	Room 5
	Keynote Speaker 5 Prof. Andrzej Czyżewski Talk title: Multimedia industrial and medical applications supported by machine learning 13:00 - 14:00				
	Networking Break 14:00 - 14:30 CEST				
Session Details	AMSTA-07 Intelligent Agents in Health, Wellness and Human Development Environments Applied to Health and Medicine Chairs: Dr. Maria del Rosario Baltazar Flores and Alanis Arnulfo Garza	IDT-05 Artificial Intelligence Innovation in Daily Life & General Track Chairs: Prof. Ireneusz Czarnowski and Dr. Hadi Saleh	STS-04 Transport automation Chair: Ruo Jia	INMED-06 Innovations in Assessment, Education, and Interventions for Children with Developmental Disorders Chairs: Assoc. Prof. Margarita Stankova and Jingbing Li	
CEST Time	14:30 - 16:30 CEST	14:30 - 16:30 CEST	14:30 - 16:30 CEST	14:30 - 16:30 CEST	
	Closing Ceremony 16:30 - 16:45 CEST				

AMSTA Paper Presentations

AMSTA-01: Wednesday 14th June 2023
Time: 10:45 - 12:45 CEST
Room 1

AMSTA-01: Business Economics and Agent-Based Modeling
Chair: Prof. Hiroshi Takahashi

PROSE Paper No	Paper Title / Authors
ams23-021	Proposal of Bicycle Sharing Operation System by Multi-agent Reinforcement learning Using Transfer Learning Kohei Yashima, Setsuya Kurahashi
ams23-032	Bitcoin Fraudulent Transaction Detection Vulnerability Takashi Ehara, Hiroshi Takahashi *
ams23-012	Impact of telework on employee satisfaction during the COVID-19 crisis Festina Kadriu, Julia Kleemann, Natalie Sorg, Ralf-Christian Härting, Christopher Reichstein
ams23-037	The Relationship Between Technological Distance and Innovation Emergence in M&A through Patent Data with Outlier Detection Methods Daishiro Yamamoto, Hiroshi Takahashi *
ams23-047	Estimated Economic Ripple Effects of Closed-Type Tourism Promotion Measures Yoko Ishino, Hideto Nakamura *
ams23-019	Change in centrality and team performance: Inverse relation between manager and non-manager communication Hitomi Inagaki, Setsuya Kurahashi *

* Online session

AMSTA-02: Wednesday 14th June 2023
Time: 15:15 - 17:15 CEST
Room 1

AMSTA-02: Multi-Agent Systems
Chair: Prof. Mario Kusek

PROSE Paper No	Paper Title / Authors
ams23-014	Digital Transformation and Cyber Threats for SMEs Ralf-Christian Härting, Greg-Norman Schulz, Demian Deffner, Christoph Karg
ams23-013	Agent-based Medical Image Processing using Multi-Stage Distributed Neural Network Armin Stranjak, Swen Campagna, Igor Čavrak
ams23-005	Data Discretization for Data Stream Mining Anis Cherfi, Kaouther Nouira
ams23-008	A Method of Positioning a Humanoid Robot Relative to the Center of a Group of People - Analysis and Implementation Marko Kovačević, Zdenko Kovačić
ams23-009	RoboTwin: Combining Digital Twin and Artificial Intelligence domains for controlling robots in Industry 4.0 Flavien Balbo, Alaa Daoud, Guillaume Muller, Mihaela Juganaru-Mathieu, Fabien Badeig, Hiba Alqasir, Mireille Batton-Hubert
ams23-017	Linear machine learning algorithm for early annual corn yield prediction Ivan Kralj, Mario Kusek, Gordan Jezic

AMSTA-03: Thursday 15th June 2023
Time: 10:30 - 12:30 CEST
Room 1

AMSTA-03: Education in Software Engineering in the post-COVID era I
Chairs: Manuel Mazzara and Hamna Aslam

PROSE Paper No	Paper Title / Authors
-	Session Invited talk: "QUANTEERING: Digitalization of Real Software and Systems Engineering Education and Practice" Tom Glib
ams23-026	Cultural-Ethical Evaluations in the Launch of AI Education Technologies Sergei Kladko *
ams23-025	An Analytic Hierarchy Process for student motivation Robiul Islam, Leonard Johard, Mohammad Reza Bahrami, Mustafeed Zaman *
ams23-034	Running regular research seminar online N. V. Shilov, D. A. Kondratyev, N. Kudasov, I. S. Anureev *
ams23-039	Teaching the Future: the Vision of AI/ChatGPT in Education Mohammad Reza Bahrami, Bahareh Bahrami, Farima Behboodi, Samae Pourrafie *

* Online session

AMSTA-04: Thursday 15th June 2023
Time: 15:00 - 17:00 CEST
Room 1

AMSTA-04: Education in Software Engineering in the post-COVID era II
Chairs: Manuel Mazzara and Hamna Aslam

PROSE Paper No	Paper Title / Authors
ams23-003	An Approach for Organising and Managing an Academic Year Using Online Tools and Techniques Liviu-Andrei Scutelnicu, Marius Ciprian Ceobanu
ams23-027	Exploring the Impact of COVID-19 on Education: A Study on Challenges and Opportunities in Online Learning Anaga Thapaliya, Yuri Hrytsuk *
ams23-028	Memes as a memorization technique in education Hamza Salem, Siham Hattab *
ams23-029	Quantifying Education in the Post-COVID Era: An Engineering Approach Concept Gerald Imbugwa, Tom Gilb *
ams23-030	Teaching Object-Oriented Requirements Techniques: an Experiment Maria Naumcheva *
ams23-031	OnLife Education: Beyond Distance Learning by Intelligent Tutoring Systems Salvatore Distefano

