



EENVIRO 2026

Draft Conference Programme

International Conference on Sustainable and Resilient
Solutions for Energy and Environment

1–4 November 2026

Bucharest Romania



Corneliu Balan • Ilinca Năstase • Xiaolei Yuan
Daniel Aelenei • Massimiliano Fabbicino

Technical University of Civil Engineering Bucharest
124 Lacul Tei Boulevard, Bucharest, Romania

Draft issued 26 October 2026
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Welcome to EENVIRO 2026

We are pleased to welcome you to Bucharest for EENVIRO 2026, the International Conference on Sustainable and Resilient Solutions for Energy and Environment. Hosted by the CAMBI Research Centre at the Technical University of Civil Engineering Bucharest, the conference brings together researchers, doctoral candidates and practitioners to share results and develop new collaborations.

The programme connects research on energy systems, the built environment, water, materials and environmental modelling with questions of safety and resilience. The PREPARE project contributes a dedicated focus on disaster preparedness, risk management and community resilience.

Monday is dedicated to the Doctoral School Conference and presentations by doctoral candidates and young researchers. Tuesday combines keynote lectures with parallel scientific paper and extended abstract sessions. Project workshops, poster discussions and informal meetings provide further opportunities to exchange ideas across disciplines. The parallel Ethics Symposium, “Contemporary Perspectives on Applied Ethics”, takes place on Monday at the Faculty of Hydrotechnics, room II-7.

We hope these days offer time to discuss work in progress, meet future collaborators and explore approaches that can carry forward into joint research. We look forward to welcoming you to EENVIRO 2026.

The EENVIRO Organising Team

Using this programme

The overview shows the daily timetable and parallel activities. The detailed programme lists presentation times, paper IDs, titles and authors. Tracks A, B and C identify the parallel conference sessions; room assignments will be announced separately.

All times are local to Bucharest. Draft programme issued 26 October 2026. The programme is subject to change; please check www.eenviro.ro for updates.

Presentation information

Scientific papers: 8 minutes for the presentation and 2 minutes for questions. Abstract presentations: 5 minutes each, followed by a shared discussion at the end of the session. Please upload slides before the session and bring A0 portrait posters already printed; the organisers do not provide poster printing. The Ethics Symposium follows the presentation times shown in its own programme.

Sponsors and partners

The EENVIRO Organising Team warmly thanks our sponsors and partners for supporting this edition. Their contribution helps bring the research community together and creates opportunities for scientific exchange, doctoral training and future collaboration.

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With special thanks to our main sponsor for supporting EENVIRO 2026.

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We also acknowledge EU-CONEXUS ENABLES and the academic and research communities represented above. We thank everyone contributing to the exchanges between universities, research projects and practitioners throughout the conference.

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Programme overview



Sunday 1 November

Time	Activity
17:00–18:00	Registration
18:00–19:00	Cocktail party

Monday 2 November



Doctoral School Conference and EENVIRO 2026

Time	Conference programme	Parallel workshops
09:00–09:45	Registration	
09:45–10:00	Opening remarks — university and doctoral school representatives	
10:00–10:30	Keynote — Corneliu Balan	
10:30–11:30	S1 Fluid Mechanics and Thermal Systems	CoReS Workshop
11:30–12:00	Coffee break and group photo	
12:00–12:30	Keynote — Ilinca Năstase	
12:30–13:30	S2 Thermal Comfort and Building Performance	CoReS Workshop
13:30–14:30	Lunch break	
14:30–15:00	Keynote — Massimiliano Fabbicino (online)	
15:00–16:00	S3 Water Resources and Environmental Monitoring	CoReS Workshop
16:00–16:30	Coffee break	
16:30–17:30	S4 Fire Safety and Smoke Control	CATALIST Project Workshop
19:00–23:00	Gala dinner — Hanu' lui Manuc, Str. Franceză 62–64	

Monday parallel programme | 09:00–18:30

Ethics Symposium “Contemporary Perspectives on Applied Ethics”

Faculty of Hydrotechnics, room II-7, 2nd floor, 122–124 Lacul Tei Boulevard.
Full programme follows the Monday EENVIRO sessions.

Tuesday 3 November



Conference programme and parallel sessions

Time	Track A	Track B	Track C
09:00–09:30	Registration	Registration	Registration
09:30–09:45	Registration	Registration	PREPARE Workshop 09:30–11:30
09:45–10:00	Opening remarks	Opening remarks	PREPARE Workshop
10:00–10:30	Keynote — Xiaolei (Damon) Yuan	Keynote	PREPARE Workshop
10:30–11:30	S5 Thermal and Mechanical Energy Systems	S6 Renewable Energy and Sustainability	PREPARE Workshop
11:30–12:00	Coffee break and group photo	Break	Break
12:00–12:30	Keynote — Daniel Aelenei	Plenary	Plenary
12:30–13:30	S7 Climate-Responsive Buildings and Cities	S8 Sustainable Materials and Construction	S9 EA Structural Monitoring, Materials and Risk
13:30–14:30	Lunch break and poster session	Lunch and posters	Lunch and posters
14:30–15:30	S10 Water Quality and Environmental Management	S11 Seismic Risk and Structural Resilience	S12 EA Climate, Buildings and Community Resilience
15:30–16:00	Coffee break	Break	Break
16:00–17:00	S13 Critical Infrastructure and Asset Management	—	S14 EA Digital and Environmental Modelling
17:00–17:30	Closing session and farewell	Closing	Closing

09:30–11:30 | General Workshop PREPARE Project. Chair: Prof. dr. ing. Radu Vacareanu.

