



13th International Conference

ENVIRONMENTAL ENGINEERING

April 23–24, 2026
Vilnius, Lithuania

CONFERENCE PROGRAMME



Conference organized by:



**VILNIUS GEDIMINAS TECHNICAL
UNIVERSITY**

Under the auspices of:



NORDIC GEODETIC COMMISSION



**INTERNATIONAL FEDERATION OF
SURVEYORS**



**EUROPEAN SUSTAINABLE ENERGY
INNOVATION ALLIANCE**



**NEW EUROPEAN BAUHAUS
ACADEMY**



**THE LITHUANIAN ROADS
ASSOCIATION**



**LITHUANIAN WATER SUPPLIERS
ASSOCIATION**

SCIENTIFIC COMMITTEE

Chairman:

Prof. Dr. Donatas Čygas

Secretary:

Prof. Dr. Vilma Jasiūnienė

ORGANIZING COMMITTEE

Chairman:

Prof. Dr. Rasa Vaiškūnaitė

Secretary:

Assoc. Prof. Dr. Oksana Survilė

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Mait Kriipsalu	Estonia
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Aušra Mažeikienė	Lithuania
Violeta Motuzienė	Lithuania
Eimuntas Paršeliūnas	Lithuania
Giorgio Passerini	Italy
Marek Pszczoła	Poland
Peter Randerson	United Kingdom
Juris Smirnovs	Latvia
Jūratė Sužiedelytė-Visockienė	Lithuania
Ovidijus Šernas	Lithuania
Judita Škuldeckė	Lithuania
Kiran Tota-Maharaj	United Kingdom
Rasa Vaiškūnaitė	Lithuania
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Viktoras Vorobjovas	Lithuania
Rasa Ušpalytė-Vitkūnienė	Lithuania
Aušra Zigmontienė	Lithuania
Mirosław Zukowski	Poland

PREFACE

Environmental engineering is a field of general engineering due to its complexity, wide applicability, and interdisciplinary nature. Environmental problems and challenges arise from various factors related to sustainable development. The international conference “Environmental Engineering” is devoted to the analysis of relevant environmental and water engineering issues, the dissemination of key research on roads and railways, the presentation of state-of-the-art geodesy and cadastre technologies, and the analysis, assessment, and optimization of research on energy supply and consumption systems.

The main objectives of the conference are:

- to promote direct discussions and versatile cooperation among researchers from Lithuanian and foreign research and higher education institutions, engineers, industry representatives, and municipalities;
- to bring together potential partners for successful, long-term, and continuous cooperation in the field of environmental engineering;
- to discuss the directions of applied research development and to encourage the implementation of advanced research results in practice.

The first international conference “Environmental Engineering” was held in 1994. At the 13th conference, researchers from 13 countries (Lithuania, Poland, Iraq, Ireland, Italy, Latvia, Malaysia, Peru, Portugal, Slovakia, Slovenia, Ukraine, and the Czech Republic) will present 115 papers, organized into four thematic sections: Environmental Protection and Water Engineering; Roads, Railways and Smart Cities; Geospatial Technologies and Innovations in Geodesy, Remote Sensing, and Environmental Monitoring; Energy for Buildings.

Prior to the conference, the International Scientific Committee selected 54 of the most significant and original papers, which have been published in the electronic conference proceedings. The Conference Organizing Committee sincerely thanks the members of the International Scientific Committee for their significant contribution to organizing the conference. We also express our gratitude to the conference participants and authors for their valuable insights and significant research results presented at the international conference “Environmental Engineering”.

Special thanks are extended to the conference sponsors for their contribution to the organization and implementation of the event. The Platinum Sponsor is “Bentley Systems International Limited”. Gold Sponsors: AB “Kauno tiltai”, UAB “Kerista”, UAB “Danfoss”, UAB “EMP Recycling”, UAB “ACO”. Silver Sponsors: UAB “Arginta”, UAB “Skadec”, UAB “GPS partneris”. Other Sponsors: UAB “Hnit-Baltic”, AB “Eurovia Lietuva”, VšĮ “RVA Agentūra”, UAB “GeoNovus”. Their support is essential in ensuring the high quality and smooth organization of the conference.

