

Timetable A: SpliTech2025 Program			
June 16, 2025, IoT Day, University of Split, FESB, Split TIME - 8:30 - 16:00			
June 16, 2025, University of Split, FESB, Split			
TIME/HALL	A103	A104	Small Hall
08:00	REGISTRATION		
09:00-10:30	RFID1: Special Session on Electromagnetic Innovation through Additive and Advanced Manufacturing Technologies (supported by IEEE CRFID and IEEE TC-AMES)	EM1: Engineering Modelling of Renewables	E1: Renewable energy and technologies
10:30-11:00	Coffee Break		
11:00-11:30	Keynote: Levent Sevgi - “From Engineering Electromagnetics to Electromagnetic Engineering: Teaching/Training Next Generations” (A100)		
11:30-13:00	RFID2: Special Session on Hardware, Intelligence and Engagement: From Circuits to Gameful IoT	EM2: Engineering Modelling - PART I	E2: Energy systems and technologies - PART I
13:00-14:00	Lunch		
14:00-14:30	Keynote: Lei Xing - “AI-enabled data-driven approaches for circular chemical economy research" (A100)		
14:30-16:00	RFID3: Special Session on Innovative Antennas and Intelligent Systems: Shaping the Future of RFID Application	EM3: Engineering Modelling - PART II	E3: Energy conversion and Energy Efficiency
16:00-16:30	Coffee Break (RFID P - Special Poster Session: “RFID/IoT Research Projects: Hardware and Software Solutions in Focus”)		
16:30-18:00		Tutorial: Tutorial on Human Exposure to Nonionizing Radiation	
June 17, 2025, University of Split, FESB, Split			
TIME/HALL	A103	A104	Small Hall
08:30	REGISTRATION		
08:30-10:00	RFID4: Special Session on Technology for Life: revolutionizing Work, Health monitoring, and Safety with modern Electronics & Backscattering Communications	P4: Environmental Applications	E4: Power Engineering and power systems
10:00-10:30	Keynote: Dubravko Čulibrk - “AI-disrupted Medicine and How to Apply It" (A100)		
10:30-11:00	Coffee Break		
11:00-13:00	Opening Ceremony which includes the Plenary Speech: Gaetano Marrocco (IEEE CRFID Distinguished Lecturer) - “Wireless Identification and Sensing without Conductors: The Laser-Induced Graphene Technology for Eco-Friendly IoT Mat Santamouris - “Can we Cool our cities? Recent developments on Urban Heat Mitigation Technologies” (A100)		
13:00-14:00	Lunch		
14:00-14:30	Keynote: Giuseppe Marco Tina, “Harnessing the Sun: Technical and Economic Insights on Floating Photovoltaic Systems and Their Aquatic Integration” (A100)		
14:30-16:00	RFID5: Special Session on Exploring Hardware Aspects of Low Power Wireless Communication for IoT Applications Across Asia	LC: Life Cycle Assessment, Digital Solutions, and Sustainable Practices in Building Design and Construction	Meet The Editors Workshop
16:00-18:00			
June 18, 2025, University of Split, FESB, Split			
TIME/HALL	A103	A104	Small Hall
08:30	REGISTRATION		
09:00-09:30	AIoTwin Keynote 3 Anwitaman Datta (De Montfort University & NTU Singapore) - On building trustworthy decentralized infrastructure: Experiences from the Blockchain I/O project (Big Hall)		

09:30-11:00	SC1: Smart City - Energy Modeling	P5: AI Applications	E5: Energy systems and technologies -PART II
11:00-11:30	Coffee Break		
11:30-13:00			
13:00-14:00	Lunch		
June 19, 2025, Hotel Elaphusa, Bol (island of Brač)			
TIME/HALL	VIS	KORČULA	BRAČ 1
08:00	REGISTRATION		
09:00-10:30	CS1: Humanized Computing: Citizen Science, Co-creation, and Emerging Technologies for Human-Centric Decisions - PART I	IoT4: Special Session on Artificial Intelligence and Deep Learning applied to Smart Environments	Keynote: Agis M. Papadopoulos - “The energy-water nexus: A challenge for the Mediterranean region”
			BD1: Advanced Materials and Technologies for Thermal Management
10:30-11:00	Coffee Break		
11:00-11:30	Keynote: Sima Noghanian (IEEE APS Distinguished Lecturer) - “Empowering Connectivity: Wearable Antennas for Wi-Fi and 5G Applications” (BRAČ 1)		
11:30-13:00	CS2: Humanized Computing: Citizen Science, Co-creation, and Emerging Technologies for Human-Centric Decisions - PART II	IoT5: Special Session on Big Data and IoT Special	Keynote: M. Santamouris- “Climate Change affects seriously the Cognitive Performance of Students. Recent Developments and Potential Solutions”
			BD2: Cultural and Historical Considerations under Energy and Climate Constraints
13:00-14:00	Lunch		
14:00-14:30	Keynote: Roberto Garay-Martinez - “Energy Modeling of Buildings and HVAC Systems” (BRAČ 1)		
14:30-15:00	Keynote: Nuno Vasco Lopes- “From Smart to Trustworthy: Embedding Secure AI and Governance in Next-Generation Smart Cities” (BRAČ 1)		
15:00-15:30	Coffee Break		
15:30-17:00	SDEN1: Renewable Energy Systems and Market Optimization	IoT6: Session on Blockchain applications and Cybersecurity solutions for IoT Systems	BD3: Smart Systems and Energy Optimization in Buildings
17:30	GUIDED TOUR		
21:00	CONFERENCE DINNER AND COCKTAILS		
June 20, 2025, Hotel Elaphusa, Bol (island of Brač)			
TIME/HALL	VIS	KORČULA	BRAČ 1
10:30	REGISTRATION		
9:00-10:30	SDEN2: Smart Electrical Networks and AI Integration	SC2: Smart City - Aquatic Applications	MLE: Machine Learning and Statistics in Electronics
10:30-11:00	Keynote: Liping Wang - “Controlled Environment Agriculture (CEA, Community, and Sustainability)” (BRAČ 1)		
11:00-11:30	Coffee Break		
11:30-13:00	H1: Artificial Intelligence and Advanced Technologies in Healthcare	SC3: Smart City - Environmental Perspective	
13:00-14:00	Lunch		

Timetable B: SpliTech2025 Program		
June 16, 2025, University of Split, FESB, Split		
TIME/HALL	A105	B420
08:00	REGISTRATION	
09:00-10:30	P1: Energy Modeling	Workshop: High Performance Computing Marko Hrženjak, University Computing Centre of the University of Zagreb
10:30-11:00	Coffee Break	
11:00-11:30	Keynote: Levent Sevgi - “From Engineering Electromagnetics to Electromagnetic Engineering: Teaching/Training Next Generations” (A100)	
11:30-13:00	P2: Engineering Modeling	
13:00-14:00	Lunch	
14:00-14:30	Keynote: Lei Xing - “AI-enabled data-driven approaches for circular chemical economy research” (A100)	Workshop: How Large Language Models Work? Maja Braović, University of Split, FESB
14:30-16:00	P3: Building Efficiency	
16:00-16:30	Coffee Break (RFID P - Special Poster Session: “RFID/IoT Research Projects: Hardware and Software Solutions in Focus”)	
16:30-18:00		
June 17, 2025, University of Split, FESB, Split		
TIME/HALL	A105	B420
08:30	REGISTRATION	
08:30-10:00	IoT1: Symposium on Internet of Things - General Track	Workshop: Machine Learning Applications on the Supek Supercomputer Nenad Mijić, University Computing Centre of the University of Zagreb
10:00-10:30	Keynote: Dubravko Čulibrk - “AI-disrupted Medicine and How to Apply It” (A100)	
10:30-11:00	Coffee Break	
11:00-13:00	Opening Ceremony which includes the Plenary Speech: Gaetano Marrocco (IEEE CRFID Distinguished Lecturer) - “Wireless Identification and Sensing without Conductors: The Laser-Induced Graphene Technology for Eco-Friendly IoT Mat Santamouris - “Can we Cool our cities? Recent developments on Urban Heat Mitigation Technologies” (A100)	
13:00-14:00	Lunch	
14:00-14:30	Keynote: Giuseppe Marco Tina, “Harnessing the Sun: Technical and Economic Insights on Floating Photovoltaic Systems and Their Aquatic Integration” (A100)	Workshop: Password Security Analysis Toni Perković, University of Split, FESB
14:30-16:00	IoT2: Workshop on IoT and AI for sustainable and smart services in healthcare - PART I	
16:00-18:00		
June 18, 2025, University of Split, FESB, Split		
TIME/HALL	A105	
08:30	REGISTRATION	
09:00-09:30	AloTwin Keynote 3 Anwitaman Datta (De Montfort University & NTU Singapore) - On building trustworthy decentralized infrastructure: Experiences from the BlockChain I/O project (Big Hall)	
09:30-11:00	IoT3: Workshop on IoT and AI for sustainable and smart services in healthcare - PART II	
11:00-11:30	Coffee Break	

11:30-13:00	
13:00-14:00	Lunch
June 19, 2025, Hotel Elaphusa, Bol (island of Brač)	
TIME/HALL	ŠOLTA
08:00	REGISTRATION
09:00-10:30	EMB1: Energy modelling of public buildings and HVAC systems for energy & comfort performance assessment and near real-time control
10:30-11:00	Coffee Break
11:00-11:30	Keynote: Sima Noghanian (IEEE APS Distinguished Lecturer) - “Empowering Connectivity: Wearable Antennas for Wi-Fi and 5G Applications” (BRAČ 1)
11:30-13:00	EMB2: Energy modelling of buildings and HVAC systems for energy & comfort performance assessment and near real-time control - PART I
13:00-14:00	Lunch
14:00-14:30	Keynote: Roberto Garay-Martinez - “Energy Modeling of Buildings and HVAC Systems” (BRAČ 1)
14:30-15:00	Keynote: Nuno Vasco Lopes- “From Smart to Trustworthy: Embedding Secure AI and Governance in Next-Generation Smart Cities” (BRAČ 1)
15:00-15:30	Coffee Break
15:30-17:00	EMB3: Energy modelling of buildings and HVAC systems for energy & comfort performance assessment and near real-time control - PART II
17:30	GUIDED TOUR
21:00	CONFERENCE DINNER AND COCKTAILS

International Symposium on Internet of Things organizer: L. Patrono
International Symposium on RFID, Electromagnetics, and Electronics for IoT Devices: The Hardware Side of IoT organizer: L. Catarinucci
International Symposium on Statistics and Machine Learning in Electronics organizers: M. Ivanova , G. Bogdanova, C.-Z. Kertesz
Special Session on Energy Modeling of Buildings and HVAC Systems for Energy and Comfort Performance Assessment and Near Real-Time Control organizers: R. Gray-Martinez, J. L. Hernandez, B. Arregi
Special Session on ELife Cycle Assessment, Digital Solutions, and Sustainable Practices in Building Design and Construction organizers: P. Fokaides, E. Giama
Special Session on Humanized Computing: Citizen Science, Co-creation, and Emerging Technologies for Human-Centric Decisions organizers: D. C. Mansilla, D. L. de Ipiña
Special Session on Decarbonizing Buildings and Enhancing Resilience: Strategies and Innovations for a Future Sustainable Built Environment organizers: F. Ascione, A. Papadopoulos, S. Nižetić, M. Arici, P. Fokaides, M. E. Gonzalez Trevizo, P. Oclon
Special Session on Smart Distributed Electrical Network: Opportunities and Challenges for Integration of Renewable Energy Systems organizers: M. L. Kolhe, N. J. Johannesen
Special Session on Artificial Intelligence of Things and Edge Intelligence organizers: I. P. Žarko, G. Ježić, M. Kušek
Tutorial on Human Exposure to Nonionizing Radiation organizers: D. Poljak, M. Cvetković
Workshop: Meet the editors / Speakers: M. Santamouris, A. Papadopoulos, F. Ascione/ Moderator: Sandro Nižetić