* Online session

AMSTA-05: Thursday 15th June 2023
Time: 15:00 - 17:00 CEST
Room 2

AMSTA-05: Agent-based Modeling and Simulation
Chair: Roman Sperka

PROSE Paper No	Paper Title / Authors
ams23-016	Multisectoral household location agent-based simulation for testing policy decisions Simon Gorecki, Seghir Zerguini, Natalie Gaussier, Mamadou Kaba Traore
ams23-018	DaFne: Data Fusion Generator and Synthetic Data Generation for Cities Ayse Glass, Kübra Tokuç, Jörg Rainer Noennig, Ulrike Steffens, Burak Bek
ams23-011	Assessing The Impact of Shared-Taxi Pricing On Congestion Using Agent-Based Modeling Negin Alisoltani, Mahdi Zargayouna
ams23-004	Distributed, classical and flexible Job shop Scheduling Problem with Transportation times: A State-of-the-Art Bilel Marzouki, Olfa Belkahla Driss, Khaled Ghedira
ams23-006	How Can Adults Make Time to Study: A System for Employee Sharing and Reskilling Education Kenta Abe, Minoru Matsui, Hisashi Hayashi
ams23-038	Application of TDABC systems and their support with ABMS approach Michal Halaška, Roman Šperka

AMSTA-06: Friday 16th June 2023
Time: 10:00 - 12:00 CEST
Room 1

AMSTA-06: Education in Software Engineering in the post-COVID era III
Chairs: Manuel Mazzara and Hamna Aslam

PROSE Paper No	Paper Title / Authors
ams23-033	A Personal View On Past And Future Higher Education Nikola Zlatanov
ams23-015	Impact of Covid-19 on Employee Satisfaction and Trust with Focus on Working from Home Miriam Gazem, Ralf-Christian Härting, Anna Schneider, Christopher Reichstein
ams23-036	Innopolis University: an agile and resilient academic institution navigating the rocky waters of the COVID-19 pandemic Yuliya Karsylnykova, Iouri Kotorov, Jaroslav Demel, Manuel Mazzara, Evgeny Bobrov
ams23-022	Training students as agile developers: team and role building games Paolo Ciancarini, Marcello Missiroli
ams23-045	Thesis Supervision in Computer Science in the Aftermath of Covid-19 - Challenges and a Gamified Solution Rabab Marouf, Iouri Kotorov, Hamna Aslam, Yuliya Krasylnykova, Marko Pezer
ams23-049	Humanizing Zoom: Lessons from Higher Education in Qatar Robert Bianchim, Byrad Yyelland, Alan Weber, Khawala Kittaneh, Sara Mohammed, Aia Zaina, Afreena Niaz, Hud Muazzam, Selma Fejzullaj, Lolwa Al-Tahni

AMSTA-07: Friday 16th June 2023
Time: 14:30 - 16:30 CEST
Room 1

AMSTA-07: Intelligent Agents in Health, Wellness and Human Development Environments Applied to Health and Medicine
Chairs: Maria del Rosario Baltazar Flores and Alanis Arnulfo Garza

PROSE Paper No	Paper Title / Authors
ams23-024	Analysis of Batch Size in the Assessment of Bone Metastasis from Bone Scans in various Convolutional Neural Networks Vincent Peter Magboo, Patricia Angela Abu
ams23-023	Exploratory Study of Eye-Tracking Path: A Case Study from Switzerland Kholod Marina, Wirth Julia, ElDarawany Ahmed, Shilina Marina
ams23-040	Patient Monitoring through Intelligent Agents: A preliminary study Ángeles Arellano Vera, Rosario Baltazar, J. Ascención Guerrero-Viramontes, Arnulfo Alanis, Juan José Soto-Bernal, Rosario González-Mota
ams23-046	Designing a BCI platform with embedded ANN as an aid for Autism Spectrum Disorder (ASD) diagnosis: A preliminary study Gerardo Vilchis, Rosario Baltazar, Arnulfo Alanis, Juan Francisco-Mosino, Miguel Angel Casillas-Araiza
ams23-001	Multi-agent Modal Logic Evaluating Implicit Information Vladimir Rybakov

HCIS Paper Presentations

HCIS-03: Wednesday 14th June 2023
Time: 10:45 - 12:45 CEST
Room 3

HCIS-03: Edge Computing Technologies for Mobile Computing and Internet of Things
Chair: Prof. Abdellah Chehri