EA = abstract sessions. Scientific papers: 8 minutes for presentation and 2 minutes for questions. Abstracts: 5 minutes per presentation, followed by a shared discussion at the end of the session.

Wednesday 4 November

Time	Activity
10:00–13:30	Laboratory visits

Monday 2 November



Keynote lecture

Monday 2 November | 10:00–10:30

Emeritus Professor Corneliu Balan

National University of Science and Technology POLITEHNICA Bucharest, Romania

Constitutive Laws in Fluid Mechanics: Historical Overview and Perspectives

Corneliu Balan is an emeritus professor of fluid mechanics and founder of the REOROM research group at POLITEHNICA Bucharest. His work addresses non-Newtonian fluids, rheometry, yield-stress materials, complex flows, microfluidics and interfacial phenomena. He obtained his doctorate at TU Darmstadt and held research fellowships in Wales and Minnesota. He is co-founder and vice-president of the Romanian Society of Rheology, with a continuing interest in the history and philosophy of science.



Session 1

Fluid Mechanics and Thermal Systems

Monday 2 November | 10:30–11:30 | Doctoral School Conference

Scientific papers • 6 contributions

10:30–10:40 | ID 65 Influence of geometry and liquid filling level on the seismic fluid-structure interaction response of vertical steel storage tanks

Ioana - Claudia Tomescu

10:40–10:50 | ID 55 An integrated 3D approach for the representation and analysis of hydraulic parameters in water distribution network models

Attila Torok; Marius Dragomir; Gabriel Racoviteanu

10:50–11:00 | ID 98 From district heating network to geothermal network.

Florin Vladimir Mihailov

11:00–11:10 | ID 95 Theoretical Performance Comparison of R32 and R290 in a Single-Split Air-to-Air Heat Pump

Mihai-Vlad Cîrlan

11:10–11:20 | ID 68 Simulating the Impact of Cloud Transients on CSP Energy Production

Ana-Maria Peligrad; Matei Razvan Georgescu

11:20–11:30 | ID 110 Pellet size, char-bed voidage and blower head bound the throat of a 25 kW downdraft gasifier

Tudor Octavian Pocola; Florin Bode

Presenter: Octavian Pocola

Monday 2 November



Keynote lecture

Monday 2 November | 12:00–12:30

Professor Ilinca Năstase

Technical University of Civil Engineering Bucharest, Romania

Beyond Adaptive Thermal Comfort: Integrating Human Perception, Context and Climate-Responsive Design

Ilinca Năstase is Professor of Building Services Engineering and Vice-Rector for Scientific Research and International Affairs at UTCB. She leads the CAMBI Research Center. Her research covers indoor environmental quality, thermal comfort, ventilation, computational fluid dynamics and digital twins for buildings and occupants. She has contributed to national and European research projects and international expert groups, including REHVA and WHO, and has authored or co-authored more than 300 scientific publications.



Session 2

Thermal Comfort and Building Performance

Monday 2 November | 12:30–13:30 | Doctoral School Conference

Scientific papers • 6 contributions

12:30–12:40 | ID 97 Exploring the Influence of Narrative Framing on Reported Thermal Sensation in a Classroom

Alexandru Cernei; ILINCA NASTASE; Paul Danca; Diana Lemian; Matei Georgescu; Georgeta Bordea

12:40–12:50 | ID 93 Development and validation of a low-cost 3D-printed device for indoor thermal comfort assessment

Diana Lemian; ILINCA NASTASE; Paul Danca

12:50–13:00 | ID 108 From urban heat to indoor heat: a critical review and a scale-matched chain-of-evidence framework for local heat-risk assessment in Bucharest–Ilfov

Alexandru Popa OPRITA; Kira Adina Ilinca; Cristiana Croitoru; Oana Luca; Byron Ioannou

Presenter: Alexandru Popa Oprita

13:00–13:10 | ID 99 Evaluation of the energy gain coefficient and the fcap correction factor within the framework of the Mc001-2022 standard using PVGIS modeling.

Mihai Diaconu; Vlad Iordache

13:10–13:20 | ID 78 THE EVOLUTION OF FACILITY MANAGEMENT AND THE IMPACT OF DIGITALIZATION IN 2026: A COMPARATIVE ANALYSIS

Dan-Ilie Baleanu; Nicolae Postavaru

13:20–13:30 | ID 88 HOSPITAL FACILITY MANAGEMENT IN THE 2026-2040 PERIOD – THE BRIDGE BETWEEN CRITICAL INFRASTRUCTURE, PREDICTIVE MAINTENANCE AND THE QUALITY OF MEDICAL CARE

Dan-Ilie Baleanu; Nicolae Postavaru

Monday 2 November



Keynote lecture

Monday 2 November | 14:30–15:00 | Online keynote

Professor Massimiliano Fabbicino

University of Naples Federico II, Italy

Effects of climate changes on wastewater characteristics in rural areas

Massimiliano Fabbicino is Full Professor of Environmental Engineering at the University of Naples Federico II. His research covers water and wastewater treatment, remediation, waste valorisation and the circular economy. He has authored more than 150 international journal publications and participated in numerous European and national research projects. He has held visiting professorships at the University of Washington and the University of Chengdu and received a Fulbright research scholarship.