Timetable C: SpliTech2025 Program	
June 16, 2025, University of Split, FESB, Split	
TIME/HALL	Big Hall
08:00	REGISTRATION
09:00-10:30	3rd AloTwin Summer School: OPENING Ivana Podnar Žarko (UNIZG-FER)
	AloTwin Keynote 1 Tomislav Grgić (Ericsson Nikola Tesla) - IoT and AI-Based Network Enablers for Evolution Towards Future 6G Technologies
	AloTwin Keynote 2 Ivan Marković (UNIZG-FER) - A Gentle Introduction to Human-Robot Interaction
10:30-11:00	Coffee Break
11:00-12:00	Tutorial 1 Fatemeh Rahimian (RISE) - Model Compression and Pruning Techniques for AI on IoT Devices
12:00-13:00	Tutorial 2 Myeongho Jeon (EPFL) - Tutorial on Learning Under Distribution Shifts
13:00-14:00	Lunch
14:00-14:30	Keynote: Lei Xing - "AI-enabled data-driven approaches for circular chemical economy research" (A100)
14:30-16:00	AloT1: Special session on Artificial Intelligence of Things and Edge Intelligence - PART I
16:00-16:30	Coffee Break (RFID P - Special Poster Session: "RFID/IoT Research Projects: Hardware and Software Solutions in Focus")
16:30-18:00	AloT2: Special session on Artificial Intelligence of Things and Edge Intelligence - PART II
June 17, 2025, University of Split, FESB, Split	
TIME/HALL	Big Hall
08:30	REGISTRATION
08:30-10:00	Hands-on-session 1 Ivan Čilić, Ana Petra Jukić, Katarina Vuknić (UNIZG-FER) - Orchestrating Hierarchical Federated Learning Pipelines with AloTwin Middleware
10:00-10:30	Keynote: Dubravko Čulibrk - "AI-disrupted Medicine and How to Apply It" (A100)
10:30-11:00	Coffee Break
11:00-13:00	Opening Ceremony which includes the Plenary Speech: Gaetano Marrocco (IEEE CRFID Distinguished Lecturer) - "Wireless Identification and Sensing without Conductors: The Laser-Induced Graphene Technology for Eco-Friendly IoT Mat Santamouris - "Can we Cool our cities? Recent developments on Urban Heat Mitigation Technologies" (A100)
13:00-14:00	Lunch
14:00-15:00	Tutorial 3 Anna Lackinger (TU Vienna) - Time Series Prediction
15:00-16:30	Hands-on-session 2 Anh Le Tuan (TU Berlin) - Building a Semantic Swarm of Edge Intelligence
June 18, 2025, University of Split, FESB, Split	
TIME/HALL	Big Hall
08:00	REGISTRATION
09:00-09:30	AloTwin Keynote 3 Anwitaman Datta (De Montfort University & NTU Singapore) - On building trustworthy decentralized infrastructure: Experiences from the Blockchain I/O project
09:30-10:30	Tutorial 4

	Ali Ganbarov (TU Berlin) - Workload Balancing for Distributed Multi-Object Tracking on Multi-Camera
11:00-11:30	Coffee Break
11:30-12:30	Tutorial 5 Ivan Kralj (UNIZG-FER) - Semi-Decentralized Training of Spatio-Temporal Graph Neural Networks for Traffic Prediction
12:30-13:00	3rd AIoTwin Summer School: CLOSING
13:00-14:00	Lunch

Timetable D: Digital Plan – Civil Protection Plan Digitalization through Internet of Things Decision Support System based Platform	
June 19, 2025, Hotel Elaphusa, Bol (island of Brač)	
TIME/HALL	HVAR
09:30-09:45	REGISTRATION
09:45-10:00	Welcome speeches
10:00-10:30	Press conference
10:30-11:00	Coffee Break
11:00-11:45	WP1 status Progress on WP1 activities, WP1 discussion (all partners) - GAL MOLISE, FESB, CA'FOSCARI
11:45-12:45	WP2 status Progress on WP2 activities, WP2 discussion (all partners) - GAL MOLISE, FESB, CA'FOSCARI
12:45-13:00	Introduction of WP3 activities, WP3 discussion (all partners) - GAL MOLISE, FESB, CA'FOSCARI
13:00-14:00	Lunch
14:00-16:00	Presentation of DP project (goals, activities, results etc.; emphasis on IoT sensors, pilot deployment and IoT EDSS platform)
20:00	Social dinner
June 20, 2025, Hotel Elaphusa, Bol (island of Brač)	
TIME/HALL	HVAR
09:30-09:45	REGISTRATION
09:45-10:00	Management and project coordination - Adolfo Colagiovanni, Project manager LP
10:00-10:15	Financial management - Roberto D'Amico, Financial manager LP
10:15-10:30	Project Communication - Communication manager PP2 AGRRA
10:30-11:00	Coffee Break
11:00-11:30	Analysis of third period - SC members
11:30-12:00	Deliverable execution - SC members
12:00-12:30	Critical tasks and deviations - SC members
12:30-13:00	AOB and main conclusion - LP project manager
13:00-14:00	Lunch

Monday, June 16 9:00 - 10:30

E1: Renewable energy and technologies

PV and Shading Device-Integrated Facade for Energy Efficiency
Abdulrahman Waru and Halil Zafer Alibaba (Eastern Mediterranean University, Cyprus)

Comparative Study of Modeled and Measured Spectral Irradiance for PV Technology Applications
Ivan Bevanda (University of Mostar, Bosnia and Herzegovina); Tihomir Betti (University of Split, Croatia); Petar Marić (University of Mostar, Bosnia and Herzegovina); Ivan Marasović (University, Croatia)

Floating Bifacial PV Systems: An Experimental Comparison
Giuseppe M Tina and Gaetano Mannino (University of Catania, Italy); Amr Osama Mostafa Mohamed (University of Catania, Italy & Port Said University, Egypt); Alessio Cucuzza, Andrea Canino and Fabrizio Bizzarri (Enel Green Power, Italy)

Genetic Algorithm-Optimized Wind Tunnel for Experimental Validation of High-Efficiency Savonius Wind Turbines
Ivo Marinić-Kragić (FESB, University of Split, Croatia); Igor Pehnek (University of Split, FESB, Croatia); Drago Bulić and Teo Čolović (University of Split FESB, Croatia)

Integration of renewable gaseous fuels and hydrogen into natural gas infrastructure: A review
Dimitrios Gidaris, Effrosyni Giama, Christos Vlachokostas, Panagiotis Seferlis and Agis Papadopoulos (Aristotle University of Thessaloniki, Greece)

Boosting Solar PV Efficiency with Passive Cooling Innovation
Hassan Abdulmouti (HCT, United Arab Emirates)

Monday, June 16 9:00 - 10:30

EM1: Engineering Modelling of Renewables

Enhancing the Precision of PEM Fuel Cell Numerical Models Using Temperature Field Mapping
Ivana Hrabar, Željko Penga and Bruno Ševo (University of Split, Croatia); Jure Penga and Gojmir Radica (University of Split, FESB, Croatia)

Computational Analysis of a Planar PEM Fuel Cell Stack for Portable Power Applications
Bruno Ševo, Željko Penga and Ivana Hrabar (University of Split, Croatia); Jure Penga and Gojmir Radica (University of Split, FESB, Croatia)

The Effect of Burial Depth of Offshore Wind Turbine Power Cables to the Magnetic Field Levels on Marine Life Safe Zones
Mario Cvetković and Dragan Poljak (University of Split, Croatia)

Revolutionizing Photovoltaic Asset Performance with Digital Twin and AI
Ashok Kumar Patil, Nikhil Chanda, Jyothiraditya Danda and Vaishnavi M (PES University, India); Kousthub Menon (PES University, Bangalore, India); Prasad Honnavalli (PES University, India)

Assessment of Low Frequency Electromagnetic Fields Generated from Subsea Power Cables used in Offshore Wind Farms
Dragan Poljak and Mario Cvetković (University of Split, Croatia)

Monday, June 16 9:00 - 10:30

P1: Energy Modeling

CFD modeling on a solar thermal energy transfer performances with experimental validations in a water-based serpentine photovoltaic-thermal collector
Sang Shin Park and Ji-Hong Moon (Korea Institute of Energy Research, Korea (South))

Numerical Study of A Direct-irradiated Solar-Driven Pyrolysis Reactor
Yuhan Jin, Yibo Wu, Xinyi Chen, Youwei Yang, Yaning Zhang and Ruming Pan (Harbin Institute of Technology, China)

Research Progress and Analysis of Dry Granulation and Waste Heat Recovery Processes for Blast Furnace Slag
Chuanbin Wang (清华大学, China)

Improving the performance of a solar air collectors by using longitudinal baffle
Ghizlene Boussouar (Lublin University of Technology, Poland)

Advanced Parameter Identification Method for Double Diode Model of PV Module Combining Nonlinear Least Squares and Support Vector Regression
Petar Marić (University of Mostar, Bosnia and Herzegovina); Ivan Marasović (University, Croatia); Ivan Bevanda (University of Mostar, Bosnia and Herzegovina); Antonio Vuletić (FESB, University of Split, Croatia)

Monday, June 16 9:00 - 10:30

RFID1: Special Session on Electromagnetic Innovation through Additive and Advanced Manufacturing Technologies (supported by IEEE CRFID and IEEE TC-AMES)

Wireless Pressure Sensor Based on an Additively Manufactured Thermoplastic Polyurethane (TPU) Transducer

Amirhossein Karami-Horestani (CIMITEC, Departament d'Enginyeria Electrònica & Universitat Autònoma de Barcelona, Spain); Ferran Paredes (Universitat Autònoma de Barcelona, Spain); Sandra Rodini, Filippo Costa and Simone Genovesi (University of Pisa, Italy); Ferran Martín (Universidad autónoma de Barcelona, Spain)

Designing Flexible Antenna Substrates with 3D-Printed Compliant Structures

Francesco P Chietera and Waleef Ullah Usmani (Polytechnic of Bari, Italy); Luca Catarinucci (University of Salento, Italy); Luciano Mescia (Polytechnic University of Bari, Italy)

Preliminary characterization of 3D printed tunable conductive structures for sensing applications

Luigi Davide Gala (Università di Napoli Federico II, Italy); Federico Parenti and Carlotta Ragazzo Capello (Università di Pisa, Italy); Claudio Esposito and Lorenzo Lombardi (Università di Napoli Federico II, Italy); Elisabetta Dimaggio (Università di Pisa, Italy); Daniele Tammaro (University of Naples Federico II, Italy)

A Sinusoidal-Shaped 3-D Printed Wideband Microstrip Patch Antenna

Giovanni Andrea Casula (Università di Cagliari, Italy); Giorgio Montisci and Enrico Mattana (University of Cagliari, Italy)

Substrate-free Epidermal Tattoo Antennas for NFC and UHF Applications

Adina B. Barba (Radio6ense Srl, Italy & University of Rome Tor Vergata, Italy); Alessio Mostaccio (University of Rome Tor Vergata, Italy); Cecilia Occhiuzzi (University of Roma Tor Vergata, Italy); Gaetano Marrocco (University of Rome Tor Vergata, Italy)

Dual-Extrusion 3D Printing of Graphene-Based Composites for Strain Sensing Applications

Meshari Alsharari, Khaled Aliqab and Ammar Armghan (Jouf University, Saudi Arabia)

Monday, June 16 11:30 - 13:00

E2: Energy systems and technologies - PART I

Shock wave energy from a cavitation bubble collapsing near an elastic membrane

Jingdong Shen, Huiying Xu and Xiaoyan Gao (China Jiliang University, China)

Dual-Source Energy Harvesting for Wearable Electronics

Aminu Yusuf and Sedat Ballikaya (Istanbul University-Cerrahpaşa, Turkey)

Web-based Group Decision Support System for usage in Air Handling Unit Concept Development

Krešimir Osman (Zagreb University of Applied Sciences, Croatia); Mato Perić (University North, Croatia)

Case study of thermal management of axial flux electric motor

Marko Đula (Axialis, Croatia); Sandro Nizetic (University of Split, FESB, Croatia)

Study on the Self-Diffusion Coefficients of Supercritical Water-Benzene Binary Mixtures in Nano-confined Spaces

Xiaoran Rong (Xi'an Jiaotong University & None, China)

Efficient conversion of pulp and paper mill sludge by pyrolysis: From microscopic kinetic mechanisms to macroscopic tar conversion patterns

Fangjun Chen and Qingang Xiong (South China University of Technology, China)

Monday, June 16 11:30 - 13:00

EM2: Engineering Modelling - PART I

Optimization of the SMAW Welding Process in Carbon Steel Pipes for District Heating Systems

Vanessa Estremera Carrera (Public University of Navarre, Spain); Sergio Ruiz González (University of La Rioja (Spain), Spain); Ruben Lostado-Lorza (University of La Rioja, Spain); Carlos Berlanga-Labari (Public University of Navarre, Spain)

Presentation of the control algorithm for the drive of a workstation in the automotive industry

Krešimir Osman (Zagreb University of Applied Sciences, Croatia); Mato Perić (University North, Croatia); Trpimir Alajbeg (Zagreb University of Applied Sciences, Croatia)