PROSE Paper No	Paper Title / Authors
hcis23-007	Can Smart City Businesses Be Sustainable? Artificial Intelligence role in achieving business sustainability Soukaina El Maachi, Abdellah Chehri, Rachid Saadane *
hcis23-009	Smart University: Project Management of Information Infrastructure Based on Internet of Things (IoT) Technologies Yana Mitrofanova, Svetlana Konovalova, Tatiana Popova, Anna Tukshumskaya *
hcis-0010	Smart Manufacturing: Intelligent Infrastructure Based on Industry 4.0 Technologies Yana Mitrofanova *
hcis-0013	Developing Optical IoT-based Power Transformer Monitoring: Review and Case Study Defect Diagnosis Najmeh Seifaddini, Sekongo Beki, Kok Sing Lim, Waldo Udos, Mohan Rao Ungarala, Ooi Cheong Weng *
hcis23-002	Advanced Analytics for Smart Farming in a Big Data Architecture Secured by Blockchain and pBFT Quafiq El Mehdi, Abdellah Chehri, Rachid Saadane
hcis23-004	Ultrasound-Coupled Electrocoagulation Based Azo Dye Fading Rate Prediction using Deep Neural Networks Smail Tigani, Chehri Abdellah, Meryem Akoulih, Rachid Saadane *
hcis23-020	Smart Energy Management System: Methodology for Open-Pit Mine Power Grid Monitoring Applications Saadane Rachid, Elmaghraoui Adila, Abdellah Chehri, El Aroussi Mohamed, Lemdaoui Younes *

* Online session

HCIS-01 & 02: Thursday 15th June 2023
Time: 10:30 - 12:30 CEST
Room 3

HCIS-01: Human-Centred Intelligent Systems
Chair: Prof. Alfred Zimmermann

PROSE Paper No	Paper Title / Authors
hcis23-001	Leveraging open innovation practices through a novel ICT platform Nikos Karacapilidis, Emmanuel Adamides, Nikolaos Giarelis,Nikos Kanakaris, Konstantinos Konstantinopoulos, Ilias Siachos
hcis23-005	Digital Strategy and Architecture for Human-centered Intelligent Systems Alfred Zimmermann, Rainer Alt, Abdellah Chehri, Yoshimasa Masuda, Rainer Schmidt

HCIS-02: Intelligent Transport Systems
Chair: Dr. Milan Simic

PROSE Paper No	Paper Title / Authors
hcis23-015	Communication Trends, Research Challenges in Autonomous Driving and different Paradigms of Object Detection Teena Sharma, Abdellah Chehri, Paul Fortier *
hcis23-016	Investigation in Automotive Technologies Transitions Milan Todorovic, Abdulaziz Aldakkhelallah, Milan Simic
hcis23-019	An Investigation in Autonomous Vehicles Acceptance Abdulaziz Aldakkhelallah, Milan Simic, Milan Todorovic

* Online session

HCIS-04: Thursday 15th June 2023
Time: 15:00 -17:00 CEST
Room 3

HCIS-04: Digital Enterprise Architecture for Human-Centric Intelligent Systems in Manufacturing, Financial, and Others
Chair: Prof. Yoshimasa Masuda

PROSE Paper No	Paper Title / Authors
hcis23-008	ChatGPT, How to Wire Age 5.0 Mindsets: Industry, Society, Healthcare and Education? Abdellah Chehri, Hasna Chaibi, X Chatgpt Chatgpt, Saadane Rachid, Alfred Zimmermann *
hcis23-017	Designing Performance Indicator in Human-Centered Agile Development Kasei Miura, Yoshimasa Masuda, Seiko Shirasaka *
hcis23-18	Human-Centered Design Thinking using the Intelligence Amplification Design Canvas and the Adaptive Integrated Digital Architecture Framework Jean Paul Sebastian Piest, Koray Karaca, Yoshimasa Masuda, Osamu Nakamura
hcis23-021	Applying AIDAF for Digital Transformation toward Ecosystem in Global Enterprise Yoshimasa Masuda, Rashmi Jain, Osamu Nakamura, Rainer Schmidt, Tetsuya Toma, Alfred Zimmermann

* Online session

IDT Paper Presentations

IDT-01: Wednesday 14th June 2023
Time: 10:45 - 12:45 CEST
Room 2

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

PROSE Paper No	Paper Title / Authors
idt23-012	Accessibility Measures and Indicators: A Basis for Dynamic Simulations to Improve Regional Planning Victoria Kazieva, Christine Große, Aron Larsson
idt23-001	On Sensing Non-visual Symptoms of Northern Leaf Blight Inoculated Maize for Early Disease Detection Using IoT/AI Theofrida Julius Maginga, Deogracious Protas Massawe, Hellen Elias Kanyagha, Jackson Nahson, Jimmy Nsenga
idt23-028	Decision-making Model for Updating Geographical Information Systems for Polish Municipalities Using the Fuzzy TOPSIS Method Oskar Sęk, Ireneusz Czarnowski

IDT-02: Wednesday 14th June 2023
Time: 15:15 - 17:15 CEST
Room 2

IDT-02: Recent Development of Multivariate Analysis and Model Selection
Chairs: Dr. Rei Monden and Dr. Mariko Yamamura

PROSE Paper No	Paper Title / Authors
idt23-003	Modified Cp Criterion in Widely Applicable Models Hirokazu Yanagihara, Isamu Nagai, Keisuke Fukui, Yuta Hijikawa
idt23-006	Geographically Weighted Sparse Group Lasso: Local and Global Variable Selections for GWR Mineaki Ohishi, Koki Kirishima, Kensuke Okamura, Yoshimichi Itoh, Hirokazu Yanagihara
idt23-007	Kick-one-out-Based Variable Selection Method Using Ridge-type Cp Criterion in High-dimensional Multi-response Linear Regression Models Ryoya Oda
idt23-010	Estimation Algorithms for MLE of Three-mode GMANOVA Model with Kronecker Product Covariance Matrix Keito Horikawa, Isamu Nagai, Rei Monden, Hirokazu Yanagihara *
idt23-015	Implications of the Usage of Three-mode Principal Component Analysis with a Fixed Polynomial Basis Rei Monden, Isamu Nagai, Hirokazu Yanagihara
idt23-017	Spatio-temporal Analysis of Rates Derived from Count Data Using Generalized Fused Lasso Poisson Model Mariko Yamamura, Mineaki Ohishi, Hirokazu Yanagihara