CONFERENCE PROGRAMME OVERVIEW

23 APRIL, 2026

- 12:00 – 13:00 Registration of participants at VILNIUS TECH, 2nd floor, near Aula Magna Hall
Address: Saulėtekio av. 11, LT-10223 Vilnius, Lithuania.
- 13:00 – 13:30 Conference opening / Aula Magna Hall
- 13:30 – 15:45 Plenary session / Aula Magna Hall
- 15:45 – 16:15 Coffee break / 2nd floor, near Aula Magna Hall
- 16:15 – 19:00 Free time
- 19:00 – 22:00 Gala Dinner / In the Museum Hall of the Botanical Garden of Vilnius University
Address: Kairėnų str. 43, LT-10239 Vilnius, Lithuania

24 APRIL, 2026

- Sessions:
9:00 – 10:15 Oral* and Poster** Presentations & Discussions
- 10:15 – 10:45 Coffee break / 2nd floor, near Aula Magna Hall
- 10:45 – 12:00 Sessions:
Oral* and Poster** Presentations & Discussions
- 12:00 – 13:00 Lunch / 1st floor, Hall near the Dressing Room and Aula Magna Hall
- Sessions:
13:00 – 14:15 Oral* and Poster** Presentations & Discussions /
Company and Equipment Presentations**
- 14:15 – 14:45 Coffee break / 2nd floor, near Aula Magna Hall
- Sessions:
14:45 – 15:30 Oral* and Poster** Presentations & Discussions /
Company and Equipment Presentations**

* – S1 307; S1 602; S1 704, S5 102 –
VILNIUS TECH, Saulėtekio av. 11, LT-10223 Vilnius, Lithuania

** – 2nd floor, near Aula Magna Hall
VILNIUS TECH, Saulėtekio av. 11, LT-10223 Vilnius, Lithuania

CONFERENCE PROGRAMME

23 APRIL CONFERENCE OPENING

- Location:** Vilnius Gediminas Technical University / S1 /
Aula Magna Hall /
- Address:** Saulėtekio av. 11, LT-10223 Vilnius, Lithuania
- 13:00 – 13:10 **OPENING PERFORMANCE**
- 13:10 – 13:20 **Prof. dr. Donatas Čygas.** *Chairman of the Conference
Scientific Organizing Committee, Lithuania*
- CONFERENCE OPENING**
- 13:20 – 13:30 **Prof. dr. Romualdas Kliukas.** *Rector of Vilnius
Gediminas Technical University, Lithuania*
- OPENING SPEECH**

23 APRIL PLENARY SESSION

- 13:30 – 14:00 **A. Alijošiūtė-Paulauskienė.** *JSC “Kelių priežiūra”,
Lithuania*
SUSTAINABILITY IN ACTION: TRANSFORMING
ROAD MAINTENANCE INTO A RESPONSIBLE AND
COMPETITIVE BUSINESS
- 14:00 – 14:30 **K. Pavelka, L. Beloch.** *Czech Technical University in
Prague, Faculty of Civil Engineering, department of
geomatics, Czech Republic*
NEW POSSIBILITIES FOR DOCUMENTING
HISTORICAL UNDERGROUND SPACES USING
HANDHELD LASER MOBILE SCANNERS AND
MODERN VISUALIZATION OF ACQUIRED DATA
- 14:30 – 15:00 **K. Greičiūtė.** *State Enterprise Ignalina Nuclear Power
Plant, Lithuania*
THE ‘ALTRA’ SUSTAINABILITY DIRECTION: NEXT
GENERATION NUCLEAR ENERGY
- 15:00 – 15:30 **K. Januševičius.** *National Energy Regulatory Council,
Lithuania*
FROM INFRASTRUCTURE TO IMPACT:
LITHUANIA'S NEXT ENERGY CHAPTER
- 15:30 – 15:45 **M. Kaczmarek.** *Bentley Systems International Limited,
Ireland*
CHALLENGES AND SOLUTIONS FOR
ENVIRONMENTAL ENGINEERING: SUSTAINABLE
INFRASTRUCTURE DESIGN & TECHNOLOGY