Shape synthesis with optimization of parametric values grid and THB-Spline parameterization model

Domagoj Samardzic and Milan Ćurković (University of Split, Croatia)

Numerical Analyses of S460MC and S460NL Butt Joints Welding Process

Mato Perić (University North Varaždin, Croatia); Tomasz Kik (Silesian University of Technology & Faculty of Mechanical Engineering, Poland); Jaromir Moravec and Daniel Klápště (Technical University of Liberec, Czech Republic); Ivica Galić (University of Zagreb, Croatia); Krešimir Osman (Zagreb University of Applied Sciences, Croatia)

Integrated Control Stick Analyzer: A Novel Approach for Enhanced Aviation Safety

Muhammad Usman and Mohsin Khalil (National University of Sciences and Technology, Pakistan); F. Pervez (NUST, Pakistan)

Numerical investigation of the influence of the tightening force on the geometric stress concentration factor at the root of the bolt thread

Stipe Plešтина (University of Split, FESB, Croatia); Vjekoslav Tvrdić, Milan Perkušić and Anđelo Čapeta (University of Split, Croatia)

Monday, June 16 11:30 - 13:00

P2: Engineering Modeling

Use of modern diagnostic equipment for the purpose of improving the engine in use, case study

Tino Sumić (NAVAL STUDIES, Croatia); Jure Penga (University of Split, FESB, Croatia); Branko Lalić (University of Split, Faculty of Maritime Studies, Croatia); Nenad Vulić (Maritime Studies in Split, Croatia)

Some Useful Measures to Study Efficiency of Grounding Systems - Case of Simple Configurations

Dragan Poljak (University of Split, Croatia); Ivan Sučić (University of Split, Croatia)

Numerical simulation of biomass gasification in pure oxygen and steam circulating fluidized bed

Fengxian Yao (清华大学, China); Fengxian Yao (Tsinghua University, China)

Time-Series Representation Learning for Energy Demand Forecasting: A Contrastive Predictive Coding Approach

Manar Alkhatib (The British University in Dubai, United Arab Emirates); Ghanshyam Lalmani Chaturvedi (The British University in Dubai & Presight AI, United Arab Emirates)

Real-Time Thermal Control Using Reinforcement Learning-Augmented Active Disturbance Rejection Control

Yanming Zhong, Dong Li, Li Sun and Qingyao Chen (Southeast University, China)

Monday, June 16 11:30 - 13:00

RFID2: Special Session on Hardware, Intelligence and Engagement: From Circuits to Gameful IoT

Preliminary analysis of the exploitation of QVAR sensor for gesture recognition

Alfonso Messina (University of Reggio Calabria, Italy); Alessia Lazzaro (Mediterranean University of Reggio Calabria, Italy); Riccardo Carotenuto (University "Mediterranea" of Reggio Calabria, Italy); Massimo Merenda (University Mediterranea of Reggio Calabria, Italy)

A Novel Pulsing Technique for Synaptic Weight Updates in Memristor Crossbar Arrays

Alberto Arciello (Università Mediterranea di Reggio Calabria, Italy); Giuseppe Cimino (University Mediterranea di Reggio Calabria, Italy); Massimo Merenda (University Mediterranea of Reggio Calabria, Italy)

Precision Enhancement of Full-Body Tracking for Virtual Reality Applications

Antonia Bartulović (University of Split, FESB, Croatia); Maja Braović (University of Split - FESB, Croatia); Jakov Bejo and Ljiljana Šerić (University of Split, FESB, Croatia)

From Bracelets to Hoodies: Exploring Embedded Multimodal Assistive Controllers

Mustasin Mahmood Sakif and Tiina Ihalainen (Tampere University, Finland); Sari Merilampi (Satakunta University of Applied Sciences, Finland); Tiina Vuohijoki, Pasi Raunonen and Johanna Virkki (Tampere University, Finland)

Towards Real-World EDA Monitoring in Children: The Potential of Everyday Socks with Textile Electrodes

S M Musfequr Rahman (Tampere University, Finland & Tampere University of Technology, Finland); Henna Mattila, Lotta Eerola, Annika Maenpää, Terhi Helminen, Pasi Raunonen, Anneli Kylliäinen and Johanna Virkki (Tampere University, Finland)

Microstructure regulation of heat transfer at solid-solid interfaces with lower stress for electronic devices cooling

Qingsong Song, Yunguang Ji and Hongtao Li (Hebei University of Science and Technology, China)

Monday, June 16 14:30 - 16:00

AIoT1: Special session on Artificial Intelligence of Things and Edge Intelligence - PART I

The Impact of Meteorological Data on Machine Learning Model Development for Thermal Energy Consumption Forecasting in District Heating Systems

Milica Tasic and Ivan Ciric (University of Nis, Serbia); Vladan S. Jovanović and Marko Ignjatović (University of Niš, Serbia); Dejan Mitrovic (University of Nis, Serbia)

Arabic Dialect Speech-Text Recognition Using Deep Learning

Manar Alkhatib (The British University in Dubai, United Arab Emirates); Omar Saleh Alboom (British University in Dubai, United Arab Emirates); Ashwaq Faisal (The United Arab Emirates University, United Arab Emirates); Khaled F. Shaalan (The British University in Dubai, United Arab Emirates)

Leveraging Large Language Models for IoT Applications A Maritime Image Dataset Perspective

Mahtab Shahin (Estonian Maritime Academy, Tallinn University of Technology, Estonia); Saeed Rahimpour and Tara Ghasempouri (Tallinn University of Technology, Estonia); Pentti Kujalai and Sanja Bauk (Estonian Maritime Academy, Tallinn University of Technology, Estonia)

LLM-FaaS: A Secured Large Language Model assisted Fog-as-a-Service Framework

Ebrahim Abdulla Mattar (University of Bahrain, Bahrain); Pronaya Bhattacharya (Amity University, Kolkata, India); Pushan Kumar Dutta (Amity University Kolkata, India & Amity School of Engineering and Technology, India); Joel J. P. C. Rodrigues (Senac Fac of Ceará, Brazil)

Towards AI-Augmented Co-Compilation for Smart IoT Systems Through Domain-Specific LLMs

Federico Ciccozzi (Malardalen University, Sweden)

Monday, June 16 14:30 - 16:00

E3: Energy conversion and Energy Efficiency

Heat and mass transfer performance of heat pipe and evaporator coupled cooling system for building dehumidification

Wenke Zhao (Harbin Institute of Technology, China); Guohui Yang (Baicheng, China); Kaihan Xie, Bingxi Li and Yaning Zhang (Harbin Institute of

Technology, China)

Investigation of Sludge Drying Performances Using a Designed Microwave Thermogravimetric System

Kaihan Xie (Harbin Institute of Technology, China); Zhihong Liu (Tsinghua University, China); Wenke Zhao and Yaning Zhang (Harbin Institute of Technology, China)

The Effect of High-Resolution Wind Speed and Wind Direction Measurements on Dynamic Thermal Rating

Nika Mlinarič Hribar (Jožef Stefan Institute, Slovenia); Matjaž Depolli (Jozef Stefan Institute, Slovenia); Gregor Kosec (Jožef Stefan Institute, Slovenia)

XAI-OptiEV: Explainable DL Framework for Optical Fiber Fault Detection to Optimize Energy Efficiency at EV Charging Stations

Lakshit Pathak, Prachita Patel, Riya Upadhyay and Rajesh Gupta (Nirma University, India); Sudeep Tanwar (Nirma University & Institute of Technology, India); Kashif Saleem (King Saud University, Saudi Arabia); Joel J. P. C. Rodrigues (Senac Fac of Ceará, Brazil)

Study on the Effect of Silica Sand Method in Improving the Color of Non-Conforming Mixed Oil Distilled Diesel

Zijian Wang and Gang Deng (China Oil and Gas Pipeline Network Corporation, China); Yulin Zhou, Bohong Wang, Limei Gai and Zhipeng Yu (Zhejiang Ocean University, China)

Financial challenges and risk assessment for building renovation in nZEB standard: A case study

Margareta Zidar (Energy institute Hrvoje Požar, Croatia); Vlasta Zanki (University of Zagreb & Geotehnički Fakultet, Croatia); Marino Grozdek and Juraj Čukelj (University of Zagreb, Croatia)

Monday, June 16 14:30 - 16:00

EM3: Engineering Modelling - PART II

Assessment of steady-state temperature in a single-layer human body model: analytical approach

Enida Cero Dinarević (FESB, Bosnia and Herzegovina); Dragan Poljak (University of Split, Croatia)

Channel Model of Line-of-Sight Radio Propagation by Reflection over Lossy Ground for Cellular Networks

Zoran Blažević, Maja Škiljo and Dragan Poljak (University of Split, Croatia)

Dosimetric Analysis of Human Exposure in Near-Field Wireless Power Transfer Systems: A Comparison of Analytical and Numerical Methods

Petra Rasic, Zoran Blažević, Dragan Poljak and Maja Škiljo (University of Split, Croatia)

Transient Analysis of a Single-Channel Service System Operation with Positive and Negative Messages

Wojciech M Kempa and Patrycja Grabarz (Silesian University of Technology, Poland)

Semantic Usability of Digital Images - Ontology-Based Readability Assessment

Zeljka Tomasovic and Marijana Tomić (University of Zadar, Croatia)

Numerical comparison of natural frequencies with vortex separation frequencies of a laboratory model of a wind turbine blade

Stipe Pleština (University of Split, FESB, Croatia); Damir Sedlar (University of Split, Croatia)

Monday, June 16 14:30 - 16:00

P3: Building Efficiency

Effective Simulation and Study of Daylight, Human Comfort and Performance Outcomes in Building Design: A Case Study of Famagusta, Cyprus

James Bruno B Ochieng and Halil Zafer Alibaba (Eastern Mediterranean University, Cyprus)

Energy Performance and Carbon Reduction Effects of Triple-Glazed Windows in Green Remodeling

Hansol Lee (Korea Institute of Civil Engineering and Building Technology, Korea (South)); Kyeong-seok Choi (Korea Institute of Civil Engineering and Building Technology(KICT), Korea (South))

Energy Efficiency in Buildings: EPC and SRI as Enablers of Future Renovations

Boris Sucic and Goran Matesic (Jozef Stefan Institute, Slovenia)

A Dual Approach to Light Pipe Efficiency: Experimental Validation and Simulation Results

Dionysia Kolokotsa (Chemical and Environmental Engineering School, Technical University of Crete, Greece); Mat Santamouris (University of New South Wales, Australia)

Monday, June 16 14:30 - 16:00

RFID3: Special Session on Innovative Antennas and Intelligent Systems: Shaping the Future of RFID Application

Evaluation of Growing Skin Organoid Culture Utilizing RFID Tag

Mohammed S. Salim (University of Kent, United Kingdom (Great Britain) & University of Ninevah, Iraq); Alexander J Casson (The University of Manchester, United Kingdom (Great Britain)); Benito Sanz-Izquierdo and John Batchelor (University of Kent, United Kingdom (Great Britain))

Wireless Battery-Free Sensor Probe for Temperature/Humidity Measurement in Sustainable Pharmaceutical Blister

Adina B. Barba (Radio6ense Srl, Italy & University of Rome Tor Vergata, Italy); Nicola D'Uva (RADIO6ENSE srl, Italy); Sara Amendola (University of Rome Tor Vergata & Radio6ense srl, Italy); Gaetano Marrocco (University of Rome Tor Vergata, Italy); Cecilia Occhiuzzi (University of Roma Tor Vergata, Italy)

Digital Twin of Retail Environment Using RFID Particle Filter Localization

Christopher Turner, Dheeraj Bhaskaruni and Xiangyu Wang (Auburn University, USA); Jian Zhang (Kennesaw State University, USA); Shiwen Mao, Senthilkumar Periaswamy and Justin Patton (Auburn University, USA)

Numerical Analysis of Human Head Exposure to Electromagnetic Radiation Due to 5G Mobile Phones

Francesco P Chietera and Waleef Ullah Usmani (Polytechnic of Bari, Italy); Domenico Caggiano and Claudio Maria Lamacchia (IAMatek Srl, Italy); Gaetano Chimenti (IAMatek srl, Italy); Luciano Mescia (Polytechnic University of Bari, Italy)

Advancing Wireless Sensing: PEDOT Integration in High-Frequency RFID Sensors

Giovanni Andrea Casula (Università di Cagliari, Italy); Giovanna Mura and Giorgio Montisci (University of Cagliari, Italy); Paolo Maxia (INAF, Italy); Piero Cosseddu, Giuseppe Sforazzini, Antonello Mascia and Enrico Mattana (University of Cagliari, Italy)