* Online session

IDT-03: Thursday 15th June 2023
Time: 10:30 - 12:30 CEST
Room 2

IDT-03: *Reasoning-Based Intelligent Applied Systems and Applied methods of Machine and Deep Learning*

Chairs: Dr. Jair Minoro Abe and Dr. Nikita Andriyanov

PROSE Paper No	Paper Title / Authors
idt23-002	Optimize a Contingency Testing Using Paraconsistent Logic Liliam Sayuri Sakamoto, Jair Minoro Abe, Aparecido Carlos Duarte, José Rodrigo Cabral *
idt23-005	Age-group Estimation of Facial Images Using Multi-task Ranking CNN Margarita N. Favorskaya, Andrey I. Pakhirka *
idt23-020	Evaluation Instrument for Pre-implementation of Lean Manufacturing in SMEs Using the Paraconsistent Annotated Evidential Logic Eτ Evaluation Method Nilton Cesar França Teles, Jair Minoro Abe, Samira Sestari do Nascimento, Cristina Corrêa de Oliveira *
idt23-031	Neural Networks Combinations for Detecting and Highlighting Defects in Steel and Reinforced Concrete Products Nikita Andriyanov, Vitaly Dementiev, Marat Suetin *
idt23-032	Modern Methods of Traffic Flow Modeling: A Graph Load Calculation Model Based on Real-time Data Roman Ekhlakov *
idt23-036	Application of Machine Learning Methods for the Analysis of X-ray Images of Luggage and Hand Luggage Nikita Andriyanov *

* Online session

IDT-04: Friday 16th June 2023
Time: 10:00 - 12:00 CEST
Room 2

IDT-04: Large-Scale Systems for Intelligent Decision Making and Knowledge Engineering and Decision Making Theory for Economics
Chairs: Prof. Sergey V. Zykov and Prof. Takao Ohy

PROSE Paper No	Paper Title / Authors
idt23-021	An Ontology Model to Facilitate Sharing Risk Information and Analysis in Construction Projects Heba Aldbs, Fayez Jrad, Lama Saoud, Hadi Saleh *
idt23-025	Designing Sustainable Digitalization: Crisisology-based Tradeoff Optimization in Sociotechnical Systems Sergey V. Zykov, Eduard Babkin, Boris Ulitin, Alexander Demidovskiy
idt23-022	Calculations by Several Methods for MDAHP Including Hierarchical Criteria Takao Ohya
idt23-026	Utilization of Big data in the Financial Sector, Construction of Data Governance and Data Management Shunei Norikumo
idt23-027	A Block Chart Visualizing Positive Pairwise Comparison Matrices Takafumi Mizuno *

* Online session

IDT-05: Friday 16th June 2023
Time: 14:30 -16:30 CEST

IDT-05: Artificial Intelligence Innovation in Daily Life & General Track
Chair: Prof. Ireneusz Czarnowski and Dr. Hadi Saleh

PROSE Paper No	Paper Title / Authors
idt23-018	Inference Analysis of Lightweight CNNs for Monocular Depth Estimation Shadi Saleh, Pooya Naserifar, Wolfram Hardt *
idt23-019	Arabic Text-to-speech Service with Syrian Dialect Hadi Saleh, Ali Mohammad, Kamel Jafar, Monaf Solieman, Bashar Ahmad, Samer Hasan *
idt23-033	A Systematic Review of Sentiment Analysis in Arabizi Sana Gayed, Souheyl Mallat, Mounir Zrigui *
idt23-023	Image-multimodal Data Analysis for Defect Classification: Case Study of Industrial Printin Hiroki Itou, Kyo Watanabe, Sumika Arima *
idt23-024	Image-multimodal Data Analysis for Defect Classification: Case Study of Semiconductor Defect Patter Daisuke Takada, Hiroki Itou, Ryo Ohta, Takumi Maeda,Kyo Watanabe, Sumika Arima *
idt23-029	An Ontology-based Collaborative Assessment Analytics Framework to Predict Groups' Disengagement Asma Hadyaoui, Lilia Cheniti-Belcadhi *

* Online session

InMed Paper Presentations

INMED-01: Wednesday 14th June 2023
Time: 10:45 - 12:45 CEST
Room 4

INMED-01: Deep Learning in Medical Imaging I
Chairs: Dr. Iván Macía Oliver and Prof. Yen-Wei Chen