- 15:45 – 16:15** **Coffee break / 2nd floor, near Aula Magna Hall**
- 16:15 – 19:00** **Free time**
- 19:00 – 22:00** **Gala Dinner / In the Museum Hall of the
Botanical Garden of Vilnius University / Address:
Kairėnų str. 45, LT-10239 Vilnius, Lithuania**

**24 APRIL
WORK AT SECTIONS**

- 9:00 – 15:30** **Work at sections
(S1 602; S1 704; S1 307; S5 102 – VILNIUS TECH,
Saulėtekio av. 11, LT-10223 Vilnius, Lithuania)**
- 10:15 – 10:45** **Coffee break / 2nd floor, near Aula Magna Hall**
- 12:00 – 13:00** **Lunch / 1st floor, Hall near the Dressing Room and
Aula Magna Hall**
- 14:15 – 14:45** **Coffee break / 2nd floor, near Aula Magna Hall**

**SECTION 1. ENVIRONMENTAL PROTECTION AND
WATER ENGINEERING**

24 APRIL

**ORAL
PRESENTATIONS**

Session 1

Location: VILNIUS TECH
Room: S1 704

Chairmen:

Giorgio Passerini. *Marche Polytechnic University, Italy*

Tomas Astrauskas. *Vilnius Gediminas Technical University, Lithuania*

- 9:00 – 9:15 **R. Dagilūtė, J. Žaltauskaitė, G. Sujetovienė, D. Miškelytė.** *Lithuania*
BREAKTHROUGH TECHNOLOGIES FOR UPCYCLING OF CRITICAL RAW MATERIALS FROM HARD DISK DRIVES: NEO-CYCLE APPROACH
- 9:15 – 9:30 **J. Kostecki, A. Greinert, W. Dudziak.** *Poland*
SPATIAL DISTRIBUTION OF HEAVY METALS IN ROADSIDE DUST IN ZIELONA GÓRA, POLAND.
- 9:30 – 9:45 **T. Astrauskas,** *Lithuania*
PRELIMINARY STUDY OF ACOUSTIC AND PHYSICAL PROPERTIES OF FOAMED PAPER MILL SLUDGE PANELS
- 9:45 – 10:00 **M. Garnevičius.** *Lithuania*
DESIGNING FOR REUSE IN CONSTRUCTION: TOWARD ZERO-WASTE CONSTRUCTION SITES
- 10:00 – 10:15 **G. Stankevičiūtė, G. Ignatavičius, V. Valskys.** *Lithuania.*
THE IMPACT OF ROAD SALTING ON THE ROADSIDE SOIL CONDITION WITH DIFFERENT LEVELS OF MAINTENANCE
- 10:15 – 10:45** **Coffee break / 2nd floor, near Aula Magna Hall**
- 10:45 – 11:00 **O. Sorochynska, V. Khrutba, I. Rutkovska.** *Ukraine*
TECHNOLOGICAL APPROACHES TO THE REUSE OF DEMOLITION WASTE IN ROAD CONSTRUCTION AND THEIR ENVIRONMENTAL BENEFITS
- 11:00 – 11:15 **N. A. Gboe.** *Lithuania*
ASSESSMENT OF NATURAL-FIBER CEILING MATERIALS FOR ROOM ACOUSTICS THROUGH COMSOL MULTIPHYSICS SIMULATION

- 11:15 – 11:30 **K. Mohammadi, R. Vaiškūnaitė.** *Lithuania*
 BIOFILM-DRIVEN H₂S BIOTRANSFORMATION IN A
 HIGH-SURFACE-AREA BIOFILTER PACKED WITH KOH-
 ACTIVATED BIOCHAR AND FE₂O₃-MODIFIED CLC
 WASTE INOCULATED WITH PSEUDOMONAS SPP.
- 11:30 – 11:45 **A. Chiappini, G. Passerini.** *Italy*
 MAPPING URBAN AIR POLLUTION IN DATA-SCARCE
 AREAS USING GIS AND SATELLITE DATA
- 11:45 – 12:00 **J. Poggi, G. Romero, M. Guerrero, K. Yancee, F. Marroquin.**
Peru
 CIRCULAR ECONOMY ANALYSIS IN 3 DISTRICTS OF
 LIMA, PERU
- 12:00 – 13:00 Lunch / 1st floor, Hall near the Dressing Room and Aula
 Magna Hall**

