

DoCEIS 2026

PRELIMINARY PROGRAM

DoCEIS 2026 & YEF-ECE 2026

Wednesday – 17 Jun 2026		Thursday – 18 Jun 2026		Friday – 19 Jun 2026				
09:00	Opening Session	09:00	D1 Intelligent Energy Systems	D2 Interoperability and Collaborative Decision Making	08:45	Opening YEF-ECE 2026		
09:30	Keynote 1 Sustainability in Electronics <i>Elvira Fortunato, NOVA FCT, Portugal</i>	10:30	Coffee break		09:00	F1 Smart Cities and Sustainable Urban Systems		
10:30	Coffee break	10:45	E1 Workshop Sustainable Data Driven Business Innovation for Societal Impact	E2 AI in Systems Design	10:30	Coffee break		
10:45	A1 Computational Intelligence and Machine Learning	12:45	Lunch		10:45	Y3 7 papers	Y4 7 papers	Y5 7 papers
12:45	A2 Smart and Fair Energy Communities	14:15	Lunch		12:45	Lunch		
14:15	B1 Smart Infrastructures	14:15	Keynote 2 Industry 5.0 <i>Khaled Benkrid, Anglia Ruskin University, UK</i>		14:15	Keynote 3 Engineering the Socio-Technical Future <i>Tal Soffer, Tel Aviv University, Israel</i>		
16:15	B2 Human-centered Intelligent Systems	15:15	Coffee break		15:15	Coffee break		
16:30	Coffee break	15:45	Panel		15:30	G1 AI in Biomedical Systems	Y6 7 papers	Y7 7 papers
16:30	Horizontal Session Maximizing Social & Environmental Impact from Research <i>Graham Miller, NOVA SBE, Portugal</i>	17:45	Bus transfer		17:30	Closing Session & Awards		
17:30	C1 Water Management Systems	18:00	Site visit		18:15			
19:00	Posters	20:30	Conference dinner					
19:00	Welcome Reception							

Day 1 – Wednesday 17th June 2026

09:00 – 09:30 Opening session

09:30 – 10:30 Keynote 1

Sustainability in Electronics

Elvira Fortunato, NOVA University Lisbon, Portugal

10:30 – 10:45 Coffee break

10:45 – 12:45 Session A

A1 – Computational Intelligence and Machine Learning

Chairs: Antonio Monte Pegado and Diogo Natário

Comparative Survival Analysis Using Machine Learning Models with and without Topological Data Analysis

Mavambu Diankatu, Vítor Filipe, Jorge Duque and José Braga de Vasconcelos

Machine Learning on Small Datasets under Resource Constrained: A Scoping Review

Renato Leite and Rui Esteves Araújo

Fourier Apparent Front: A Method of Generating Apparent Fronts Without a Template

Andrei Pătrăușanu, Adrian Florea, Mihai Neghină, Radu Chiș and Alina Dicoiu

WASP it Up: Estimating Parameters under Noisy Observations

Filipe Vieira and Francisco Coelho

A2 – Smart and Fair Energy Communities

Chairs: Ramon Vilanova and Sebastián Madrigal

A Deep Learning Approach to Electric Water Heater Thermal Modelling for Demand Response Applications

Francisco Januário-Silva, João Tabanêz Patrício, Rafael Menezes-Barros and Rui Amaral Lopes

Towards Scalable Demand Response Solutions for Households in Citizen Energy Communities

Pau Comas, Antoni Morell, Ramon Vilanova and Jose Lopez Vicario

Community-Focused Energy Management System with Modular Architecture

Laurențiu-Alex Mustață, Elena Helerea, Cristian-Leonard Mușuroi and Rodolfo Dufo López

Predictive Control and Optimization Strategies for Smart and Fair Operation in Energy Communities

S. Madrigal, A. Morell, J. L. Vicario, O. Arrieta and R. Vilanova

12:45 – 14:15 Lunch

14:15 – 16:15 Session B

B1 – Smart Infrastructures

Chairs: David Leiria and Daniel Ferreira

Multi-Agent Framework with Blockchain-Based Audit Trails for Securing Industrial Greenhouse Gas Monitoring Infrastructure

Timileyin Abiodun, Nnamdi Nwulu and Peter Olukanmi

Graph-Based Generation of Navigable 3D Environments from Deformable Map Pieces

Diogo de Andrade and Nuno Fachada

Urban Traffic Control Enabled by Optical IoT and Deep Reinforcement Learning

Gonçalo Galvão, Manuela Vieira, Manuel Augusto Vieira, Mário Véstias and Paula Louro