PROSE Paper No	Paper Title / Authors
imed23-025	Diffusion Models for realistic CT image generation Maialen Stephens Txurio, Karen López-Linares Román, András Marcos-Carrión, Pilar Castellote-Huguet, José M. Santabárbara-Gómez, Iván Macía Oliver, Miguel A. González Ballester
imed23-028	Unsupervised Data Drift Detection Using Convolutional Autoencoders: A Breast Cancer Imaging Scenario Javier Bóbeda, María Jesús García-González, Laura Valeria Pérez-Herrera, Karen López-Linares
imed23-029	Deep learning-based assessment of histological grading in breast cancer whole slide images María Jesús García-González, Karen López-Linares Román, Esther Albertin Marco, Iván Lalaguna, Javier García Navas, Maria Blanca Cimadevila Alvarez, Ana Calvo Pérez, Valery Naranjo Ornedo
imed23-030	Sample Viability Assessment from H&E Whole Slide Images for Lung Cancer Molecular Testing Laura Valeria Perez-Herrera, María Jesús García-González, Ruth Román Lladó, Cristina Aguado, Josep Castellvi, Sonia Rodriguez, Erika Aldeguer, María Teresa Torrijos, Karen Lopez-Linares
imed23-031	LOBAR EMPHYSEMA QUANTIFICATION ON CHEST X-RAYS USING A GENERATIVE AD- VERSARIAL REGRESSOR Mónica Iturrioz Campo, Javier Pascau, Raúl San José Estépar
imed23-032	Thorax-Net: A Full Thoracic Chest X-ray Segmentation Approach Maria Rollan-Martinez-Herrera, Jagoba Zuluaga-Ayesta, Francisco Martinez-Dubarbie, Marta Garrido-Barbero, Ane Zubizarreta-Zamalloa, Raúl San José Estépar

INMED-02: Wednesday 14th June 2023
Time: 15:15 - 17:15 CEST
Room 4

INMED-02: Deep Learning in Medical Imaging II
Chairs: Prof. Yen-Wei Chen and Dr. Iván Macía Oliver

PROSE Paper No	Paper Title / Authors
imed23-024	An Efficient Dual-Pooling Channel Attention Module for Weakly-Supervised Liver Lesion Classification on CT Images Duong Linh Phung, Yinhao Li, Rahul Kumar Jain, Lanfen Lin, Hongjie Hu, Yen-Wei Chen
imed23-027	An Improved Multi-Instance Learning Model for Postoperative Early Recurrence Prediction of Hepatocellular Carcinoma using Histopathological Images Gan Zhan, Fang Wang, Weibin Wang, Yinhao Li, Qingqing Chen, Hongjie Hu, Yen-Wei Chen
imed23-034	Teacher-student Learning Using Focal and Global Distillation for Accurate Cephalometric Landmark Detection Yu SONG, Xu QIAO, Yinhao Li, Yen-Wei Chen
imed23-006	Prior Active Shape Model for Detecting Pelvic Landmarks Chenyang Lu, Wei Chen, Xu Qiao, Qingyun Zeng
imed23-015	Deep Learning System for Automatic Diagnosis of Ocular Diseases in Infants Baochen Fu, Fabao Xu, Wei Chen, Chunyu Kao, Jianqiao Li, Xu Qiao
imed23-023	Predicting Stroke-Associated Pneumonia from Intracerebral Hemorrhage based on Deep Learning Methods Guangtong Yang, Min Xu, Lulu Gai, Wei Chen, Jin Ma, Xu Qiao, Hongfeng Shi, Yongmei Hu

INMED-03: Thursday 15th June 2023
Time: 15:00 - 17:00 CEST
Room 4

INMED-03: Medical Image Processing
Chairs: Dr. Mihaela Luca and Assoc. Prof. Tomio Goto

PROSE Paper No	Paper Title / Authors
imed23-021	Improved Diagnostic Accuracy of Rheumatoid Arthritic by Image Generation Using StyleGAN2 Tomio Goto, Reo Kojima, Koji Funahashi
imed23-039	BrainFuse: Self-Supervised Data Fusion Augmentation for Brain MRI's via Frame Interpolation Robert Herscovici, Cristian Simionescu
imed23-001	Designing deep learning architectures with neuroevolution. Study case: fetal morphology scan Smaranda Belciug, Rodica Nagy, Sebastian Doru Popa, Andrei Gabriel Nascu, Dominic Gabriel Iliescu
imed23-026	Deep Neural Network-based Classification of Focal Liver Lesions Using Phase-Shuffle Prediction Pre-training Jian Song, Haohua Dong, Youwen Chen, Lanfen Lin, Hongjie Hu, Yen-Wei Chen
imed23-037	PD-L1 prediction of lung cancer by a radiomics method using rough tumor mask in CT images Xiang Lv, Huadong Liu, Rui Xu, Dingpin Huang, Yuan Tu, Fangyi Xu, Yi Gan, Hongjie Hu *
imed23-020	Robust Watermarking Algorithm for Medical Volume Data Based on PJFM and 3D-DCT Lei Cao, Jingbing Li, Jing Liu, Yen-Wei Chen *

* Online session

INMED-04: Thursday 15th June 2023
Time: 10:30 - 12:30 CEST
Room 4

INMED-04: Projects, systems, and applications for smart medicine/healthcare
Chair: Prof. Yoshimasa Masuda

PROSE Paper No	Paper Title / Authors
imed23-022	Healthcare under Society 5.0: A Systematic Literature Review of Applications and Case Studies Jean Paul Sebastian Piest, Yoshimasa Masuda, Osamu Nakamura
imed23-040	Characterizing Groups of Patients with Depression using Clustering Techniques Ma. Sheila A. Magboo, Vincent Peter C. Magboo
imed23-018	Automatic Recognition of Check-Points for NCPR Video Review Noboru Nihshimoto, Mitsuhito Ando, Haruo Noma, Kogoro Iwanaga
imed23-013	Speech recognition in healthcare: a comparison of different speech recognition input interactions Eugenio Corbisiero, Gennaro Costagliola, Mattia De Rosa, Vittorio Fuccella, Alfonso Piscitelli, Parinaz Tabari