Session 3

Water Resources and Environmental Monitoring

Monday 2 November | 15:00–16:00 | Doctoral School Conference

Scientific papers • 6 contributions

15:00–15:10 | ID 59 Water Quality Analysis of gravel with sand and granular activated carbon Pilot-Scale Static Batch Filtration System in Comparison to Other Nature-Based Solutions: Bioretention, Bioswales and Constructed Wetlands

Mukuppa Miller; Elena Vulpasu; Gabriel Racoviteanu; Traian Ghibus; Radu Gogu

15:10–15:20 | ID 62 Modern Approaches to Bathymetric Surveying: A Case Study Using an Unmanned Surface Vehicle for Bathymetric Measurements Supporting Bridge Rehabilitation on the Buzău River, Romania

Vasile-Adrian Nan; Gheorghe Badea; Ana-Cornelia Badea; Anca Patricia Gradinaru

15:20–15:30 | ID 107 Integrating geodesy, GIS and predictive air quality monitoring for freshwater aerosol studies in the Danube Delta

Tiberiu Rus; Alexandru Popa OPRITA; Valentin Danciu; Matei Razvan Georgescu

Presenter: Tiberiu Rus

15:30–15:40 | ID 27 Root-Induced Enhancement of Shear Strength in Loessoid Soils: A Laboratory Study with Perennial Herbaceous Species for Erosion Control

Leonard Spânu; Ernest Olinic; Tatiana Olinic

15:40–15:50 | ID 77 Assessment of Sustainable Agricultural Potential through GIS-Based Multicriteria Analysis

Beatris-Nicoleta Olaru; Ana-Cornelia Badea

15:50–16:00 | ID 12 MULTI-SOURCE GEOSPATIAL APPROACH OF URBAN ARBOREAL VEGETATION USING AIRBORNE LIDAR, SLAM SCANNING, AND FIELD MAPPING

Adela - Maria Neag; Aldea; Tudor Salagean; Ioana Pop; Cătălin Sabou; Simion Bruma

Monday 2 November



Session 4

Fire Safety and Smoke Control

Monday 2 November | 16:30–17:30 | Doctoral School Conference

Scientific papers • 6 contributions

16:30–16:40 | ID 3 Translating wildfire intensity and spread estimates into computational fluid dynamics boundary conditions for wildland-urban interface fire modelling

Ilie-Marian Han; Florin Bode

16:40–16:50 | ID 7 Heat Release Rate Scenarios for PCM-Integrated Solar Air Collectors in Ventilated Façades

Emanuil Ovadiuc; Razvan Calota; ILINCA NASTASE; John Anghel; Mihai Dima

16:50–17:00 | ID 9 Comparative Numerical Analysis of Mechanical and Natural Ventilation Effects on Occupant Life Safety and Firefighter Tenability in Existing Multi-Story Building Fire Scenarios

Dan-Adrian Ionescu; Vlad Iordache; Iulian Ene; Dragos Pavel

17:00–17:10 | ID 36 CFD-Based Evaluation of Pressurization Systems for Protected Evacuation Routes

ALEXANDRU-SORIN CĂRUNTU; Catalin Ioan Teodosiu

17:10–17:20 | ID 63 Cavity and tilt effects on photovoltaic fire behavior

FOUAD FATOOM; Razvan Calota

17:20–17:30 | ID 70 Influence of the design fire heat release rate on smoke control performance and evacuation safety in underground car parks: a CFD assessment

CLAUDIU-GABRIEL STAN; Florin Bode; ILINCA NASTASE; Razvan Calota

Gala dinner

19:00–23:00 | Hanu' lui Manuc

Str. Franceză 62–64, Bucharest

Join colleagues for an evening at one of Bucharest's historic inns, near the Old Town. The gala dinner offers an opportunity to continue scientific conversations and meet collaborators.



9th Conference of the UTCB Doctoral School

Ethics Symposium

“Contemporary Perspectives on Applied Ethics”



Monday 2 November 2026

09:00–18:30

Faculty of Hydrotechnics, room II-7, 2nd floor,
Lacul Tei Boulevard, nr 122-124

Monday 2 November

Ethics Symposium

Contemporary Perspectives on Applied Ethics

Morning programme | 09:00–13:00

9:00 - 9:30

Registration

09:30 – 10:00

Moderator: Conf. univ. dr. Mirel Anghel, Director CCEA

Welcome speech

10:00 – 10:45

Keynote speaker

KAI LÖSER

Current Position: Coordinator for Digital Teaching Development at the German School in Belgrade.

Previous Experience: Future Skills implementation at the University of Rostock; research associate and lecturer at Bielefeld University.

Academic Background: Studied English, History, Philosophy, Sociology, and Modern German Literature at the University of Freiburg.

International Experience: Research and study visits at the University of Virginia, Trinity College Dublin, and Yale University.

Research Interests: Media education and the political and ethical implications of generative AI.