Using Artificial Intelligence to Predict Gunfire Deaths

Eurico Clemente, Luis M. Camarinha-Matos, Filipa Ferrada

B2 – Human-centered Intelligent Systems

Chairs: Rui Estevão and Nuno Nunes

Human Robot Collaborative Creativity: Challenges and Opportunities

Zahra Babaei, Sepideh Kalateh, Sanaz Nikghadam-Hojjati, Paulo Leitão and Jose Barata

Agentic Monitoring for Industrial Sensors in Cyber-Physical Systems: A Reproducible Framework with Safety Guardrails

Miguel Afonso Beckers, Pedro João Rodrigues, Paulo Leitão, Cesar Augusto Tacla and Pedro Luiz de Paula Filho

Towards Secure Media Deepfake Detection Using Explainable AI

S. Rajathi, J. Hemalatha, S. Rajeswari, S. Parameswaran, D. Ramya and S. Balamurugan

Human-in-the-loop Refinement of Knowledge Graph Embeddings for Semantic Similarity

Verdiana Schena, Simona Colucci, Floriano Scioscia and Francesco Maria Donini

16:15 – 16:30 Coffee break

16:30 – 17:30 Horizontal Session

Maximizing Social & Environmental Impact from Research

Speaker: Graham Miller, NOVA SBE, Portugal

17:30 – 19:00 Session C

C1 – Water Management Systems

Chairs: Diogo Natário and Gonçalo Galvão

Deep Learning-Based Acoustic Leak Detection and Classification in Water Distribution Systems Using Hydrophone Sensors

Ajibola Oyedepi, Nnamdi Nwulu and Peter Olukanmi

Digital Transformation Framework for Sustainable Water-Energy-Food Nexus in South Africa

Oluwadamilola Esan, Nnamdi Nwulu and Adepoju Omoseni Oyindamola

Reconstructing Fragmented Flood Histories: A Benchmark of Imputation Methods for Flood Loss Modeling

Miguel Estêvão, Pedro A.C. Sousa, Gracinda R. Guerreiro, João P. Pimentão and Maria Isabel Gomes

17:30 – 19:00 Posters

Chairs: TBA

A Multi-Objective Optimization Framework for Climate-Resilient Investment Planning in Electricity Distribution Networks

Sérgio Sousa, João Martins and José Maia

Scalability and Compatibility challenges in next-generation Wi-Fi networks

David Leiria, Paulo Pinto and Luis Bernardo

19:00 Welcome reception

Ready to break the ice and spark some fun? Join our Ice Breaking Session for an unforgettable start of DoCEIS'26! Meet new people, share laughs, and build connections through exciting activities designed to make everyone feel welcome and energized. Don't miss out!!

Day 2 – Thursday 18th June 2026

09:00 – 10:30 Session D

D1 – Intelligent Energy Systems

Chairs: Omid Aghda and Gonçalo Galvão

Study of a DC-DC Buck Converter as a Class D Amplifier

José Francisco Luís and Nuno Paulino

Toward High-Fidelity Datasets for Hybrid Electric Vehicle Energy Management Incorporating Power Converter Non-Idealities

Henar Mike O. Canilang, Yurim Cheon, Youjeong Yoon and Wansu Lim

How Machining State is Driving Energy Performances in AI-Guided Industries?

Andrea Bochicchio, Fabio Fruggiero and Francesco Mancusi

D2 – Interoperability and Collaborative Decision Making

Chairs: Zahra Babaei and Antonio Monte Pegado

Semantic Execution of a High-Level Petri Net for Opportunity-Driven Decision-Making in Collaborative Business Ecosystems

Javaneh Ramezani, Luis Gomes and Paula Graça

Support IOPT-Tools Interoperability through Import and Export PNML-compliant Format

Diogo Nuno Natário, Anikó Costa and Luis Gomes

Transforming Isolated Data Lakes into Federated Dataspaces: A Sovereign Architecture for Precision Medicine

Nuno Nunes, Pedro A. Sousa, Gracinda R. Guerreiro, João P. Pimentão and Maria Torrente