Thue-Morse Code Implementation for the Design of a Concentric Hexagonal Ring Array

Waleef Ullah Usmani and Francesco P Chietera (Polytechnic of Bari, Italy); Luciano Mescia (Polytechnic University of Bari, Italy)

Monday, June 16 16:00 - 16:30

RFID P: Special Poster Session: "RFID/IoT Research Projects: Hardware and Software Solutions in Focus"

On-Device Dataset Distillation: The MNIST Use Case and Initial Experiments on Agri-Food product classification

Mohamed Riad Sebti (University Mediterranea of Reggio Calabria, Italy); Zohra Dakhia (University Mediterranea of Reggio Calabria, Italy & University Federico 2 of Naples, Italy); Antonella Macheda, Demetrio Iero, Mariateresa Russo and Massimo Merenda (University Mediterranea of Reggio Calabria, Italy)

SENNSE IoT-Driven Platform for Real-Time Environmental Monitoring: Network Design and Hardware Implementation

Mohamed Emara, Noushin Najafiragheb and Mohamed Ali Jaziri (ISPC-CNR, Italy); Riccardo Colella (National Research Council (CNR), Italy); Andrea Pandurino (National Research Council, Italy); Francesco Taurino (ISPC-CNR, Italy); Alberto Bucciero (CNR, Italy)

LiDAR and UWB Sensor Fusion for Improved Safety in Agricultural Work Sites

Andrea Motroni, Emanuele Tavanti and Paolo Nepa (University of Pisa, Italy); Danilo Monarca and Pierluigi Rossi (University of Tuscia, Italy); Davide Gattamelata, Daniele Puri and Leonardo Vita (Italian Institute for Insurance Against Accidents at Work - INAIL, Italy)

Precision in Contactless Respiratory Monitoring: Machine Learning-Based Algorithm Performance

Arnav Hari (IIT Ropar, India); Harsh Arora (IIIT Una, India); Simarpreet Singh (Thapar Institute of Engineering and Technology Patiala, India); Brijesh Kumbhani (IIT Ropar, India); Sam Darshi, Satyam Agarwal and Jyotindra Singh Sahambi (Indian Institute of Technology Ropar, India); Suksham Jain and Deepak Chawla (Government Medical College and Hospital, Chandigarh, India)

Flexible Phased Antenna Array for Ka-Band Applications: the WONDER Research Project

Domenico Caggiano (IAMatek Srl, Italy); Francesco P Chietera and Waleef Ullah Usmani (Polytechnic of Bari, Italy); Serafino Convertini (IAMatek srl, Italy); Claudio Maria Lamacchia (IAMatek Srl, Italy); Gabriele Incerti, Filippo Rossi and Paul Danca (RINA Consulting S.p.A., Italy); Giuseppe Cirillo (Elettronica S.p.A., Italy); Luciano Mescia (Polytechnic University of Bari, Italy)

Integrating Emerging Technologies for Comprehensive Healthcare Solutions: Early Insights from the BRILLIANCE Project

Massimo Merenda (University Mediterranea of Reggio Calabria, Italy); Martina Teresa Bevacqua (Università Mediterranea di Reggio Calabria, Italy); Riccardo Carotenuto (University "Mediterranea" of Reggio Calabria, Italy); Riccardo Colella (National Research Council (CNR), Italy); Massimo De Vittorio, Barbara Gili Fivela and Giuseppe Grassi (University of Salento, Italy); Giuseppe Martino (Università "Mediterranea" di Reggio Calabria, Italy); Vincenzo Mastronardi, Luigi Portaluri, Michele Scaraggi, Francesco Sigona and Luca Catarinucci (University of Salento, Italy)

DSTM: Dual-Strategy Framework for Energy and Thermal Management on Heterogeneous Multicore Systems-on-Chip

Milanpreet Kaur Sandhu and Suman Kumar (IIT Ropar, India)

Populating the Digital Twin of a Retail Store Using an RFID Autonomous Mobile Robot

Rafael Pous and Abdussalam Ali Alajami (Universitat Pompeu Fabra, Spain); Lluís Hernández and Álvaro Jiménez (Keonn Technologies, Spain)

Monday, June 16 16:30 - 18:00

AIoT2: Special session on Artificial Intelligence of Things and Edge Intelligence - PART II

Atomic Design for MLOps: A Modular Approach to Scalable and Reusable ML Pipelines

Asier Villar, Imanol Echeverria and Bruno Santidrian (Tecnalia, Spain); Mikel Emaldi (University of Deusto, Spain)

Bridging the Gap: Challenges and Limitations of Federated Learning in Real-World Applications

Vasilis Perifanis and Nikolaos Pavlidis (ATHENA Research Center, Greece); Foteini Nikolaidou and Despoina Kampouri (Indigma, Greece); Pavlos S. Efraimidis (Democritus University of Thrace & Athena Research Center, Greece)

Enhancing EV Charging Management with Dynamic Pricing and Edge Intelligence

Luka Gjurić, Gordan Jezic, Ivana Podnar Zarko and Mario Kusek (University of Zagreb, Croatia)

Dude, Who's Driving My Car? Detecting Familiar and Unfamiliar Drivers Using CAN Bus Data

Avery Elizabeth Oxendine (University of North Carolina Wilmington, USA); Hosam Alamleh and Damir Pulatov (University of North Carolina Wilmington, USA)

CAAFR: Comparative Analysis of Amazon and Flipkart Reviews

Joel A and M Kavacin (Dayananda Sagar College of Engineering, India)

Tuesday, June 17 8:30 - 10:00

E4: Power Engineering and power systems

Design of Dual Medium-Voltage Transformer Stations: Methodology Showcase
Matija Ištvanović, Vladimir Šimović and Antonio Cvetković (Zagreb University of Applied Sciences, Croatia)

Power System Fault Detection and Classification: Case Study with Large-Scale Grid Data
Adin Memić (University of Sarajevo, Bosnia and Herzegovina); Arman Ghaderi Baayeh and Michael Kleemann (KU Leuven, Belgium)

Analyzing Energy Consumption of Loihi 2 Neuromorphic Chip in a Self-driving Use-case
Adam Nagy (Budapest University of Technology and Economics, Hungary); Robert Szabo (Ericsson Hungary Ltd., Hungary); Laszlo Toka (Budapest University of Technology and Economics, Hungary)

Towards Sustainable Rural Electrification: Techno-Economic Feasibility Analysis & ML-Driven Distributed Energy Resource Planning
Hindesh Akash and Pushpendra Singh (Atria University, India); Mohan Kolhe (University of Agder, Norway)

Cybersecurity of Power Electronic Converters in Maritime Systems: Threat Landscape, Modeling, and Resilient Mitigation Strategies
Saeed Rahimpour (Tallinn University of Technology, Estonia); Mahtab Shahin and Sanja Bauk (Estonian Maritime Academy, Tallinn University of Technology, Estonia)

A Comparative Study Of Machine Learning Strategies To Reduce Computational Impact And Improve Sustainable Network Management
Harshit Chawla (Technological University of the Shannon, Ireland & Ericsson Ireland, Ireland); Enda Fallon and Sheila Fallon (Technological University of the Shannon, Ireland)

Tuesday, June 17 8:30 - 10:00

IoT1: Symposium on Internet of Things - General Track

A Review on 6G: Pioneering the Future of Wireless Communication
Camilla Zambetti, Giuseppe Montaruli and Daniele Piccolomo (Politecnico di Bari, Italy); Niko Makitalo (University of Helsinki, Finland); Marco Fiore and Marina Mongiello (Politecnico di Bari, Italy)

IoT-Enabled Pyranometer using LoRa Technology
Ivan Burazin and Antonio Vuletic (University of Split, Croatia); Tea Erceg (University of Split & FESB, Croatia); Tihomir Betti (University of Split, Croatia)

EngageMate: An IoT-Driven Platform for Monitoring Teacher Engagement and Classroom Dynamics
Oihane Gómez-Carmona and Martín Fernández-de-Retana (University of Deusto, Spain); Joan Navarro (La Salle Campus Barcelona, Universitat Ramon Llull, Spain); Xavier Solé-Beteta (La Salle - Universitat Ramon Llull, Spain); Diego Casado-Mansilla (University of Deusto, Spain); Diego López-de-Ipiña (Deusto Institute of Technology - DeustoTech, University of Deusto, Spain)

Path planning of Unmanned Aerial Vehicle flying at low height for Internet of Underground Things - Application to data collection of buried communicating sensor nodes in agriculture
Christophe Cariou (University of Clermont Auvergne & INRAE, France); Laure Moiroux-Arvis, Fatiha Bendali, Yuankang Hu and Jean Mailfert (University Clermont Auvergne, France)

Assessing Energy Consumption and Thermal Impact in IoT Edge Federated Learning
Davide Cantoro, Angela-Tafadzwa Shumba, Gianluigi Semeraro, Teodoro Montanaro, Ilaria Sergi, Davide Rollo and Mattia Cotardo (University of Salento, Italy); Massimo Merenda (University Mediterranea of Reggio Calabria, Italy); Luigi Patrono (University of Salento, Italy)

Tuesday, June 17 8:30 - 10:00

P4: Environmental Applications

Sensor Technology NoiSens for Noise Detection on Construction Sites
Boris Obrovski (University of Novi Sad, Serbia); Ivana Krtolica (The Institute for Artificial Intelligence Research and Development of Serbia, Serbia); Miljan Šunjević (Science Associate, Serbia); Vladimir Rajs (Faculty of Technical Sciences, Serbia)

Quantifying the urban meteorological implications of anthropogenic heat over Sydney city
Ansar Khan (University of Calcutta, Kolkata, India); Mat Santamouris (University of New South Wales, Australia)

Integrating Local Climate Zones into Urban Solar Photovoltaic Potential Assessment
Tsampika Dimitriou, Nikolaos Skandalos and Dimitris Karamanis (University of Patras, Greece)

EnvioDev - AIoT System for Real-Time Monitoring of Environmental Parameters in Smart Cities
Josip Balen (Josip Juraj Strossmayer University of Osijek, Croatia); Ivan Aleksi (FERIT Osijek, Croatia); Davor Damjanovic (Josip Juraj Strossmayer University of Osijek, Croatia); Antonio Antunović (FERIT Osijek, Croatia); Matej Arlovic (Josip Juraj Strossmayer University of Osijek, Croatia)

Tuesday, June 17 8:30 - 10:00

RFID4: Special Session on Technology for Life: revolutionizing Work, Health monitoring, and Safety with modern Electronics & Backscattering Communications

Wireless Automatic Inspection of Soil and Plants through RFID IoT devices

Glauco Cecchi, Andrea Ria, Andrea Motroni, Paolo Bruschi and Paolo Nepa (University of Pisa, Italy)

A CDS-compensated RC Relaxation Oscillator for Clock Generation in Single-Chip IoT Devices

Francesco Gagliardi (University of Pisa, Italy); Simone Contardi (University of Pisa, Italy & Sensichips Srl, Italy); Margherita Scognamiglio (University of Pisa, Italy); Iacopo Nannipieri (Sensichips Srl, Italy); Paolo Bruschi and Andrea Ria (University of Pisa, Italy)

Preliminary Analysis of Federated Learning in Agrifood: From MNIST to Real-World IoT Applications in a Heterogeneous Environment

Zohra Dakhia (University Mediterranea of Reggio Calabria, Italy & University Federico 2 of Naples, Italy); Alessia Lazzaro (Mediterranean University of Reggio Calabria, Italy); Mohamed Riad Sebti, Demetrio Iero, Mariateresa Russo and Massimo Merenda (University Mediterranea of Reggio Calabria, Italy)

Smarttendance: A BLE-Based Mobile Application for Real-Time Student Attendance Tracking

Luka Munivrana (University of Split, FESB, Croatia); Vladimir Plestina (University of Split, Croatia); Sven Gotovac (University of Split & FESB, Croatia)

Differential-mode Bandpass Filter with Wideband Behaviour Featuring Intrinsic Common-mode Suppression

Khaled Aliqab, Meshari Alsharari and Ammar Armghan (Jouf University, Saudi Arabia); Spyridon Nektatios Daskalkis (School of Engineering and Physical Sciences Institute of Sensors, Heriot Watt Un, United Kingdom (Great Britain))

Unseen Triggers: Exploiting Wireless Channels to Activate Dormant Malware in Air-gapped Critical Infrastructure

Hosam Alamleh and Ulku Clark (University of North Carolina Wilmington, USA); Bilge Karabacak (University of North Carolina Wilmington, USA & UNCW, USA)