Topic: Tokens with a Worldview: Three Perspectives on the Politics of Generative AI

10:45 - 11:30

Keynote speaker

DANIELA POPESCU

Current Position: Lecturer (PhD) at the Faculty of History, University of Bucharest.

Academic Background: PhD in History (2020), specializing in contemporary history, international relations, and Romanian-Turkish relations.

Publications: Author of *Navigând în ape învolburate* (2023) and co-author of *Post-communism, Democracy, and Illiberalism* (2023), alongside numerous scholarly articles.

Academic Recognition: Recipient of the 2024 Gheorghe Brătianu Award from the Romanian Society of Historical Sciences.

Research Interests: Romanian-Turkish relations, minority history, political propaganda, and interwar Romanian society.

Cultural Initiatives: Founder and President of the Cultural Association *Istoria din Casă în Casă* (2020), dedicated to preserving Romania's 20th-century heritage.

Educational Projects: Initiator of History Workshops, HI-STORY TELLING, and Democratic Dialogue, promoting historical awareness, civic education, and democratic values among more than 5,000 pupils annually.

Topic: Poate un instrument AI să își formeze o conștiință istorică? Dileme etice ale construirii modelelor de limbaj pe surse istorice primare

11:30 - 12:00

Concluding remarks and discussions

12:00 – 13:00

Lunch break

Monday 2 November

Ethics Symposium

Contemporary Perspectives on Applied Ethics

Plenary session I | 13:00–15:00

Moderator: Conf univ. dr. Mirel Anghel, Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

13:00 – 13:20

Conf. univ. dr. Valeriu Marinescu

Departamentul de Limbi Moderne, Universitatea de Științe Agronomice și Medicină Veterinară din București & Departamentul de Lingvistică, Facultatea de Litere, Universitatea din București

Aspecte etice în formarea și dezvoltarea competențelor lexiculturale la cetățenii străini care învață limba română

13:20 – 13:40

Prof. Valentin Crețu, Prof. Monica Văduva

Liceul Teoretic „Mihail Kogălniceanu”, Snagov

Etica în utilizarea elementelor de conținut din curriculum pentru limba franceză, clasa a IX, liceul, 2026

13:40 – 14:00

Conf. univ. dr. Mirel Anghel

Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

Aspecte etice ale folosirii inteligenței artificiale în activitatea didactică

14:00 – 14:20

Alexandra Patricia Ilie, masterand

Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

Inteligența artificială în școli: unealtă de lucru sau înlocuitor al gândirii proprii?

14:20 – 14:40

Drd. Radu Denisa

Școala Doctorală, Facultate de Litere, Istorie, Filosofie și Teologie, Universitatea de Vest din Timișoara

Cuvântul nu este întotdeauna sensul: libertatea traducătorului și etica traducerii literare

14:40 – 15:00

Drd. Stefan Zivojinović

Școala Doctorală, Facultate de Litere, Istorie, Filosofie și Teologie, Universitatea de Vest din Timișoara

De la strigoii mitologici la strigoii digitali: o perspectivă antropologică și etică asupra bântuirii în era Inteligenței Artificiale

15:00–15:20 | Coffee break

Monday 2 November

Ethics Symposium

Contemporary Perspectives on Applied Ethics

Plenary session II | 15:20–18:30

Moderator: Conf univ. dr. Mirel Anghel, Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

15:20 – 15:40

Conf. univ. dr. Marinela-Doina Nistea

Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

Vorba zboară, responsabilitatea rămâne: etica vorbirii în discursul public contemporan

15:40 – 16:00

Drd. Andra-Gabriela Naciu

Școala Doctorală „Alexandru Piru”, Universitatea din Craiova

Între autenticitate și prestigiu instituțional: utilizarea etică a limbajului colocvial în discursul de relații publice

16:00 – 16:20

Conf. univ. dr. Raluca-Mihaela Ghențulescu

Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

Fraude IA-cademice

16:20 – 16:40

Lector univ. dr. Irina-Ana Drobot

Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

The ethics of Chat GPT and individual originality as researchers

16:40 – 17:00

Asist. univ. dr. Roxana Joița

Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

Algoritmii modelelor mari de limbaj și plurilingvismul digital

Monday 2 November

Ethics Symposium

Contemporary Perspectives on Applied Ethics

Plenary session II continued | 17:00–18:30

17:00 – 17:20

Prof. univ. dr. Cristina Iacoboaea

Facultatea de Construcții Civile, Industriale și Agricole, Universitatea Tehnică de Construcții București

Drd. Mihai Alexandru Veleanu

Școala Doctorală, Universitatea Tehnică de Construcții București

Etica modernizării infrastructurii militare: cadru decizional și aplicație conceptuală în contextul regimentului 71 PATRIOT

17:20 – 17:40

Drd. Andreea Toroiman

Academia de Studii Economice, București

Perspective ale eticii în documente statutare ale membrilor rețelei camerelor franceze de comerț din lume

17:40 – 18:00

Lector univ. dr. Mihaela Hristea

Facultatea de Limbi și Literaturi Străine, Universitatea Creștină Dimitrie Cantemir

The integration of the children with autism in the kindergarten and schools of Romania

18:00 – 18:20

Prof. univ. dr. Felix Nicolau

Departamentul de Limbi Străine și Comunicare, Facultatea de Inginerie în Limbi Străine, Universitatea Tehnică de Construcții București