10:30 – 10:45 Coffee break

10:45 – 12:45 Session E

E1 – Workshop on Sustainable Data Driven Business Innovation for Societal Impact

Chairs: Arianit Kurti and Bahtijar Vogel

Introduction

Data driven innovations – *Arianit Kurti*

Sustainable digitalization – *Bahtijar Vogel*

Brief discussions

Workshop session

Summary and next steps

E2 – AI in Systems Design

Chairs: Daniel Ferreira and Rui Estevão

Human-AI Agentic Approach for Industrial Software Systems Design

Antonio Monte Pegado, Luis M. Camarinha-Matos and Andre Dionisio Rocha

Digital Sovereignty in Organisational End-to-End Processes: An Early-Stage Design-Oriented Research Roadmap

Andreas Schneider, Thomas Schuster, Mario Bosslau and Lukas Waidelich

AI-driven DevSecOps to Enhance Software Quality and Security

Nuno Teixeira Gomes, João Rafael Almeida and José Luís Oliveira

Toward Agentic Privacy-by-Design: A Conceptual Framework for AI-Supported Process Compliance

Lukas Waidelich, Thomas Schuster, Andreas Schneider and Mario Bosslau

12:45 – 14:15 Lunch

14:15 – 15:15 Keynote 2

Industry 5.0

Khaled Benkrid, Anglia Ruskin University, UK

15:15 – 15:45 Coffee break

15:45 – 17:45 Panel Session

Panel Session:

Renewables Meet Resilience: Towards the Energy of Tomorrow

Moderator: João Martins, FCT NOVA

Panelists:

Pedro Carvalho, IST

Patrícia Fortes, LNEG & CENSE

Rui Pestana, REN

Panelist 4, TBA

18:00 – 20:30 Bus transfer and Site visit

20:30 – 22:30 Conference dinner

Day 3 – Friday 19th June 2026

08:45 – 09:00 Opening session YEF-ECE

09:00 – 10:30 DoCEIS Session F, YEF-ECE Sessions Y1 and Y2

F1 – Smart Cities and Sustainable Urban Systems

Chairs: Izabela Jonek-Kowalska, Agnieszka Kowalska-Styczeń, Aneta Michalak and Katarzyna Sienkiewicz-Małyjurek

Analysis of Environmental Profiles of Logistics Companies in Estonia to Enhance Technology Choice

Rene Maas, Eduard Shevtshenko, Hendrik Laanemets, Tatja-na Karaulova and Rõõt Laigu

Smart Governance for Better Living: Empirical Analysis of Public Services and Digital Transformation Impact on Urban Quality of Live

Sara Rupacz, Izabela Jonek-Kowalska and Aneta Michalak

Using Digital Participatory Platforms for Deliberation Aimed at Achieving Sustainable Development Goals

Kamila Rożnowska and Katarzyna Sienkiewicz-Małyjurek

Y1 – TBA

5 papers

Y2 – TBA

5 papers

10:30 – 10:45 Coffee break

10:45 – 12:45 YEF-ECE Sessions Y3, Y4 and Y5

Y3 – TBA

7 papers

Y4 – TBA

7 papers

Y5 – TBA

7 papers

12:45 – 14:15 Lunch

14:15 – 15:15 Keynote 3

Engineering the Socio-Technical Future

Tal Soffer, Tel Aviv University, Israel

15:15 – 15:30 Coffee break

15:30 – 17:30 DoCEIS Session G1, YEF-ECE Sessions Y6 and Y7

G1 – AI in Biomedical Systems

Chairs: Manuel Vinhas and Nuno Nunes

A Review on Technological Requirements for Ultrasound Image-Guided Neuromodulation Application-Specific Integrated Circuits

Diogo Dias, Tiago Costa and João Goes

CancerCareTech: A Pilot Study on a Digital Platform for Multimodal Clinical Data Integration in Pediatric Oncology

Pedro Correia, Joana Dias, Alexandra Morais, Amets Sagarrabay, Ana Ferreira, Ana Rita Londral, Carla Quintão, Catarina Santos, Mafalda Pires, Patrícia Santos, Paula Agulheiro and Cláudia Quaresma

Stability of Electrophysiological Signals: Findings from Preliminary Measurements in Different Clinical Environments

Ana Isabel Ferreira, Cláudia Quaresma and Carla Quintão

A Supervised Modular LLM Architecture for Personalized Management of Non-Communicable Diseases: A Proof-of-Concept Study

Ana Martins, Luís Velez Lapão, Isabel L. Nunes and Ana Londral

Y6 – TBA

7 papers

Y7 – TBA

7 papers

17:30 – 18:15 Closing Session and Awards