Tuesday, June 17 14:30 - 16:00

IoT2: Workshop on IoT and AI for sustainable and smart services in healthcare - PART 1

Leveraging blockchain-based healthcare services with artificial intelligence

Lazar Marković, Aleksandra Trpkov and Danica Sovtić (University of Belgrade, Serbia); Branka Rodić (Academy of Applied Studies Belgrade, Serbia); Aleksandra Labus (University of Belgrade, Serbia)

Edge-Cloud Latency Optimization: A Priority-Based Scheduling Framework with Dynamic VM Allocation

Ebrahim Abdulla Mattar (University of Bahrain, Bahrain); Pushan Kumar Dutta (Amity University Kolkata, India & Amity School of Engineering and Technology, India); Pronaya Bhattacharya (Amity University, Kolkata, India); Joel J. P. C. Rodrigues (Senac Fac of Ceará, Brazil)

An Innovative Digital Twin Platform for Supporting Doctors and Patients Affected by Chronic Heart Failure

Teodoro Montanaro, Ilaria Sergi and Angela-Tafadzwa Shumba (University of Salento, Italy); Nadia Mammone and Cosimo Ieracitano (University Mediterranea of Reggio Calabria, Italy); Cosimo Distante (CNR, Italy); Alessia Bramanti and Marina Garofano (University of Salerno, Italy); Luigi Patrono (University of Salento, Italy)

Nephele - Remote Healthcare Services, Ultrasound Medical Device Dematerialization

Antonio Passalacqua (Esaote S.p.A., Italy); Alessandro Carrega (UNIGE, Italy & CNIT, Italy); Giacomo Pedemonte and Silvia Volta (Esaote S.p.A., Italy)

Analyzing the Impact of Non-IID Data on IoT-Enabled Federated Learning for ECG Arrhythmia Detection

Davide Cantoro, Angela-Tafadzwa Shumba, Gianluigi Semeraro, Teodoro Montanaro, Ilaria Sergi, Massimo De Vittorio and Luigi Patrono (University of Salento, Italy)

Tuesday, June 17 14:30 - 16:00

LC: Life Cycle Assessment, Digital Solutions, and Sustainable Practices in Building Design and Construction

AI-Assisted IoT Monitoring for Tracking Construction and Demolition Waste

Pavel Trávníček (České vysoké učení technické v Praze, Fakulta stavební, Czech Republic); Václav Nežerka (České vysoké učení technické v Praze, Czech Republic)

Comparison of energy and environmental labels of a refurbished building in Southern Italy

Antonio Gigante (University of Sannio, Italy); Rosa Francesca De Masi (Università degli Studi del Sannio, Italy); Alessandro Russo (University of Sannio, Italy); Dimitra Papadaki (University of Athens, Greece)

Recent Developments in Life Cycle Assessment Implementation in the EU: Advancing Sustainability Through Level(s) and the New European Bauhaus

Paris Fokaides (Frederick University, Cyprus)

Whole Life Cycle Analysis of Buildings: Carbon Sequestration Databases and Carbon Balances

Paris Fokaides and Evi Demetriou (Frederick University, Cyprus)

Renovation wave: Energy and environmental analysis of heat pumps and renewable energy systems for buildings

Effrosyni Giamia, Marios Efthymiadis and Elli Kyriaki (Aristotle University of Thessaloniki, Greece); Paris Fokaides (Frederick University, Cyprus); Agis Papadopoulos (Aristotle University of Thessaloniki, Greece)

Energy Efficiency vs. Smart Readiness: A Comparative Assessment of EPC and SRI in Building Renovations

Konstantinos Chatzikonstantinidis and Effrosyni Giamia (Aristotle University of Thessaloniki, Greece); Afroditi Zamanidou (University of Western Macedonia & IsZEB DIH, Greece); Konstantinos Giagkoulas, Achilleas Nikolaos Mertzimekis and Agis Papadopoulos (Aristotle University of Thessaloniki, Greece)

Tuesday, June 17 14:30 - 16:00

RFID5: Special Session on Exploring Hardware Aspects of Low Power Wireless Communication for IoT Applications Across Asia

Bluetooth Low Energy Antenna Design for Monitoring Applications

Radhika Raina (Indian Institute of Technology Ropar, India); Kamal Jeet Singh and Suman Kumar (IIT Ropar, India)

Enhanced Range Dual-Coil NFC Antenna System for Diverse Near Field Applications

Hafiz Usman Tahseen (CNR-Institute for Microelectronics and Microsystems, Italy); Luca Catarinucci (University of Salento, Italy); Riccardo Colella (CNR, Italy); Chiara De Pascali and Vanessa Esposito (CNR-IMM, Italy); Luca Francioso (CNR- Institute for Microelectronics and Microsystems, Italy)

Circularly Polarised RFID Reader Antenna with an Integrated Power Divider

Radhika Raina (Indian Institute of Technology Ropar, India); Kamal Jeet Singh and Suman Kumar (IIT Ropar, India)

Transformation of Vehicular Networks through Machine Learning: Challenges and Opportunities

Sameer Kumar Singh (IIT Ropar, Rupnagar, India); Nishant Gupta (Linköping University, India); Rohit Singh (Dr B R Ambedkar National Institute of Technology Jalandhar, India); Brijesh Kumbhani and Arnav Hari (IIT Ropar, India)

Enhancing UAV Network Security: Machine Learning for DDoS Attack Detection

Ishita Sharma (IIT Ropar, India); Satyam Agarwal and Shashi Shekhar Jha (Indian Institute of Technology Ropar, India)

Radio Frequency Identification Reader Antenna Design for Tracking Applications

Radhika Raina (Indian Institute of Technology Ropar, India); Kamal Jeet Singh and Suman Kumar (IIT Ropar, India)

Wednesday, June 18 9:30 - 11:00

E5: Energy systems and technologies II

Evaluation of a Geothermal-Driven Multigeneration System for Energy, Hydrogen and Fresh Water Production with LNG Cold Energy Recovery

Serpil Celik-Toker (Isparta University of Applied Sciences Isparta Turkey, Turkey); Onder Kizilkan (Isparta University of Applied Sciences, Turkey); Sandro Nizetic (University of Split, FESB, Croatia)

A Comprehensive Thermodynamic Analysis of a Solar-Assisted Multigeneration System with Partial Cooling-Reheating sCO₂ Brayton Cycle

Serpil Celik-Toker (Isparta University of Applied Sciences Isparta Turkey, Turkey); Onder Kizilkan (Isparta University of Applied Sciences, Turkey)

Challenges associated with the modeling of large-scale PTES - literature review

Vladimir Muncan (University of Novi Sad, Serbia); Igor Mujan (University of Novi Sad - Faculty of Technical Sciences, Serbia); Aleksandar Andjelkovic (University of Novi Sad, Serbia); Dusan J Macura (Public Utility Company Novi Sad Heating Plant, Serbia)

HYSYS and PSO Integrated Method for Mixed Oil Distillation Quality Control

Mingyue Xiao and Gang Deng (China Oil and Gas Pipeline Network Corporation, China); Yulin Zhou, Bohong Wang, Limei Gai and Zhipeng Yu (Zhejiang Ocean University, China); Toshov Javokhir Buriyevich (Tashkent State Technical University, Uzbekistan)

Contribution to Process Development and Energy Efficiency of Beeswax Sterilization

Marko Gložinić (University North, Croatia); Mato Perić and Ante Čikić (University North Varaždin, Croatia)

Bridging Gaps in Indoor Air Quality Integration - Research on Croatia's Construction Sector

Vlasta Zanki (University of Zagreb & Geotehnički Fakultet, Croatia); Franciska Erdelj (Green Building Council Croatia, Croatia)

Wednesday, June 18 9:30 - 11:00

IoT3: Workshop on IoT and AI for sustainable and smart services in healthcare - PART II

A Novel Multi-Resolution Heart Rate Variability Analysis for IoT-based Drowsiness Detection: Preserving Temporal Trends in Features Series

Hossem Eddine Hafidi (University of Salento, Italy); Elisabetta De Giovanni (BCAM, Spain); Teodoro Montanaro, Ilaria Sergi, Massimo De Vittorio and Luigi Patrono (University of Salento, Italy)

IMU-Based Energy Expenditure Estimation for Various Walking Conditions Using TranSE

Abdelkarim Mamen, Teodoro Montanaro and Ilaria Sergi (University of Salento, Italy); Enrico Junior Schioppa (Inmatica S.p.A., Italy); Luigi Patrono (University of Salento, Italy)

A protocol for balance and mobility training via sensorized movement analysis

Dario Ghezzi (National Research Council of Italy, Italy); Filippo Palumbo (National Research Council (CNR), Italy)

Smart Hearing Protection System based on IoT and AI for Industrial Noisy Environments

Davide Rollo, Mattia Cotardo, Ilaria Sergi, Teodoro Montanaro and Hossem Eddine Hafidi (University of Salento, Italy); Luca Landi (University of Perugia, Italy); Raffaele Mariconte and Claudia Giliberti (Inail, Italy); Luigi Patrono (University of Salento, Italy)

Wednesday, June 18 9:30 - 11:00

P5: AI Applications

Will Technology Replace Humans? The Impact of Technological Advancements on Healthcare

Nikola Pavlović (School of Medicine, University of Split, Croatia); Katarina Vukojevic (University of Split, Croatia); Ivana Šolić (University Hospital Split, Croatia)

AI Assistant as Support to the Pathologist: A Machine Learning Approach

Ivana Krtolica (The Institute for Artificial Intelligence Research and Development of Serbia, Serbia); Aleksandra Čavić (Economy and Engineering Management in Novi Sad, Serbia); Boris Obrovski (University of Novi Sad, Serbia); Miljan Šunjević (Science Associate, Serbia); Milena Šunjević and Dragana Tegeltija (University of Novi Sad, Serbia)

Streamlining EU Regulatory Processes for High-Risk and Innovative Medical Devices and In Vitro Diagnostic Medical Devices

Ružica Bandić, Nensi Bralić, Miro Vuković and Ana Marušić (University of Split School of Medicine, Croatia)

Assessing the Role of AI in Project Risk Management: How Much Can AI Support Project Managers and Overcome Human Limitations?

Cinzia Battistella (University of Udine, Italy); Fabio Nonino (University of Rome La Sapienza, Italy); Alessandro Pompei (CASD, Italy)

Wednesday, June 18 9:30 - 11:00

SC1: Smart City - Energy Modeling

Multi-Voltage Performance Analysis and Quality Index Development for DC EV Charging Systems using Ripple Measurement

Jeykishan Kumar K (CPRI, India)

Smart Charging of V2G-Enabled EVs in Positive Energy Districts with Shared Energy Storage

Jernej Hribar (Jozef Stefan Institute, Slovenia); Mihael Mohorcic (Jozef Stefan Institute & Jozef Stefan International Postgraduate School, Slovenia); Andrej Čampa (Comsensus, Slovenia)

Wind Field Estimation by Disparate Data Harmonization and Clustering: A Case Study in SplitDalmatia County

Mateo Radić (University of Split, Croatia); Ljiljana Šerić (University of Split, FESB, Croatia); Marin Bugarić (University of Split, Croatia); Selena Knežić Buhovac (University of Mostar & University of Split, Bosnia and Herzegovina)

Evaluating Time Series Models for Urban Wastewater Management: Predictive Performance, Model Complexity and Resilience

Vipin Singh (Berlin University of Applied Sciences and Technology, Germany); Tianheng Ling (University of Duisburg-Essen, Germany); Teodor Chiaburu (Berlin University of Applied Sciences and Technology, Germany); Felix Biessmann (Berlin University of Applied Science, Germany)

Adaptive Safety Modeling for Improved Battery Protection via Integrated State-of-Safety Estimation

Changwoo Kim and Hyo-Sub Choi (Korea Electronics Technology Institute, Korea (South))

Thursday, June 19 9:00 - 10:30

BD1: Advanced Materials and Technologies for Thermal Management

Social energy demand: Environmental Quality in Mayan Indigenous Communities from Mexico

Claudia Eréndira Vázquez-Torres (Autonomous University of Yucatán, Mexico); Leticia Ozawa-Meida (De Montfort University, United Kingdom (Great Britain)); Renan Quijano Cetina (Universidad Autonoma de Yucatan, Mexico); Marcos Gonzalez Trevizo (Universidad Autonoma del Estado de Baja California, Mexico)

The Royal Site of Carditello: energy design for the conservation of culture and the resilience of the architectural heritage