Prof. univ. dr. Cristina Nicolaescu

Universitatea Yozgat Bozok, Turcia

Daredevil: education in the epoch of magic speed and astounding superficiality

18:20–18:30 | Concluding remarks

Tuesday 3 November



Keynote lecture

Tuesday 3 November | 10:00–10:30

Dr Xiaolei (Damon) Yuan

LUT University, Finland

Advanced Microchannel Thermal Management for High Heat Flux Energy Systems: From Flow Field Design to Thermo-Hydraulic Optimization

Xiaolei Yuan is a tenure-track Assistant Professor at LUT University. His research focuses on thermal management, data centre cooling and building energy systems. He has published more than 85 scientific papers and participated in more than 40 patent applications. A corresponding member of the REHVA Research and Technical Committee, he chaired the Scientific Committee of BuildSim Nordic 2024 and holds scientific leadership roles for forthcoming SCANVAC and REHVA conferences.



Session 5

Thermal and Mechanical Energy Systems

Tuesday 3 November | 10:30–11:30 | Track A

Scientific papers • 6 contributions

10:30–10:40 | ID 91 Design, Construction, and Experimental Validation of a T-History Calorimeter for PCM Characterization

Octavian Pop; Lucia Tefas; Liviu Dodea; Lucian V. Fechete Tutunaru

10:40–10:50 | ID 66 CFD simulation of gaseous and liquid ammonia injection processes in chambers for decarbonisation of combustion systems and internal combustion engines

Charalambos Chasos

10:50–11:00 | ID 29 Ex-ante energy and techno-economic feasibility of 30% thermal substitution with waste-derived fuel in cement clinker production: A case study in Vietnam

Van Vuong PHAM

11:00–11:10 | ID 45 Maintenance-based improvement of pump efficiency: evidence from vibration and temperature measurements

Lucian Primejdie

11:10–11:20 | ID 100 Effect of run capacitance on the motion and energy performance of a single-phase-fed three-phase induction motor driving a tilt table: A model-based study

MALIK FAIZAN; Xenia Mir; Dudu Geng; Zara Malik

11:20–11:30 | ID 51 Experimental Investigations on Acoustic Transmission Loss in Sustainable Muffler Structures

Suleyman KAYA; Sahin GUNGOR; Yusuf YILDIRIM; Zeki PEKER

Tuesday 3 November



Session 6

Renewable Energy and Sustainability

Tuesday 3 November | 10:30–11:30 | Track B

Scientific papers • 6 contributions

10:30–10:40 | ID 16 Long-Term Energy and Economic Assessment of Residential Photovoltaic Systems in Romania Using Field Data and CoolPV-Based Simulation

Razvan-Andrei Polcovnicu; Sebastian Hudişteanu; VALERIU-SEBASTIAN HUDISTEANU; Nicolae Taranu; Dragos Ungureanu; Marius Alexa; Iuliana Hudisteanu; Chereches Cristian; Turcanu Emilian; Catalin Onutu; Alexandru-Florin Mustiata

10:40–10:50 | ID 30 Analysis of the Optimal Distance between the Elements of a Wind Solar Hybrid System to Obtain Maximum Energy

Mihaela Stanciu; Sanda Budea

10:50–11:00 | ID 31 Study on Different Configurations of Solar Modules to Enhance Power Attainment

Manir Khan; MAHMUDUL FIROZ; Tareq; Noor Mohammad Shaon; Makfarul Islam; April Mankhin; Rakibul Islam; Rihan Ahmed; Rezwanul; Arafat Ahmed Bhuiyan

11:00–11:10 | ID 41 An Experimental Rain Erosion Test Platform for the Evaluation of Wind Turbine Leading Edge Protection Coatings Towards Sustainable Wind Energy

Mohammadhassan Badihehaghdam; Pedram Masjedi; Sinéad Uí Mhurchadha; Edmond Tobin

11:10–11:20 | ID 11 Assessing the Feasibility of Integrating Sustainable Energy Communities (SECs) in Palestine

Duha Saadedin; Oana Luca; Hasan Makkawi; Florian Gaman

11:20–11:30 | ID 103 Renewable Energy as a Moderator of the Tourism–CO₂ Emissions Relationship: Evidence from Central Asia and the South Caucasus

Habibullo Hasanov; Шухрат Кувандиков; Dilmurod Nasimov; Gulnora Shadieva; Nilufar Rahimova; Akmaljon Odilov; Shakhriyor Kholbayev; Visola Khasanova

Tuesday 3 November

Keynote lecture

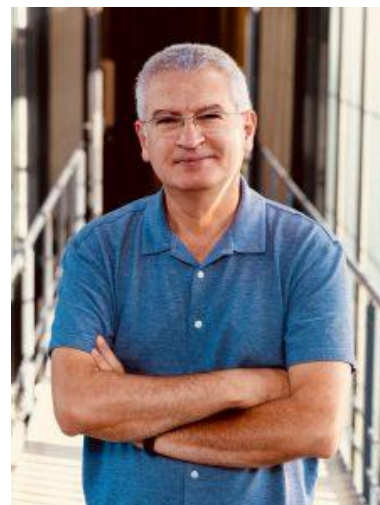
Tuesday 3 November | 12:00–12:30

Professor Daniel Aelenei

NOVA School of Science and Technology, Portugal

Designing Climate-Adaptive Buildings for Health and Comfort

Daniel Aelenei is Associate Professor with Habilitation in Civil Engineering at NOVA School of Science and Technology and coordinates its Master's Programme in Façade Technology. His research addresses low-energy and net-zero-energy buildings, adaptive façades, energy flexibility, passive cooling and retrofit strategies. He has contributed to COST and IEA research networks and led the MIT Portugal FIRST project on urban energy flexibility. He has authored or co-authored more than 100 scientific publications.