INMED-05: Friday 16th June 2023
Time: 10:00 - 12:00 CEST
Room 4

INMED-05: Data Driven Models for Health Care Systems
Chair: Dalia Kriksciuniene

PROSE Paper No	Paper Title / Authors
imed23-005	Modelling Competing Risk for Stroke Survival Data Virgilijus Sakalauskas, Dalia Kriksciuniene
imed23-007	Artificial Intelligence Chatbots and Conversational Agents - an overview of clinical studies in Health Care Stević I, Vukmirović D, Vujović V, Marinković V.
imed23-012	Challenges and Solutions for Artificial Intelligence Adoption in Healthcare – A Literature Review Uldis Donins, Daiga Behmane

INMED-06: Friday 16th June 2023
Time: 14:30 - 16:30 CEST
Room 4

INMED-06: Innovations in Assessment, Education, and Interventions for Children with Developmental Disorders
Chairs: Assoc. Prof. Margarita Stankova and Jingbing Li

PROSE Paper No	Paper Title / Authors
imed23-008	Online platforms and applications for the development and treatment of reading skills in children - a comparison between three countries Polina Mihova, Maria Mavrothanasi, Haneen Alshawesh, Tsveta Stoyanova *
imed23-009	Development of three language digital platform for early childhood development screening PTES – preliminary parents self-check results Nina Iordanova, Kornilia Tsoukka, Maria Mavrothanasi *
imed23-010	Online Parent Counselling in Speech and Language Therapy - the View of the Professionals Margarita Stankova, Tsveta Kamenski, Kornilia Tsoukka, Haneen Alshawesh, Alexandros Proedrou *
imed23-019	Robust Zero Watermarking Algorithm for Medical Images Based on BRISK-FREAK and DCT Fangchun Dong, Jingbing Li, Jing Liu, Yen-Wei Chen *
imed23-016	Robust Zero-Watermarking Algorithm for Medical Images Based on SUSAN-DCT Qinqing Zhang, Jingbing Li, Jing Liu, Uzair Aslam Bhatti, Yen-Wei Chen *
imed23-017	A robust watermarking algorithm for medical images based on DWT-Daisy and discrete cosine transform Yiyi Yuan, Jingbing Li, Jing Liu, Uzair Aslam Bhatti, Yen-Wei Chen *

* Online session

INMED-07: Friday 16th June 2023
Time: 10:00 - 12:00 CEST
Room 5

INMED-07: Projects, systems, and applications for smart medicine/healthcare & Data Driven Models for Health Care Systems
Chairs: Prof. Yoshimasa Masuda & Dalia Kriksciuniene

PROSE Paper No	Paper Title / Authors
imed23-036	Strategic Risk Management for Low-Code Development Platforms with Enterprise Architecture Approach: Case of Global Pharmaceutical Enterprise Tetsuro Miyake, Yoshimasa Masuda, Akiko Oguchi, Atsushi Ishida *
imed23-002	Optimized Deployment Planning for Elderly Welfare Facilities Based on Network Theory~A Case Study of Ibaraki Prefecture's Day Care Welfare Facilities for the Elderly Xiangchu Chen, Sumiki Arima *
imed23-035	Challenges and Solutions for Artificial Intelligence Adoption in Healthcare – A Literature Review Uldis Donins, Daiga Behmane *
imed23-011	Innovative Incremental K-prototypes Based Feature Selection for Medicine and Healthcare Applications Siwar Gorrab, Fahmi Ben Rejab, Kaouther Nouira *

* Online session

SEEL Paper Presentations

SEEL-01: Wednesday 14th June 2023
Time: 15:15 - 18:00 CEST
Room 5

SEEL-01: Smart University
Chairs: Dr. Haya Shamir and Dr. Ekaterina Prasolova-Førland

PROSE Paper No	Paper Title / Authors
-	Welcome to the SEEL-2023 international conference (synchronous via Zoom) Dr. Vladimir Uskov
seel23-043	Organizing the University 4.0: New Goals and Insights to Promote the Digital Transformation of Higher Education Institutions to Succeed Next e-Learning Era Eleonora Veglianti, Elisabetta Magnaghi, Nunzio Casalino, Alessandro Gennaro, Marco De Marco
seel23-037	Gaining Insight into Adoption of Immersive Technologies in Higher Education Jose Garcia, Ekaterina Prasolova-Førland
seel23-05	Using CAI to Provide Early Literacy Instruction for All Learners Haya Shamir, Erik Yoder, David Pocklington
seel23-04	Reliability Issues with At-Home Assessment During the COVID-19 Pandemic Haya Shamir, Erik Yoder, David Pocklington
seel23-036	Literary Tourism – Case Study Miloslava Černá, Anna Borkovcová, Petra

SEEL-02: Thursday 15th June 2023
Time: 10:30 - 12:30 CEST
Room 5

SEEL-02: Smart University and Smart Education: Case Studies and Research
Chairs: Dr. Lyudmila Glukhova, Dr. Natalya Serdyukova and Dr. Svetlana A. Gudkova