Teresa Iovane and Giuseppe Aruta (Università degli Studi di Napoli Federico II, Italy); Fabrizio Ascione (Università degli studi di Napoli Federico II, Italy); Claudia Colosimo, Filippo De Rossi, Gerardo Maria Mauro and Margherita Mastellone (Università degli Studi di Napoli Federico II, Italy); Anna Iaccheo (External Collaboration, Italy)

Thermal comfort and energy consumption in prisons: the case of an Italian historical building

Margherita Mastellone, Filippo De Rossi, Giuseppe Aruta, Teresa Iovane and Sara Riccardi (Università degli Studi di Napoli Federico II, Italy); Fabrizio Ascione (Università degli studi di Napoli Federico II, Italy); Maria Rosaria Santangelo (Università degli Studi di Napoli Federico II, Italy)

Indoor thermal analysis for energy and cultural heritage interaction

Tullio de Rubeis (University of L'Aquila, Italy); Francesco Smarra (University of L'Aquila, Italy); Giovanni Pasqualoni (University of L'Aquila Italy, Italy); Fabio Franchi, Alessandro D'Innocenzo and Dario Ambrosini (University of L'Aquila, Italy)

Opaque ventilated façade (OVF) with electricity conversion: analyses on a real installation

Fabrizio Ascione (Università degli studi di Napoli Federico II, Italy); Rosa Francesca De Masi (Università degli Studi del Sannio, Italy); Valentino Festa (University of Sannio, Italy); Teresa Iovane and Margherita Mastellone (Università degli Studi di Napoli Federico II, Italy); Silvia Ruggiero (Università degli Studi del Sannio, Italy); Francesco Tariello (Università degli Studi del Molise, Italy); Giuseppe Peter Vanoli (Università degli studi del Molise, Italy)

Projected Inefficiencies of Passive Cooling: Rethinking Urban Heat Mitigation for a Warmer World

Mat Santamouris (University of New South Wales, Australia)

Thursday, June 19 9:00 - 10:30

CS1: Humanized Computing: Citizen Science, Co-creation, and Emerging Technologies for Human-Centric Decisions - PART I

A Strategy for Enhancing Privacy and Usability of Crowdsourced Data

David Wolosiuk and Milena Vuckovic (VRVis GmbH, Austria); Jan Peters-Anders (AIT Austrian Institute of Technology GmbH, Austria); Felipe Vergara and Ruben Sanchez-Corcuera (University of Deusto, Spain); Diego López-de-Ipiña (Deusto Institute of Technology - DeustoTech, University of Deusto,

Spain)

Developing a Tool for Profiling End-User Participation in Citizen Science to Enhance Engagement

Diego Casado-Mansilla (University of Deusto, Spain); Dorottya Varga (VUB, Belgium); Isabel Casas and Unai Hernández-Jayo (University of Deusto, Spain); Perle Petit (VUB, Belgium); Sofia Garcia-Torres (University of Deusto, Spain); Diego López-de-Ipiña (Deusto Institute of Technology - DeustoTech, University of Deusto, Spain)

Stress-Testing Citizen Science at Scale: Performance Insights from the GRENCROWD Platform

Felipe Vergara (University of Deusto, Spain); Diego López-de-Ipiña (Deusto Institute of Technology - DeustoTech, University of Deusto, Spain); Mikel Emaldi (University of Deusto, Spain); Cristian Olivares-Rodríguez (Universidad Alberto Hurtado, Chile); Dawid Wolosiuk and Milena Vuckovic (VRVis GmbH, Austria)

Validating a Citizen Observatories enabling Platform by completing a Citizen Science Loop

Diego López-de-Ipiña (Deusto Institute of Technology - DeustoTech, University of Deusto, Spain); Dawid Wolosiuk (VRVis GmbH, Austria); Felipe Vergara, Mikel Emaldi and Ruben Sanchez-Corcuera (University of Deusto, Spain); Alex Barco (Universidad de Deusto, Spain); Milena Vuckovic (VRVis GmbH, Austria); Diego Casado-Mansilla (University of Deusto, Spain); Jan Peters-Anders (AIT Austrian Institute of Technology GmbH, Austria)

Bridging the Gap: Integrating Crowdsourced Data with Structured Analytics for Adaptive EV Charging Infrastructure

Evgenia Kapassa (Neapolis University Pafos, Cyprus & Innov-Acts, Cyprus); Marios Touloupou (Cyprus University of Technology, Cyprus); Elena Kakoulli (Neapolis University Pafos, Cyprus)

AmlAire: A Citizen Science and Action Research Initiative for Air Quality Monitoring and Behavioral Change

Ibai Gomez (University of Deusto, Spain); Syed Mohsin Ali Shah (University of Deusto, Bilbao Spain, Spain); Diego Casado-Mansilla (University of Deusto, Spain); Diego López-de-Ipiña (Deusto Institute of Technology - DeustoTech, University of Deusto, Spain)

Thursday, June 19 9:00 - 10:30

EMB1: Energy modelling of public buildings and HVAC systems for energy & comfort performance assessment and near real-time control

Processing of occupancy signals for building energy model

Iker Gutierrez (University of the Basque Country, Spain); Roberto Garay-Martinez (Universidad de Deusto, Spain)

Prediction horizon error analysis in thermal consumption models for control applications

Iñigo Lopez-Villamor (TECNALIA, Basque Research and Technology Alliance (BRTA), Spain); Olaia Eguiarte (University of the Basque Country, Spain); Beñat Arregi (TECNALIA, Basque Research and Technology Alliance (BRTA), Spain); Antonio Garrido Marijuan (TECNALIA, Spain); Roberto Garay-Martinez (Universidad de Deusto, Spain)

Application of resistance-capacitance (RC) models to predict soil surface temperature: A case study in the Netherlands

Iñigo Lopez-Villamor (TECNALIA, Basque Research and Technology Alliance (BRTA), Spain); Olaia Eguiarte (University of the Basque Country, Spain); Beñat Arregi (TECNALIA, Basque Research and Technology Alliance (BRTA), Spain); Roberto Garay-Martinez (Universidad de Deusto, Spain); Juan Pablo Aguilar and Leonardo Duarte (Delft University of Technology, The Netherlands)

Impact of pavement material properties on radiant heat exchanges with the built environment

Beñat Arregi, Iñigo Lopez-Villamor and Diego Zamora-Sánchez (TECNALIA, Basque Research and Technology Alliance (BRTA), Spain); Roberto Garay-Martinez (Universidad de Deusto, Spain)

Thursday, June 19 9:00 - 10:30

IoT4: Special Session on Artificial Intelligence and Deep Learning applied to Smart Environments

Effects of Shading Elements on Daylighting for Buildings

Mustapha Jamo Suleiman and Halil Zafer Alibaba (Eastern Mediterranean University, Cyprus)

Deep Learning for UAV Classification: Impact of Noise and Multipath Fading in RF Signals

Prajoy Podder, Maciej Zawodniok and Sanjay Madria (Missouri University of Science and Technology, USA)

Design of Remote Monitoring System for Biomass Boiler Fuel Based on CNN

Haiyun Wu, Yaxin Wang, Shide Li, Yang Li, Fanzhen Wang and Yongcheng Jiang (Tianjin Agricultural University, China)

RHEA: Residential Home Energy Advisor

Nikolaos Virtsionis Gkalinikis (Aristotle University of Thessaloniki, Greece & NET2GRID, Greece); Chrstoforos Nalmpantis (Aristotle University of Thessaloniki, Greece); Spyridon Chatzigeorgiou, Christos Athanasiadis and Dimitrios Doukas (NET2GRID BV, Greece); Dimitris Vrakas (Aristotle University of Thessaloniki, Greece)

Multi-Dimensional IoT-Based Energy Management Approach for Smart Homes: A Unified Model for Comfort and Energy Efficiency

Muhammad Ans, Teodoro Montanaro and Ilaria Sergi (University of Salento, Italy); Ahmad Alsharoa (Missouri University of Science and Technology, USA); Miriam Pezzuto (Parsec326, Italy); Luigi Patrono (University of Salento, Italy)

Comparative Analysis of YOLOv7 with Modified Mosaic Augmentation Against YOLOv8-11 for Object Detection in Unbalanced Datasets

Boris Gašparović (University of Rijeka, Croatia); Jonatan Lerga (University of Rijeka, Croatia & University of Rijeka, Center for Artificial Intelligence and Cybersecurity, Croatia)

Sparse Temporal AutoEncoder for ECG Anomaly Detection

Radia Daci (Consiglio Nazionale delle Ricerche, Italy); Abdelmalik Taleb-Ahmed (IEMN DOAE UMR CNRS 8520, Université Polytechnique Hauts-de-France, Algeria); Cosimo Distanto (CNR, Italy); Luigi Patrono (University of Salento, Italy)

Thursday, June 19 11:30 - 13:00

BD2: Cultural and Historical Considerations under Energy and Climate Constraints

Assessment of an adaptive control system for heating systems in multi-family buildings

Alicja Siuta-Oлча, Tomasz Cholewa and Martyna Bocian (Lublin University of Technology, Poland); Krawczyk D A (Białystok University of Technology, Poland); Bożena Babiarczyk (Rzeszów University of Technology, Poland); Anna Werner-Juszczuk and Beata Sadowska (Białystok University of Technology, Poland); Joanna Krasoń (Rzeszów University of Technology, Poland); Piotr Rynkowski and Dorota Gawryluk (Białystok University of Technology, Poland); Przemysław Miąsik (Rzeszów University of Technology, Poland); Maciej Kłopotowski (Białystok University of Technology, Poland)

Impact of building envelope retrofit on primary energy consumption for space cooling with climate change

Francesca Villano (Università degli Studi del Sannio, Italy); Fabrizio Ascione (Università degli studi di Napoli Federico II, Italy); Tomasz Cholewa (Lublin University of Technology, Poland); Rosa Francesca De Masi (Università degli Studi del Sannio, Italy); Gerardo Maria Mauro (Università degli Studi di Napoli Federico II, Italy); Silvia Ruggiero (Università degli Studi del Sannio, Italy)

Hourly scaling down of an in-house annual energy demand estimation method: A novel approach for hourly heating consumption analysis

Giuseppe Aruta (Università degli Studi di Napoli Federico II, Italy); Fabrizio Ascione and Nicola Bianco (Università degli studi di Napoli Federico II, Italy); Teresa Iovane and Margherita Mastellone (Università degli Studi di Napoli Federico II, Italy); Sandro Nizetic (University of Split, FESB, Croatia); Francesco Tariello (Università degli Studi del Molise, Italy); Giuseppe Peter Vanoli (Università degli studi del Molise, Italy)

Holistic framework for household energy management services

Georgios Korpakakis (National Technical University of Athens, Greece); Alexios Lekidis (University of Thessaly, Greece); Ioannis Papias and Nikos Dimitropoulos (NTUA, Greece); Filippos Serepas (Holistic sa, Greece); Vangelis Marinakis (National Technical University of Athens, Greece)

Tuning Energy Performance Certificate and Smart Readiness Indicator to achieve full potential: methods used in tunES Project

Tomasz Cholewa (Lublin University of Technology, Poland); Laura Canale (University Mercatorum & University of Cassino and Southern Lazio, Italy); Rune Korsholm Andersen (Technical University of Denmark, Denmark); Georg Vogt (Empirica GmbH Bonn, Germany); Martyna Bocian and Alicja Siuta-Oлча (Lublin University of Technology, Poland); Giorgio Ficco (University of Cassino and Southern Lazio, Italy); Luca Zaniboni (Technical University of Denmark, Denmark); Tatiana Novikova (Empirica GmbH Bonn, Germany); Amelia Staszowska, Marzenna Róża Dudzińska and Sławomira Maria Dumała (Lublin University of Technology, Poland); Jorn Toftum and Orgun Berk Kazanci (Technical University of Denmark, Denmark); Marco Dell'Isola (University of Cassino and Southern Lazio, Italy)

EFI-DSS: A Machine Learning-based Decision Support System for Energy Efficiency Investments in Buildings

Vasilis Michalakopoulos, Georgios Korpakakis, Sotiris Pelekis, Vagelis Karakolis, Spiros Mouzakitis and Dimitris Askounis (National Technical University of Athens, Greece)

Performance Optimization of Air-Solar Dual-Source Heat Pumps: Comparative and Parametric Analysis

Miriam di Matteo, Costanza Vittoria Fiorini and Andrea Vallati (Sapienza University of Rome, Italy)

Thursday, June 19 11:30 - 13:00

CS2: Humanized Computing: Citizen Science, Co-creation, and Emerging Technologies for Human-Centric Decisions - PART II