Session 7

Climate-Responsive Buildings and Cities

Tuesday 3 November | 12:30–13:30 | Track A

Scientific papers • 6 contributions

12:30–12:40 | ID 33 Low-carbon social housing in tropical climates: an integrated framework for energy efficiency, sustainable materials and indoor environmental quality

Hai Nguyen Hong; Phuong Tran; Vu Thanh Trung

12:40–12:50 | ID 26 Measured indoor temperature and humidity in courtrooms during the heating season

Turcanu Emilian; VALERIU-SEBASTIAN HUDISTEANU; Chereches Cristian; Catalin Vulpe; Claudiu Romila

12:50–13:00 | ID 101 Experimental assessment of digitalised demand-driven heating control in a district heating system

Paula Unguresan; Oana Giurgiu; Daniel Vasile Banyai; Daniel Hiris; Raluca Felseghi

13:00–13:10 | ID 106 Carbon footprint assessment of two-stage heat-recovery air-handling unit configurations

Ivan Dimchev; Martin Ivanov; Petrini Marinov; Angel Terziev

Presenter: Martin Ivanov

13:10–13:20 | ID 20 High-Density Transit-Oriented Development in a Flood-Prone District: Adaptive Capacity and Sustainability Challenges of the Truong Tho Station Area, Ho Chi Minh City

Trung Bui

13:20–13:30 | ID 104 A Multi-Sensor and Multi-Temporal Digital Twin Framework for Gravity-Based Urban Accessibility Modelling in Heritage Environments

Teodora Minculescu; Constantin Moldoveanu

Tuesday 3 November



Session 8

Sustainable Materials and Construction

Tuesday 3 November | 12:30–13:30 | Track B

Scientific papers • 6 contributions

12:30–12:40 | ID 57 Geometrical Modelling Approaches for Cellular Materials: Recent Developments and Perspectives

Farzaneh Khast; Lilibeth A. Zambrano M.; Vivek Christhunathan; Adriana Neves; David Culliton

12:40–12:50 | ID 67 Towards More Sustainable Structures Through Additive Manufacturing

Saeedeh Qaderi; Mantas Atutis; Fernando Fraternali

12:50–13:00 | ID 22 the influence of polypropylene fiber on 3D printed concrete

HICHAM BENSAFI; Constantin-Dorinel VOINIȚCHI

13:00–13:10 | ID 71 Material Efficiency and Waste Reduction in Modular Residential Buildings: A Circular Economy Alignment Framework from Prefabrication to End of Life

Kenza Belkhiri; Raluca Buzatu; Ungureanu Viorel

13:10–13:20 | ID 44 Cu-based non-sparking alloys for fire and explosion risk mitigation in potentially explosive industrial environments

Costica BEJINARIU; Ramona Cimpoeșu; Gabriel Chelariu; Marius-Mihai Cazacu; GABRIEL DRAGOS VASILESCU; Cimpoesu Nicanor

13:20–13:30 | ID 13 Integrated AHP–TOPSIS Framework for Selecting Sustainable and Resilient Construction Technologies in Civil and Mission-Critical Buildings

Mihai Veleanu; MIHAI ALEXANDRU VELEANU

Tuesday 3 November



Session 9

Structural Monitoring, Materials and Risk

Tuesday 3 November | 12:30–13:30 | Track C

Abstract presentations • 10 contributions

12:30–12:35 | ID 52 Polynomial Demodulation for Non-stationary Signal Analysis: Application to Nuclear Noise Monitoring in Nuclear Reactors

Maria Dima; Ramona Cimpoeșu; GABRIEL DRAGOS VASILESCU; Ileana Mates; Costica BEJINARIU

12:35–12:40 | ID 10 Vibration-Based Assessment of Axial Load Effects on Steel Piles Using Experimental Testing and Finite Element Analysis

Vilma Vaicekauskienė; Darius Narmontas; Arturas Slauteris; Dovydas Balsys

12:40–12:45 | ID 25 An Integrated Framework for Predictive Structural Health Monitoring of Concrete Dams

Andreea-Catalina Mosneag; Tudor Salagean

12:45–12:50 | ID 81 Optimized test setup for traditional Romanian 'paiantă' timber-framed masonry walls out-of-plane testing

Cristian Tutui; Andreea Casuta

12:50–12:55 | ID 83 Minimum-weight design of a steel bowstring truss railway bridge using a genetic algorithm

Elisei Cojan; RACANEL IONUT RADU

12:55–13:00 | ID 87 Integrating three-component seismic measurements into geotechnical ground-model assessment in Romania

Vlad-Constantin Ciulică

13:00–13:05 | ID 94 Methodology for monitoring horizontal displacements of the Rausor Dam using geodetic methods

Maria Madalina Boruga

13:05–13:10 | ID 61 Whole-Life Carbon Assessment of Romanian Building Typologies: An Archetype-Based Approach towards National Benchmarks

Rodica Purcel; Cristiana Croitoru

13:10–13:15 | ID 39 MFe₂O₄@MOF (M=transition metal) composites for innovative remediation of radioactive elements in CBRN threats.