PROSE Paper No	Paper Title / Authors
seel23-006	The Concept of New Generation Lecturers for Smart Universities: Case Study and Trends Svetlana A. Gudkova, Inga V. Treshina, Marina V. Malashchenko, Tatiana S. Yakusheva, Marina V. Dayneko *
seel23-013	Decision-Making Training for Students and Managers Using Data Science and Smart Platforms Anna Sherstobitova, Bella Kazieva, Lyudmila Glukhova, Valery Kaziev, Elena I. Koroleva *
seel23-028	Ecosystems for Higher Education and Society Svetlana A. Gudkova, Elena N. Korneeva, Raisa K. Krayneva, Irina V. Khristoforova, Aizhan Omarova *
seel23-014	Mathematical Simulation for Quality Management in State System of Higher Education Lyudmila V. Glukhova, Svetlana D. Syrotyuk, Sabina Sh. Palferova, Svetlana A. Gudkova, Anna A. Sherstobitova, Anton A. Gudkov *
seel23-007	Quasi-Fractal Logic Usage in Risk Management Models of Smart Systems Natalia A. Serdyukova, Vladimir I. Serdyukov, Olga A. Kusminova, Svetlana I. Shishkina *
seel23-022	Research and Simulation of Cryptocurrency Market as an Innovative Use Case for Emerging Smart Education Anna A. Sherstobitova, Bella V. Kazieva, Olga A. Kusnetsova, Tatiana V. Polteva *

* Online session

SEEL-03: Thursday 15th June 2023
Time: 13:00 - 15:30 CEST
Room 5

SEEL-03: *Smart Organizations: Case Studies and Research*
Chairs: Dr. Svetlana A. Gudkova and Dr. Lyudmila Glukhova

PROSE Paper No	Paper Title / Authors
seel23-009	A Model of Quality Management System for Digital Economy Anna A. Sherstobitova, Elena V. Kargina, Svetlana E. Vasilyeva, Ekaterina N. Zolotareva *
seel23-015	A Model for Business System Infrastructure's Vulnerability Assessment Lyudmila V. Glukhova, Olga. A. Filippova, Svetlana D. Syrotyuk, Svetlana A. Gudkova, Yuliya S. Munirova *
seel23-008	Marketing Research for Regional Development Anna A. Sherstobitova, Elena V. Kargina, Slavyana O. Shanogina, Natalya A. Nesmeyanova *
seel23-016	Organizational and Methodological Support of the Strategic Analysis of the Resource Potential of Smart University Leyla F. Berdnikova, Natalya A. Igoshina, Andrei S. Vasilchuk, Lyubov K. Shamina, Iuliia A. Anisimova, Anastasia Yu. Malyarovskaya *
seel23-018	Digital Technologies for Quality Management in Integrated Production Anna A. Sherstobitova, Elena N. Korneeva, Raisa K. Krayneva, Manchuk T. Bayetova, Azyk A. Orozonova *
seel23-012	Algorithm for Strategic Management of Project Activities in Smart University Leyla F. Berdnikova, Olga S. Aksinina, Elena V. Shchepotkina-Marinina, Elena A. Borgardt, Oksana A. Lugovkina, Pavel A. Kabanov *
seel23-010	Innovative Marketing Strategy for Industry Anna A. Sherstobitova, Elena V. Kargina, Varvara V. Danshina, Olga A. Filippova *

* Online session

SEEL-04: Thursday 15th June 2023
Time: 16:00 - 19:00 CEST
Room 5

SEEL-04: Smart Education and e-Learning
Chairs: Dr. Vladimir Uskov and Dr. Jeffrey P. Bakken

PROSE Paper No	Paper Title / Authors
seel23-044	Smart Education: Students' Perception of Hybrid Learning in Graduate Computing Curriculum Vladimir L. Uskov *
seel23-003	Innovative Methods for Smart Education: Hybrid Approach Svetlana A. Gudkova, Elena N. Korneeva, Raisa K. Krayneva, Svetlana P. Azarova, Aigul. U. Samuratova *
seel23-038	Online Ed.D. Program Development: A Program Level Perspective Erik A. Dalmasso, Jeffrey P. Bakken
seel23-017	Possibilities of Using Multimedia Technologies in the Learning Process for Children with Special Needs Natalya Prokofyeva, Sabina Katalnikova, Viktorija Ziborova, Andrejs Semrjakovs *
seel23-039	Online Doctoral Faculty Engagement: Building Connections Through Authenticity Erik A. Dalmasso, Jeffrey P. Bakken *
seel23-001	Impact of Offline and Online Lecture Formats on Student Satisfaction with the University Takumi Kato *
seel23-011	Systematic Approach to Project Management at Smart University Leyla F. Berdnikova, Svetlana I. Sotskova, Irina V. Kalashnikova, Elizaveta I. Gnatishina, Ekaterina A. Afonichkina, Elena A. Khramova *
seel23-040	Student Support in an Online Environment: Doctoral Student Feedback Erik A. Dalmasso, Jeffrey P. Bakken *