24 APRIL

POSTER PRESENTATIONS

Session 2

Location: VILNIUS TECH
Poster session time: 2nd floor, near Aula Magna Hall
Room: 13:00 – 15:30

Coffee break: 14:15 – 14:45 / 2nd floor, near Aula Magna Hall

Chairmen:

S. Vasarevičius. *Vilnius Gediminas Technical University, Lithuania*

V. Šerevičienė. *Vilnius Gediminas Technical University, Lithuania*

1. **V. Danila, L. Usevičiūtė, T. Januševičius, M. Pranskevičius.** *Lithuania*
 INFLUENCE OF IRON-BASED MATERIALS ON HEAVY METAL
 DISTRIBUTION IN SEWAGE SLUDGE
2. **I. Krupińska.** *Poland*
 EFFECTIVENESS OF WATER TREATMENT PROCESSES IN
 REMOVING PRECURSORS OF CHLORINATED ORGANIC
 SUBSTANCES FROM MIXTURES OF GROUNDWATER AND
 SURFACE WATER
3. **V. Vitkauskaitė, S. Vasarevičius.** *Lithuania*
 THE ROLE OF MICROORGANISMS IN HEAVY METAL
 IMMOBILIZATION: A SYSTEMATIC ANALYSIS
4. **A. Kārklīņa.** *Latvia*
 ASSESSMENT OF ALTERNATIVE WOOD PELLET SUSTAINABILITY

5. **L. Usevičiūtė, V. Danila, M. Pranskevičius, E. Marčiulaitienė, T. Januševičius.** *Lithuania*
FROM INHIBITION TO PROMOTION: THE CRITICAL ROLE OF OXIDE VERSUS NON-OXIDE FORMS OF GRAPHENE AND IRON ON THE ANAEROBIC DIGESTION OF THERMALLY HYDROLYZED SEWAGE SLUDGE
6. **M. E. F. Silva, I. Brás.** *Portugal*
BURNED SOILS REGENERATION PRACTICES: A REVIEW
7. **J. Pileckienė, J. Tretjakovas, R. Grubliauskas.** *Lithuania*
APPLICATION OF MYCELIUM COMPOSITES AND THE INFLUENCE OF THEIR MICROTEXTURE ON MECHANICAL PROPERTIES
8. **Z. Kazizova, A. Zagorskis.** *Lithuania*
INFLUENCE OF CHEMICAL PRETREATMENT ON BIOGAS PRODUCTION FROM ANAEROBIC DIGESTION OF *PHRAGMITES AUSTRALIS*
9. **M. Huseynov, V. Šerevičienė.** *Lithuania*
FUSION ENERGY FOR A SUSTAINABLE FUTURE: A REVIEW OF CAPABILITIES AND BARRIERS
10. **A. Bouynk, A. Mažeikienė, K. Stepova, O. Zhorina, T. Skyba.** *Lithuania*
POST-RECLAMATION CHANGES IN RADIATION DOSE EQUIVALENT RATE AND LEACHATE PROPERTIES: A CASE STUDY OF THE LVIV MUNICIPAL LANDFILL.
11. **O. Khrystoslavenko, U. Sikandar.** *Lithuania*
BIODEGRADABLE PH-RESPONSIVE COLOURIMETRIC INDICATORS FOR SMART PACKAGING APPLICATION
12. **V. Griškevičienė, V. Mickevičienė.** *Lithuania*
NON-TRADITIONAL RESOURCES IN THE CONTEXT OF CLIMATE CHANGE: OPPORTUNITIES FOR HEMP MARKET DEVELOPMENT IN LITHUANIA
13. **D. Putere.** *Latvia*
CLOSING THE LOOP ON GLASS PACKAGING IN LATVIA: FROM EXPORT TO DOMESTIC RECYCLING
14. **D. Rutkauskas, M. Garnevičius, R. Grubliauskas.** *Lithuania*
ENVIRONMENTAL LIFE CYCLE ASSESSMENT OF MYCELIUM-BASED COMPOSITES FOR ACOUSTIC APPLICATIONS
15. **A. Bouynk, A. Mažeikienė, A. Zigmontienė, E. Marčiulaitienė.** *Lithuania*
STUDIES TO DETERMINE THE OPTIMAL COAGULANT DOSAGE FOR THE PRECIPITATION OF LANDFILL LEACHATE POLLUTANTS
16. **I. L. Sanžerevska.** *Latvia*
A SIMULATION BASED APPROACH TO DECISION MAKING DYNAMICS IN ENERGY COMMUNITIES
17. **H. Ali, A. Mažeikienė, D. Paliulis.** *Lithuania*
ADDITIONAL TREATMENT OF BIOLOGICALLY TREATED WASTEWATER USING ENVIRONMENTALLY FRIENDLY SORBENTS