Cezar Comanescu; Nicusor Iacob; Cristina Bartha; Petru Palade; Kuncser

13:15–13:20 | ID 92 Advanced nanocomposite materials for CBRN and ballistic protection: MTA Ferdinand I's partnership within PREPARE

Traian Rotariu; Gabriela Toader; Aurel Diacon; Andreea Moldovan

13:20–13:30 | Discussion

Tuesday 3 November



Session 10

Water Quality and Environmental Management

Tuesday 3 November | 14:30–15:30 | Track A

Scientific papers • 6 contributions

14:30–14:40 | ID 17 Comparative Analysis of Biodegradable Dissolved Organic Carbon (BDOC) Concentrations in Different Water Qualities from Surface Water versus Groundwater

Hayat EL-KADERY; Gabriel Racoviteanu

14:40–14:50 | ID 28 Influence of Coagulant Type on the Settling Velocity of Coagulated Colloidal Particles: A Comparative Study between Conventional and Polymer-Based Coagulants

Hayat EL-KADERY; Gabriel Racoviteanu

14:50–15:00 | ID 50 Impact of Septic Tank Seepage on karst Aquifers: A Case Study Benghazi, Libya

Adel S. Faskol; Farag EL Mabrouk; Asif Faskol

15:00–15:10 | ID 90 Towards an open-data indicator framework for agricultural drought assessment across soil–water–crop systems in Romania: an exploratory county-level application

Petronela-Bianca Vecerdea; Mihaela Rotaru; Iagaru Romulus; Lucian-Ionel CIOCA; Claudiu Isarie; Marius Cioca

15:10–15:20 | ID 15 A Smart Rooftop Farming Platform for Urban Sustainability: IoT Sensing, Plant Phenotyping and Automated Irrigation in the ORA Testbed

Giorgos Demetriou; Anna Merry; Pavlos Petridis; Katerina Zacharia; Nicoletta Christodoulou

15:20–15:30 | ID 8 Infrastructure-Aware Maritime Monitoring for Offshore Renewable Energy Zones

Ashish Vashishtha; Phil Murphy; Cathal Nolan

Tuesday 3 November

Session 11



Seismic Risk and Structural Resilience

Tuesday 3 November | 14:30–15:30 | Track B

Scientific papers • 6 contributions

14:30–14:40 | ID 35 Validation of hybrid ground motion simulations for Vrancea intermediate-depth earthquakes

Anabella Cotovanu; Angelica Stanciu; Elisei Cojan; Bogdan Ganta; Radu Vacareanu

14:40–14:50 | ID 43 QUANTIFICATION OF RANDOM AND EPISTEMIC UNCERTAINTIES IN SEISMIC RISK ANALYSES

Adrian Diaconu

14:50–15:00 | ID 58 Earthquake-Induced Change Management: A Conceptual Framework for Understanding Post-Disaster Organizational and Institutional Transformation

Zsolt Nagy; Attila Puskas; Oana Gherman; Nicoleta Cobarzan

15:00–15:10 | ID 73 Seismic risk exposure and the insurance protection gap in Romania: a locality-level assessment of mandatory catastrophe insurance

Simona PĂȚĂRLĂGEANU; GABRIELA TIGU; Stefania Cristina Curea; Viorel Mionel; Marius Neacsu

15:10–15:20 | ID 84 Seismic Design of Structural Glass Systems in Interaction with Supporting Structures: Good-Practice Approaches from Two Real-World Case Studies

Ciprian Popa; Iolanda Craifaleanu

15:20–15:30 | ID 49 AN AI-ASSISTED FRAMEWORK FOR STANDARDIZING LIFE-CYCLE DATA AND ENVIRONMENTAL PRODUCT DECLARATIONS OF CONSTRUCTION MATERIALS IN VIETNAM

Phuong Tran

Tuesday 3 November

Session 12



Climate, Buildings and Community Resilience

Tuesday 3 November | 14:30–15:30 | Track C

Abstract presentations • 9 contributions

14:30–14:35 | ID 54 From Environmental Exposure to Perceived Vulnerability and Adaptive Capacity: A Patient-Centered Framework for Cardiovascular Patients

Miruna Mihaela Micheu; Oana-Maria Udrea; Marius-Victor Birsan

14:35–14:40 | ID 85 Mapping the links between the socially vulnerable groups and extreme weather events. Evidence from Romania

Irena Roznovietchi; Paul-Razvan Serban; Dana Magdalena Micu; Bianca Mitrica; Laura Lupu

14:40–14:45 | ID 24 Developing Vietnam's First Operational Urban Climate Resilience Assessment System: Translating Global Resilience Principles into a National Assessment Framework

Thi Thuy Ha Le

14:45–14:50 | ID 69 Extended Abstract: Extending the Theory of Planned Behaviour: Examining Sustainable Travel Intentions of Leisure and VFR Travellers in Short-Haul Regional Aviation