An Evaluation of Large Language Models for Code Optimization

Endika Tapia, Unai Lopez-Novoa, Leonardo Sastoque Pinilla and Luis Norberto López de Lacalle (University of the Basque Country, Spain)

Citizen Science for Sustainable Energy Transition and Air Quality: Social Perception and Evidence-Based Policymaking in Krzywczka (Poland)

Monika Peplowska (Mineral and Energy Economy Research Institute of the Polish Academy of Sciences, Poland & Instytut Gospodarki Surowcami Mineralnymi i Energią PAN, Poland); Wit Hubert and Dominik Kryzia (Mineral and Energy Economy Research Institute of the Polish Academy of Sciences, Poland); Wojciech Kowalik (AGH University, Poland)

An Exploratory Study of Digital Literacy and Proficiency Challenges in Citizen-Based Initiatives

Milena Vuckovic and Dawid Wolosiuk (VRVis GmbH, Austria); Ruben Sanchez-Corcuera (University of Deusto, Spain); Diego López-de-Ipiña (Deusto Institute of Technology - DeustoTech, University of Deusto, Spain)

Developing Science and Technology in Rural Areas Using Remote Experiments. The Experience of Project R3: Rural, Remote and Real

Javier Garcia-Zubia (University of Deusto, Spain & Universidad de Deusto, Spain); Veronica Canivell, Marcelo Leslabay, Cristina Gimenez-Elorriaga, Nora Gallastegi, Giovanna Lani and Ander Herrero-Pascual (University of Deusto, Spain); Diego López-de-Ipiña (Deusto Institute of Technology - DeustoTech, University of Deusto, Spain); Luis Rodriguez-Gil (LabsLand, Spain)

Leveraging Virtual Reality to Promote Bystander Education for a Safer Pakistan

Furqan Arshad (University of California, Davis, USA); Suleman Shahid (Lums, Pakistan); Hafiz Muhammad Abubakar (Beaconhouse National University, Pakistan); Usman Nazir (Beaconhouse National University, Lahore, Pakistan)

Visual Literacy in the Age of Generative AI: Lessons from a Public Quiz and Student Workshops

Martina Dragijja Ivanović (University of Zadar, Croatia)

A Transformer-Based Approach to Analyzing Public Opinion and Political Trends

Jon Gardeazabal-Gutiérrez (Spain); Miguel Fernandez-De-Retana (Basque Center for Applied Mathematics (BCAM), Spain); Aritz Bilbao-Jayo (University of Deusto, Spain)

Thursday, June 19 11:30 - 13:00

EMB2: Energy modelling of buildings and HVAC systems for energy & comfort performance assessment and near real-time control - PART I

Energy consumption in a multi-family residential building

Martyna Bocian, Tomasz Cholewa and Alicja Siuta-Oлча (Lublin University of Technology, Poland); Krawczyk D A (Bialystok University of Technology, Poland); Bożena Babiarczyk (Rzeszow University of Technology, Poland); Anna Werner-Juszczuk and Beata Sadowska (Bialystok University of Technology, Poland); Joanna Krasoń (Rzeszow University of Technology, Poland); Piotr Rynkowski and Dorota Gawryluk (Bialystok University of Technology, Poland); Przemysław Miąsik (Rzeszow University of Technology, Poland); Maciej Kłopotowski (Bialystok University of Technology, Poland)

Optimization of Life Cycle Energy in an Educational Building: A Case Study of an Elementary School in Niš

Vladan S. Jovanović (University of Niš, Serbia); M. Stojiljković (University of Nis, Serbia); Marko Ignjatović and Dušan J. Randelović (University of Niš, Serbia); Aleksandar Andjelković (University of Novi Sad, Serbia)

Energy Efficiency and Indoor Microclimate in Balloon Halls: A Case Study on Thermal Stability and Ventilation Simulation

Dušan J. Randelović, Miomir Vasov, Dragan Kostić, Vladan S. Jovanović and Jelena Savić (University of Niš, Serbia); Aleksandar Andjelković (University of Novi Sad, Serbia)

Comparison between PMV and modified PMV indices in the context of thermal comfort assessment and predicted productivity loss

Anton Kerčov (University of Belgrade, Serbia); Tamara Bajc (University of Belgrade Faculty of Mechanical Engineering, Serbia); Maja Todorović (University of Belgrade, Serbia)

Phase Change Materials as Solution for Cooling Energy Efficiency and Thermal Comfort in Mosque Buildings

Ahmet Yuksel (Yalova University, Turkey); Muslum Arici (Kocaeli University, Turkey); Michal Krajčík (Slovak University of Technology, Slovakia); Mihriban Civan (Kocaeli University, Turkey); Sandro Nizetic (University of Split, FESB, Croatia); Hasan Karabay (Engineering Faculty, Kocaeli University, Turkey)

Thursday, June 19 11:30 - 13:00

IoT5: Special Session on Big Data and IoT Special

Performance of Edge and Cloud-based Large Language Models in Smart Spaces

Aygün Varol (Tampere University, Finland); Naser Hossein Motlagh (University of Helsinki, Finland); Mirka Leino (Satakunta University of Applied Sciences, Finland); Johanna Virkki (Tampere University, Finland)

A Real-Time IoT-Based System for Solar Energy Forecasting and Automated Anomaly Notifications

Giuseppe Del Fiore, Giacomo Erroi, Maria Luisa Belcuore, Ilaria Sergi, Teodoro Montanaro and Luigi Patrono (University of Salento, Italy)

Enhancing Network Observability and QoS Provisioning for Industrial Scenarios: A Unified Architecture with Event-Triggered Server Logic

Géza Szabó (Ericsson Research, Hungary); Boldizsár Bunda (Ericsson Hungary, Hungary); József Varga (Ericsson Research, Hungary); Marcell Balogh (Ericsson Research)

Combining IoT and AI technologies to improve safety in noisy industrial environments

Mattia Cotardo, Davide Rollo, Ilaria Sergi, Teodoro Montanaro and Giuseppe Del Fiore (University of Salento, Italy); Raffaele Mariconte and Claudia Giliberti (Inail, Italy); Luca Landi (University of Perugia, Italy); Luigi Patrono (University of Salento, Italy)

Data Harmonization as a Keystone for IoT-Enabled Data Spaces: Challenges, Techniques, and Future Trends

Josu Díaz-de-Arcaya (TECNALIA, Basque Research and Technology Alliance (BRTA), Spain); Asier Garcia-Perez (TECNALIA, Basque Research & Technology Alliance (BRTA), Spain); Lander Bonilla (Tecnalia, Basque Research and Technology Alliance (BRTA), Spain & Deusto University, Spain); Raúl Miñón and Ana Isabel Torre-Bastida (TECNALIA, Basque Research and Technology Alliance (BRTA), Spain)

EcoSentinel: Towards A Techno Natural Internet of Things Approach for Large Scale Sustainable Remote Monitoring of Soil and Wilderness

Joan Navarro (La Salle Campus Barcelona, Universitat Ramon Llull, Spain); Alan Briones (La Salle Campus BCN - Ramon Llull University, Spain); Agustín Zaballos (Enginyeria La Salle - Universitat Ramon Llull, Spain); Daniël Groen, Marjolein Helder and Hadi Rajaei (Plant-e, The Netherlands); Jaume Anguera (Ignion & Universitat Ramon Llull, Spain); Aurora Andújar (Ignion, Spain); Armando Carpaneto and Enrica Roccotiello (University of Genova, Italy); Leonardo Lizzi and Davide Brunelli (University of Trento, Italy); Cécile Belleudy (Université Côte d'Azur, Nice, France); Fabien Ferrero (Université Cote d'Azur, CNRS, LEAT & CREMANT, France)

Thursday, June 19 15:30 - 17:00

BD3: Smart Systems and Energy Optimization in Buildings

Structural Optimization of Internal Heat Sources and its effect on the Melting Behavior of Solid PCM in a Single Tank

Hongtao Li (Hebei University of Science and Technology, China)

Effects of pyrolysis conditions and biochar concentrations on promoting ethanol production from corn straw fermentation

Xiaohong Su, Xuguang Wang, Wei Liu, Ruru Huo and Jia Lu (Heilongjiang Energy and Environment Research Institute, China)

Study on self-driven seepage migration of pore water in temperature-sensitive porous media

Fei Xu (China Jiliang University, Hangzhou, Zhejiang Province, China); Tao Lin (China Jiliang University, China); Yunan Li and Wei Hu (China Jiliang University, Hangzhou, Zhejiang Province, China); Xiaoyan Gao (China Jiliang University, China); Fubing Bao (China Jiliang University, Hangzhou, Zhejiang Province, China); Chaoqun Shen (Yangzhou University, China)

Experimental Evaluation of Thermal Conductivity of Straw Fiber Insulation Panels as a Function of the Relative Humidity

Eugenia Rossi di Schio (Università di Bologna, Italy); Vincenzo Ballerini (Alma Mater Studiorum University of Bologna, Italy); Tawfiq Chekifi (CDER-URAER & Research Centre in Industrial Technologies CRTI, Algeria); Michele Mandes and Razi Khan (Alma Mater Studiorum University of Bologna, Italy); Giampietro Fabbri (Alma Mater Studiorum - University of Bologna, Italy); Paolo Valdiserri (Università di Bologna, Italy)

Experimental Evaluation of Hemispherical Solar Still Performance Using Aluminum and Galvanized Steel Floral Ring Inserts

Reski Khelifi (URAER-CDER, Algeria); Tawfiq Chekifi (CDER-URAER & Research Centre in Industrial Technologies CRTI, Algeria); Eugenia Rossi di Schio and Paolo Valdiserri (Università di Bologna, Italy); Khaled Touafek (Renewable Energies Applied Research Unit, Algeria)

Ventilated façade as building retrofit solution: preliminary thermal model and comparison of energy performance in different climatic regions

Costanza Vittoria Fiorini, Miriam di Matteo, Filippo Tovoli and Andrea Vallati (Sapienza University of Rome, Italy)

A novel shape stabilized phase change material based on Co/Zn co-modified porous carbon for thermal storage and photothermal conversion

Junchi Wang (Shandong Jianzhu University, China); Xiaoling Ma (University of Birmingham, United Kingdom (Great Britain)); Ndzonelelo Bingwa (University of South Africa, South Africa); Rongren Liu, Yue Xu, Baoshu Tang, Qiangqiang Xiao, Guoning Li and Hui Li (Shandong Jianzhu University, China)

Thursday, June 19 15:30 - 17:00

EMB3: Energy modelling of buildings and HVAC systems for energy & comfort performance assessment and near real-time control - PART II

Energy Metering Assignment Algorithm for Unsteady Natural Gas Pipeline Network Based On Local Nodes

Yunan Li and Tao Lin (China Jiliang University, China); Wei Hu, Fei Xu and Fubing Bao (China Jiliang University, Hangzhou, Zhejiang Province, China); Xiaoyan Gao (China Jiliang University, China)

Operational Characteristics of Multi-Energy Complementary Heating System in Medium-Deep Ground Source Heat Pump Applications

Duotong Lin, Shuai Huang, Jiankai Dong and Yiqiang Jiang (Harbin Institute of Technology, China)

Design, Fabrication, and Evaluation of Novel 3D-Printed Thermal Metamaterials for Energy Optimization in Sustainable Buildings

Sergio Ruiz González (University of La Rioja (Spain), Spain); Vanesa Estremera Carrera (Public University of Navarre, Spain); Ruben Lostado-Lorza and Saúl Iñiguez Macedo (University of La Rioja, Spain)

Comprehensive Revision of the Feasibility of Impact Monitoring of Possitive Energy Districts

José L. Hernández and Andrea Gabaldón (Fundación CARTIF, Spain); Roberto Garay-Martinez, Ainhoa Arriazu and Asier Divasson (Universidad de Deusto, Spain)

Automated Assessment of Building Carbon Footprint Through the Integration of Material Emission Factor Databases in a BIM Environment

Sanja Dubljević (University of Novi Sad, Serbia); Aleksandra Stefanović (NET ZERO DOO, Serbia); Bojan Tepavčević (University of Novi Sad, Serbia); Miljan Šunjević (Science Associate, Serbia); Aleksandar Andjelkovic (University of Novi Sad, Serbia)

Digital Transformation of Public Building Green Remodeling: A UBEM-Based Evaluation Framework

Suin Lee (Korea Institute of Civil Engineering and Building Technology, Korea (South)); Jae-Sik Kang (Korea Institute of Civil Engineering and Building Technology(KICT), Korea (South)); Hosang Ahn (Korea Institute of Civil Engineering and Building Technology, Korea (South))