* Online session

STS Paper Presentations

STS-01: Wednesday 14th June 2023
Time: 10:45 - 12:45 CEST
Room 5

STS-01: Data-driven solution for transport systems
Chair: Dr. Ruo Jia

PROSE Paper No	Paper Title / Authors
sts23-005	Multivariate Sequences Clustering for Driving Preferences Classification Based on Wide-range Trajectory Data Shuli Wang, Ruo Jia, Professor Lanfang Zhang
sts23-022	Rule-based Recommendation System for Traffic Congestion Measures Yasmine Amor, Lamjed Ben Said, Ghaleb Hoblos, Lilia Rejeb, Nabil Sahli, Wassim Trojet
sts23-002	LSTM-based vehicle trajectory prediction using UAV drone data Shaohua Cui, Sixuan Chen, Heqi Cui, Kun Gao, Baozhen Yao, Qian Zhong
sts23-021	A Network-wide Traffic Speed Estimation Model with Gaussian Process Inference Ruo Jia, Chen Qiu
sts23-010	Interaction-Aware Trajectory Prediction for Autonomous Vehicle Based on LSTM-MLP Model Zhiwei Meng, Bing Ge, Rui He, Researcher Jiaming Wu, Sumin Zhang
sts23-003	Dynamic Pricing for Mobile Charging Service Considering Electric Vehicles Spatiotemporal Distribution Shaohua Cui, Heqi Cui, Bin Shi, Yongjie Xue, Baozhen Yao, Qian Zhong

STS-02: Wednesday 14th June 2023
Time: 15:15 - 17:15 CEST
Room 3

STS-02: *New public transit*
Chair: Omkar Parishwad

PROSE Paper No	Paper Title / Authors
sts23-011	Speed Profile Optimization for Energy-saving Operations of Electric Buses Yajun Liu, Yiming Bie, Yuting Ji *
sts23-016	Dynamical classification to improve the selection of the driver-cargo transportation duo for a trucking company Ivanhoe Arias, Leticia Davila-nicanor, Saul Lazcano, Maricela Quintana *
sts23-012	Control methods for energy-saving electric bus operation Yuwei Chen, Linhong Wang *
sts23-013	Evaluation of a supply- and demand-oriented public transport enterprise reference architecture using planning and resource deployment as an example Mark-oliver Wuertz, Kurt Sandkuhl *
sts23-014	Prospects of the Activity-based modelling approach: A review of Sweden's National Transport Model- SAMPERS Omkar Parishwad, Ruo Jia *
sts23-020	A Two-Stage Teaching Philosophy for Postgraduate Students Wang Kai, Qu Xiaobo, Yang Ying, Zhang Yue *

* Online session

STS-03: Friday 16th June 2023
Time: 10:00 - 12:00 CEST
Room 3

STS-03: Driver behavior
Chair: Bo Yu

PROSE Paper No	Paper Title / Authors
sts23-006	Optimizing the Deployment of Automated Speed Camera at the Intersections Using GPS Trajectories Hua Liu, Chuanyun Fu *
sts23-007	Examining the effect of speeding patterns on speeding-related harsh decelerations for commercial drivers with survival analysis Chuanyun Fu, Yue Zhou *
sts23-008	Research and Application Analysis of Stepwise Incremental fine Model for Speeding Behavior Chuanyun Fu, Jinzhao Liu *
sts23-017	Analysis of driver navigation software use experience based on structural equation model Weiwei Qi, Wenyi Wang, Wenhua Xu *
sts23-018	Design of a highway traffic safety assessment system based on crash data mining and modelling Weiwei Qi, Luo Li, Shuolei Qin *

* Online session

STS-04: Friday 16th June 2023
Time: 14:30 - 16:30 CEST
Room 3

STS-04: Transport automation
Chair: Dr. Ruo Jia

PROSE Paper No	Paper Title / Authors
sts23-001	Research Progress on Key Technologies of Environmental Perception and Detection of Transport System in Goaf of Coal Mine Taixue Bei, Bo Lu, Ying Luo, Zhiwei Meng, Nan Xu, Lei Zhao *
sts23-004	Guidance method of connected autonomous vehicles under automatic control intersections Wang Lichao, Wu Jiaming, Zhang Jiyang, Yang Min, Meng Zhiwei *
sts23-015	A Novel Longitudinal Control Strategy of Connected Automated Vehicle in Heterogeneous Traffic Flow and String Stability Analysis Genze Li, Shuli Wang, Lanfang Zhang *
sts23-019	Visualization method of urban motor vehicle trajectory based on license plate recognition data Weiwei Qi, Yue Li, Bin Rao, Minggui Xu *

* Online session

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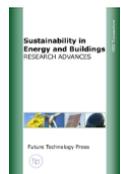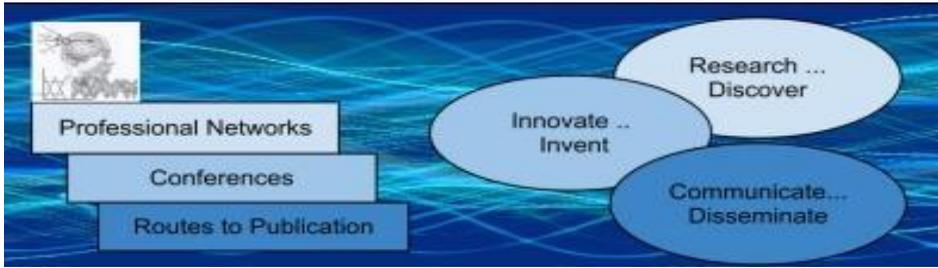
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