Amy Whelan; Paul Morrissey

14:50–14:55 | ID 60 Understanding Barriers to Sustainability in Higher Education Institutions

Jessica Cullen

14:55–15:00 | ID 64 Preliminary Development of a Bio-Inspired Thermo-Hygroscopic Bilayer for Adaptive Façade Applications

Maria Angelica Stanciu; Razvan Calota; Indrakshi Dey

15:00–15:05 | ID 74 Comparative Assessment of the EPBD (Recast 2024) Transposition: Strategies, Milestones, and Barriers Across Selected EU Member States

Mirela Tomosoiu; Gratiela Tarlea

15:05–15:10 | ID 82 Assessment of the actual performance of multifamily buildings after energy retrofit

Petrică-George Caramet

15:10–15:15 | ID 105 Numerical study of solar-heated concrete/PCM wall performance in three Moroccan climate zones

Faraji Mustapha

15:15–15:30 | Discussion

Tuesday 3 November



Session 13

Critical Infrastructure and Asset Management

Tuesday 3 November | 16:00–17:00 | Track A

Scientific papers • 6 contributions

16:00–16:10 | ID 2 Intermediate-scale thermal-hydraulic numerical modelling of 43-rod CANFLEX nuclear fuel assemblies

Paul Ros; Florin Bode

16:10–16:20 | ID 34 Advancements in the Italian Technical Standards for Dams: from the 2014 Regulation to the Ongoing Revision

Fabrizio Barpi

16:20–16:30 | ID 47 Vibration measurements for Vidraru Dam during the draining and partial refilling of associated reservoir

Basarab Chesca; George Boian; Dan STEMATIU; Altan ABDULAMIT; Cristian Arion; Alexandru Aldea

16:30–16:40 | ID 75 Smart sensing for predictive maintenance and service-life extension of infrastructure: a sustainable, continuous structural health monitoring approach

Petre Fratean; Maria-Niamh Bratcovici

16:40–16:50 | ID 80 State-of-the-Art Comparative Assessment of Sustainable and Resilient Construction Technologies for Civil and Mission-Critical Buildings

MIHAI ALEXANDRU VELEANU; Cristina Iacoboaia

16:50–17:00 | ID 37 Bridging Technical Supervision and Contract Governance: Stakeholder Perceptions of the FIDIC Engineer Role in Vietnam

Van Vuong PHAM

Tuesday 3 November



Session 14

Digital and Environmental Modelling

Tuesday 3 November | 16:00–17:00 | Track C

Abstract presentations • 10 contributions

16:00–16:05 | ID 42 Artificial intelligence methods for point cloud processing and geospatial feature extraction

Dan-Catalin Varban; Andreea-Catalina Mosneag; Cătălin Sabou; Razvan-Cristian Ploscar; Adela-Maria Neag; Tudor Salagean

16:05–16:10 | ID 79 Automatic Classification of Urban LiDAR-UAS Point Clouds Using Hierarchical Robust Filtering and Random Forest

Miron Cristina-Oana; Valeria-Ersilia Oniga; George-Catalin

16:10–16:15 | ID 53 Evaluating LLM tool orchestration over the Model Context Protocol: a cost-focused cross-model study in safety-critical geospatial services

Dorobantu Gabriel Ionut; Ana-Cornelia Badea

16:15–16:20 | ID 46 The premises for the creation of an Edge AI designed to assist construction equipment operators

Claudiu-Alexandru Serban; Ioan Mihail Savaniu

16:20–16:25 | ID 38 Premises for the Digital Design and Optimization of Load-Bearing Metal Structures through the Integration of Digital Twin and Artificial Intelligence

Ioan Mihail Savaniu; Dragos-Mihai Enacheanu

16:25–16:30 | ID 89 Leveraging UAS-LiDAR and USV bathymetric data for reservoir DTM generation and volumetric analysis: a case study of the Trei Ape Lake

Catalin-Stefanel Sabou; Simion Bruma; Paul Sestras; Dan-Catalin Varban; Adela - Maria Neag; Tudor Salagean

16:30–16:35 | ID 86 Comparative Analysis of Probability Distributions for Modeling Maximum Mean Streamflow in the Tărlung River Basin, Romania

Gales Ruxandra-Maria; Dumitriu Cristian Stefan; Benteoiu (Simeria) Ioana-Aspasia

16:35–16:40 | ID 111 Observability and Guaranteed State Enclosure for High-Alkali Downdraft Biomass Gasification: A Synthetic Feasibility Study

Tudor Octavian Pocola; Florin Bode

Presenter: Octavian Pocola

16:40–16:45 | ID 102 Pléiades-based 3D urban reconstruction and multi-temporal Landsat analysis of urban thermal patterns in Iași, Romania

Ana-Ioana Breabăn; Ștefănel-Claudiu Crețu; Petre Iuliu Dragomir; Valeria-Ersilia Oniga

16:45–16:50 | ID 48 SPATIAL ASSESSMENT OF SOIL DEGRADATION RISKS UNDER CURRENT LAND USE IN THE VELYKYI KUYALNYK RIVER BASIN, UKRAINE

KOSTIANTYN SYDORUK; Dobovska

16:50–17:00 | Discussion

Closing session

Tuesday 3 November | 17:00–17:30