18. **N. Eigelis, T. Januševičius.** *Lithuania*
THE POTENTIAL OF PLANT-BASED MATERIALS TO IMPROVE
ACOUSTIC COMFORT INDOORS: A LITERATURE REVIEW
19. **R. Dauknys, A. Rokaitė.** *Lithuania*
RESEARCH OF DIGESTION OF COW MANURE AND CHICKEN
DUNG MIXTURE WITH DIFFERENT ADDITIVES
20. **T. Lācis.** *Latvia*
ADAPTED SHADING SOLUTIONS FOR EXISTING BUILDING
SECTOR FROM RECYCLED TEXTILE
21. **R. Stankevičienė, O. Survilė, D. Kalibatiėnė.** *Lithuania*
VARIATION OF BIOGENIC NUTRIENTS IN LAKE WATER UNDER
DIFFERENT LEVELS OF ANTHROPOGENIC IMPACT
22. **R. Albrektienė-Plačakė, V. Voišnienė, M. M. Torre.** *Lithuania*
INVESTIGATION OF THE REMOVAL OF CATIONS FROM AQUEOUS
SOLUTIONS USING SAPROPEL
23. **I. Andriulaitytė, M. Valentukevičienė.** *Lithuania*
SUSTAINABLE NATURE-BASED SOLUTIONS FOR THE MITIGATION
OF RESIDUAL CHLORINE IN STORMWATER
24. **M. Ābolīņa – Tomsons.** *Latvia*
INNOVATIVE BUSINESS MODELS FOR BIOECONOMY
25. **T. Astrauskas, R. Ružickij, A. Naimušin, J. Bradulienė,
M. Pranskevičius, T. Januševičius.** *Lithuania*
EFFECT OF PERFORATION GEOMETRY ON SOUND ABSORPTION
IN PERFORATED PLASTIC PANELS
26. **E. Svirskis, V. Abromaitis.** *Lithuania*
COMPARISON OF OZONATION AND PHOTOLYTIC OZONATION
FOR TREATING PHTHALATE-CONTAMINATED SECONDARY
EFFLUENT
27. **J. Bradulienė, L. Usevičiūtė.** *Lithuania*
CHANGE IN SOIL POLLUTION INDICATORS IN CENTRAL
LITHUANIA
28. **Anatoliy Pavlenko.** *Poland*
A NOVEL THERMAL CRITERION FOR BUBBLE DESTRUCTION IN
HYDRODYNAMIC CAVITATION: NUMERICAL MODELING AND
EXPERIMENTAL VALIDATION

SECTION 2. ROADS, RAILWAYS AND SMART CITIES

24 APRIL

ORAL PRESENTATIONS

Session 1

Location: VILNIUS TECH

Room: S1 307

Chairmen:

J. Škulveckė. *Vilnius Gediminas Technical University, Lithuania*

V. Jasiūnienė. *Vilnius Gediminas Technical University, Lithuania*

- 9:00 – 9:15 **K. Maciejewski, A. Chomicz-Kowalska.** *Poland*
ADHESION BETWEEN DIFFERENT ASPHALT BINDERS
AND AGGREGATE TYPES EVALUATED USING BOILING
WATER STRIPPING TEST IN SCOPE OF WMA FOAMING
TECHNIQUE
- 9:15 – 9:30 **K. Janus, A. Chomicz-Kowalska.** *Poland*
THE EFFECT OF FIBER REINFORCEMENT ON THE HIGH-
TEMPERATURE PERFORMANCE OF WARM MIX
ASPHALT PRODUCED USING WATER-FOAMING
TECHNOLOGY
- 9:30 – 9:45 **R. Kleizienė, A. Vaitkus.** *Lithuania*
LIFE CYCLE EVALUATION OF MATERIAL
TRANSPORTATION IMPACTS IN ASPHALT MIXTURE
PRODUCTION
- 9:45 – 10:00 **J. Stępień, K. Maciejewski, E. Remišová, P. Ramiączek.**
Poland
ENVIRONMENTAL AND FUNCTIONAL ROLE OF
RECYCLED CRUMB RUBBER IN HOT-APPLIED JOINT
SEALANTS BASED ON RHEOLOGICAL AND
MICROSTRUCTURAL EVALUATION
- 10:00 – 10:15 **P. Benetis.** *Lithuania*
DATA-DRIVEN ROAD CONSTRUCTION: Q POINT
TECHNOLOGY IN KAUNAS TILTAI AB OPERATIONS
- 10:15 – 10:45 Coffee break / 2nd floor, near Aula Magna Hall**

Session 2

Chairmen:

S. A. Biancardo. *University of Naples Federico II, Italy*

R. Ušpalytė-Vitkūnienė. *Vilnius Gediminas Technical University, Lithuania*

- 10:45 – 11:00 **Š. Skuodis, M. Daugevičius, N. Dirgėlienė, M. Zakarka.**
Lithuania
CHANGES IN THE LANDSCAPE OF GEDIMINAS HILL'S SLOPES
- 11:00 – 11:15 **S. A. Biancardo, P. Serra, M. Intignano, S. F. Abbondati, G. Dell'Acqua.** *Italy*
AI-ENHANCED DATA WORKFLOWS FOR ROAD INFRASTRUCTURE BIM: A PYTHON-VPL FRAMEWORK ENABLING 4D-7D INTEGRATION
- 11:15 – 11:30 **M. Giunta, C. Marino.** *Italy*
TOWARDS SUSTAINABLE RAIL MOBILITY: EMISSION REDUCTION STRATEGIES FOR MODERN RAIL OPERATIONS
- 11:30 – 11:45 **M. Petrelli.** *Italy*
CAPACITY EVALUATION OF MIXED PASSENGER-FREIGHT TRAFFIC ON HIGH-SPEED RAILWAY LINE
- 12:00 – 13:00** **Lunch / 1st floor, Hall near the Dressing Room and Aula Magna Hall**

Session 3

Chairmen:

V. Grigonis. *Vilnius Gediminas Technical University, Lithuania*

L. Gavėnienė. *Vilnius Gediminas Technical University, Lithuania*

- 13:00– 13:15 **A. Samuilovas, R. Ušpalytė-Vitkūnienė.** *Lithuania*
DETERMINATION OF PUBLIC TRANSPORT ORGANIZATION INDICATORS AND ASSESSMENT OF THEIR IMPORTANCE
- 13:15– 13:30 **V. Grigonis, J. Tamulynas.** *Lithuania*
PLANNING PRIORITIES FOR RAIL BALTICA REGIONAL STATIONS: A COMPARATIVE ANALYSIS OF PASSENGER AND EXPERT PERSPECTIVES ON COMFORT AND AMENITIES
- 13:30 – 13:45 **S. Čižauskas, R. Ušpalytė-Vitkūnienė.** *Lithuania*
METHODS OF DETERMINING THE O-D MATRIX IN THE ABSENCE OF DATA/ POSSIBILITIES OF CALCULATING THE O-D MATRIX WITHOUT GLOBAL SURVEYS
- 13:45 – 14:00 **I. Donauskienė, V. Jasiūnienė, A. Tumavičė.** *Lithuania*
ANALYSIS OF ROAD SAFETY AUDITS CONDUCTED IN 2024-2025
- 14:00 – 14:15 **L. Matačina, G. Ignatavičius, A. Ulevičius, V. Valskys.**
Lithuania
DO METEOROLOGICAL AND ROAD CONDITIONS INFLUENCE ANIMAL-VEHICLE COLLISIONS?
- 14:15 – 14:45** **Coffee break / 2nd floor, near Aula Magna Hall**