Thursday, June 19 15:30 - 17:00

IoT6: Session on Blockchain applications and Cybersecurity solutions for IoT Systems

Dynamic Temporal Positional Encodings for Early Intrusion Detection in IoT

Ioannis Panopoulos, Maria-Lamprini Bartsioka and Sokratis Nikolaidis (National Technical University of Athens, Greece); Stylianos Venieris (Samsung AI, United Kingdom (Great Britain)); Dimitra I Kaklamani and Iakovos S. Venieris (National Technical University of Athens, Greece)

U-FIRST: Transformer-based Framework for Secure and Intelligent UAV Communication in Battlefield Environment Underlying 5G

Lakshin Pathak, Shivanshi Bhatt, Shreya Bhatia and Rajesh Gupta (Nirma University, India); Sudeep Tanwar (Nirma University & Institute of Technology, India); Jitendra Bhatia (Nirma University, India); Kashif Saleem (King Saud University, Saudi Arabia); Joel J. P. C. Rodrigues (Senac Fac of Ceará, Brazil)

DL-based Framework for Detecting Malicious Proof-of-Stake Blocks in Gaming Transactions

Jay Gor, Karm Dave, Neel Kaushikkumar Patel, Keyaba Gohil and Rajesh Gupta (Nirma University, India); Sudeep Tanwar (Nirma University & Institute of Technology, India); Kashif Saleem (King Saud University, Saudi Arabia); Joel J. P. C. Rodrigues (Senac Fac of Ceará, Brazil)

Secure Runtime Reconfiguration of FPGAs via Lightweight Authenticated Encryption for IoT Systems

Lars Kadel and Hassan Nassar (Karlsruhe Institute of Technology, Germany); Lars Bauer (Germany); Joerg Henkel (KIT, Germany)

Large-Scale (Semi-)Automated Security Assessment of Consumer IoT Devices - A Roadmap

Pascal Schöttle, Matthias Janetschek, Florian Merkle, Martin Nocker and Christoph Egger (MCI - the Entrepreneurial School, Austria)

Industrial IoT cybersecurity: a bibliometric analysis

Ignacio José Dasso (Nantes Université, France & IETR, France); Sébastien Maudet (Nantes Université & IETR UMR 6164, France); Renzo E Navas (IMT Atlantique, France); Guillaume Andrieux (University of Nantes & IETR Laboratory, France)

Creating an M-Learning-Based Educational Solution in a Decentralized Blockchain Environment

Krisztian Balint (Obuda University, Hungary)

Thursday, June 19 15:30 - 17:00

SDEN1: Renewable Energy Systems and Market Optimization

On-grid automated operation of solar-wind integrated BESS assisted hybrid microgrid

Sheshadri Shekhar Rauth, Pushpendra Singh, Christina Sundari, Canute Sherwin and Abhishek Padmanabhan (Atria University, India)

Experimental performance comparison of an organic Rankine cycle system using R245fa and R1233zd(E)

Jian Liu (Shandong University of Technology, China)

Impact of deregulation on market efficiency and quality of services in the electricity sector perfect competition vs regulated monopolist -

Zoran Tabak (Mostar, Bosnia and Herzegovina)

Techno-economic evaluation of investment models for solar power plants: from roof leasing to local energy market optimization

Ivona Šironja (University of Zagreb, Croatia & Grid ONE, Croatia); Mirna Gržanić (University of Zagreb, Croatia); Hrvoje Pandzic (Fer, Croatia)

Optimized Wind Farm Power Scheduling Using Hybrid Battery Energy Storage Systems

Jayachandra Malavatu and Ankit Kumar (University of Agder, Norway)

Friday, June 20 9:00 - 10:30

MLE: Machine Learning and Statistics in Electronics

LLM-based PID controller optimization

Ilija Kamenko and Slobodan Ilıc (The Institute for Artificial Intelligence Research and Development of Serbia, Serbia); Velimir Congradac (University of Novi Sad, Serbia)

Exploring the Boundaries of Resource-Constrained AIoT: Tiny Machine Learning for Condition Monitoring using 8-bit and 32-bit Microcontrollers

Sheena T Fernandez and Marta Vallejo (Heriot-Watt University, United Kingdom (Great Britain)); Theodore Lim (Heriot-Watt University, Mexico)

Investigation of Ceramic Bearing Systems With an Intelligent Measuring System Using Statistics and Machine Learning

Valentin Petrov Tsenev, Prof. and Teodor Draganov (Technical University of Sofia, Bulgaria)

Improving Handwritten Character Recognition Using YOLO Algorithms

Zrinka Gligo and Marija Srdanović (University of Split, Croatia); Sven Gotovac (University of Split & FESB, Croatia); Linda Vickovic, Tamara Grujic and Ana Kuzmanić Skelin (University of Split, Croatia)

Large and Small Language Models in Manufacturing and Electronics

Malinka Ivanova (Technical University of Sofia, Bulgaria); Galina Bogdanova (Institute of Mathematics and Informatics at the Bulgarian Academy of Science, Bulgaria); Csaba Zoltán Kertész (Transilvania University of Brasov, Romania)

Diving Deep: Comparative Analysis and Design of Neural Network Based Algorithm Selection for Underwater Image Processing

Nihitha Malayarukil and Hai Nam Tran (University of Brest, France); Barbara Džaja (University of Split, Croatia); Vincent Rodin (Université de Bretagne Occidentale, France)

Friday, June 20 9:00 - 10:30

SC2: Smart City - Aquatic Applications

Decoding Desalination Crafting Freshwater from Ocean Brine

Goutam Ghoshal (University of Engineering & Management, India)

Exploring the role of digital technology in the waterborne passenger mobility

Laura Pirrone, Arianna Bionda, Sergio Terzi and Andrea Ratti (Politecnico di Milano, Italy)

Ultrasound-Based Indirect Water Temperature Measurement Using Machine Learning

Ander Palacios (University of Deusto, Spain); Hugo Landaluce (Universidad de Deusto, Spain); Laura Arjona (University of Deusto, Spain); Lola Fariñas (University of Deusto and Ikerbasque, Basque Foundation for Science, Spain)

Fading Colours: Investigating Spectral Attenuation in Underwater Photography with Distance

Barbara Džaja, Hrvoje Turic and Vladimir Plestina (University of Split, Croatia)

System for Automatic Vessel Detection and Tracking in the Port of Split

Sven Gotovac (University of Split & FESB, Croatia); Paula Muslim and Dunja Božić-Štulić (University of Split, Croatia)

Integration of Ship-to-Grid Technology in Maritime Transport: A Case Study of the Island of Brač

Filip Jurić, Sandra Divković and Hrvoje Mikulčić (University of Zagreb, Croatia)

Friday, June 20 9:00 - 10:30

SDEN2: Smart Electrical Networks and AI Integration

Applications of AI in Modern/Smart Power Grids: A Short Review

Emina Hasković, Zakira Jašarević, Samir Avdaković and Maja Mućić Dedović (University of Sarajevo, Bosnia and Herzegovina); Aida Žugor (Institute of Advanced Systems and Technologies d.o.o Sarajevo, Bosnia and Herzegovina)

Predicting Hourly PV Production of FESB Solar Plant Using SKTIME Library

Joško Novaković (FESB, Croatia); Damir Jakus (University of Split & Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Croatia); Josip Vasilj (University of Split, Croatia); Stipe Puđa (FESB, Croatia)

Model for recognizing patterns and influencing factors between water inflow, hydroelectric power generation and market electricity prices

Zoran Tabak (Mostar, Bosnia and Herzegovina); Tomislav Capuder (Zagreb, Croatia)

Leveraging Quasi-Dynamic Grid Analysis of Industrial Loads: A 132 kV Norwegian Case Study

Oleksandra Ishchenko and Nils Jakob Johannesen (University of South-Eastern Norway, Norway); Le Nam Hai Pham (56 Kjølnes Ring & University of South-Eastern Norway, Norway); Carlos Pfeiffer (University College in South East Norway, Norway)

AI-Powered Predictive Analytics for Renewable Energy Systems: Leveraging Machine Learning and Time Series Forecasting

Harshpreet Singh, Chitransh Chaudhary and Anuradha Devi (Chandigarh University, India)

Friday, June 20 11:30 - 13:00

H1: Artificial Intelligence and Advanced Technologies in Healthcare

A Deep Learning Approach to Multi-Class ECG Interpretation

Elzana Dupljak and Zhilbert Tafa (International Balkan University, Macedonia, the former Yugoslav Republic of)

Predictive Model for Early Diabetes Detection Using Machine Learning

Shariq Kamaal (Amity University Noida, India)

LLM-Twins: A Large Language Model driven trusted Cyber Twin framework for Healthcare 5.0 ecosystems

Pronaya Bhattacharya (Amity University, Kolkata, India); Ebrahim Abdulla Mattar (University of Bahrain, Bahrain); Pushan Kumar Dutta (Amity University Kolkata, India & Amity School of Engineering and Technology, India); Joel J. P. C. Rodrigues (Senac Fac of Ceará, Brazil)

Web Content and Anxiety in Today's Society

Filip Mustac (University Hospital Centre Zagreb, Croatia); Maja Škarić and Marko Luka Bošković (Neuropsychiatric Hospital Popovača, Croatia); Karlo Papić (Community Health Centre Zagreb, Croatia); Tali Horvat (Practice of General Medicine, Croatia); Martina Matovinović and Darko Marčinko (University Hospital Centre Zagreb, Croatia)

Design and development of a wearable device for real-time health monitoring and telemedicine

Vincenzo Randazzo and Matteo Reineri (Politecnico di Torino, Italy); Eros GA Pasero (Politecnico of Turin, Italy & Neuronica Lab, Italy)

Machine Learning in Breast Cancer Diagnosis: Model Comparison and Practical Implications

Nemanja Sepa (University of Novi Sad, Serbia); Milovan Medojevic (The Institute for Artificial Intelligence Research and Development of Serbia & EnergyPulse DOO, Serbia); Aleksandar Rikalovic (University of Novi Sad, Serbia)

Scoping Review of Technology Enabled Healthcare Integration - Towards Sustainable Care

Tatjana Loncar-Turukalo (University of Novi Sad, Serbia); Eftim Zdravevski (University of Ss. Cyril and Methodius - Skopje, Macedonia, the former Yugoslav Republic of); Ana Madevska Bogdanova (Ss. Cyril and Methodius University, Macedonia, the former Yugoslav Republic of); Milica Solarevic (University of Novi Sad, Serbia); Fedor Lehocki (Slovak University of Technology, Slovakia); Vladimir Trajkovic (Ss. Cyril & Methodius University, Faculty of IT, Macedonia, the former Yugoslav Republic of)

Friday, June 20 11:30 - 13:00

SC3: Smart City - Environmental Perspective

Geolocating Pixels on PTZ Camera Imagery in Natural Environments using Deep neural network

Ljiljana Šerić, Antonia Bartulović, Jakov Bejo and Ivana Damjanović (University of Split, FESB, Croatia)

From SMOG to Wildfire Smoke: Lessons from Pakistan and California

Hafiz Muhammad Abubakar (Beaconhouse National University, Pakistan); Usman Nazir (Beaconhouse National University, Lahore, Pakistan)

Smart Environmental Monitoring of Marine Pollution using Edge AI

Mohamed Moursi, Norbert Wehn and Bilal Hammoud (RPTU Kaiserslautern-Landau, Germany)

Remote Sensing for Assessing Vegetation Fuels in Wildfire Risk and Propagation Modelling

Sven Gotovac (University of Split & FESB, Croatia); Paula Muslim (University of Split, Croatia); Ante Ivanović (University of Split - FESB, Croatia); Ana Šarić Gudelj (University of Split, Croatia); Ante Sanader (Croatian Firefighting Association Split, Croatia)

AtmosAI: Predicting Pollution, Protecting Communities

Aishani Chakraborty, Asmita Rani and Sriharipriya K C (Vellore Institute of Technology, India)

ECORIS - Environmental Control and Observation - River Information System of Bosnia and Herzegovina

Zoran Tabak (Mostar, Bosnia and Herzegovina); Karlo Guštin (Business Development, Croatia)

Leveraging Machine Learning for Self-adaptive Sensing in WSNs: an Energy-aware Approach

Alessandro Vanacore (Company, Italy); Antonio Pescapé (University of Napoli Federico II, Italy); Paulo Carvalho (Centro Algoritmi, Universidade do Minho, Portugal); Solange Rito Lima (Centro Algoritmi, University of Minho, Portugal)