24 APRIL

POSTER
PRESENTATIONS

Session 4

Location: VILNIUS TECH
Poster session time: 2nd floor, near Aula Magna Hall
Coffee break: 14:15 – 14:45 / 2nd floor, near Aula Magna Hall
Room: 14:45 – 15:30

Chairmen:

V. Jasiūnienė. *Vilnius Gediminas Technical University, Lithuania*

L. Bertulienė. *Vilnius Gediminas Technical University, Lithuania*

1. **O. Šernas, S. Česnauskienė, A. Vaitkus, J. Škuldeckė, L. Šneideraitienė.** *Lithuania*
RHEOLOGICAL DIFFERENCES BETWEEN LABORATORY-MODIFIED AND COMMERCIAL PMBS: AN MSCR BASED COMPARISON
2. **L. Gavėnienė, V. Jasiūnienė, D. Čygas.** *Lithuania*
EXPERIENCE IN IMPLEMENTING AVERAGE SPEED CONTROL SYSTEMS ON LITHUANIAN ROADS
3. **E. Juodvalkienė, D. Čygas, H. Sivilevičius, V. Žuraulis.** *Lithuania*
ANALYSIS OF FACTORS INFLUENCING MICROMOBILITY DEVELOPMENT
4. **G. Anilionis, A. Vaitkus.** *Lithuania*
EXPERIMENTAL EVALUATION OF DUST SUPPRESSION TECHNOLOGIES ON UNPAVED GRAVEL ROADS
5. **J. Rimkuvienė, V. Vorobjovas.** ANALYSIS OF INTELLIGENT TRANSPORT SYSTEMS COVERAGE AND MATURITY ACROSS ROAD CATEGORIES IN THE LITHUANIAN NATIONAL ROAD NETWORK
6. **K. Krayushkina, V. Bondarchuk, O. Stepanchuk, H. Talavira.** *Ukraine*
A COMPREHENSIVE STUDY OF THE EFFECT OF BIOCHAR ON THE RHEOLOGICAL PROPERTIES AND DURABILITY OF ASPHALT CONCRETE MIXTURES
7. **Y. Ugnenko, E. Uzhviieva, N. Sorochuk, Y. Korostelov, A. Shevchenko, N. Bielikova.** *Ukraine*
METHODS FOR JUSTIFYING THE CONSTRUCTION OF SETTLEMENT BYPASSES BASED ON TRAFFIC FLOW REGIMES AND ROAD CAPACITY

**SECTION 3. GEOSPATIAL TECHNOLOGIES AND INNOVATIONS IN
GEODESY, REMOTE SENSING, AND ENVIRONMENTAL MONITORING**

24 APRIL

Session 1

Location: VILNIUS TECH

Room: S1 602

Chairmen:

M. H. Zienkiewicz. *Gdańsk University of Technology, Poland*

J. Sužiedelytė Visockienė. *Vilnius Gediminas Technical University, Lithuania*

- 9:00 – 9:15 **E.K. Paršeliūnas, R. Baniulis, J. Ogintas, R.Kolosovskis, M. Petniūnas.** *Lithuania*
PROCESSING THE GNSS DATA OF LITPOS NETWORK
- 9:15 – 9:30 **K. Bobkowska, P. Burdziakowski, P. Tysiac, J.Szulwic, V.D.L.R. Goulart, C. P. Teixeira, A. T. A. Nascimento.** *Poland, Brazil*
AZIMUTHAL VISUALIZATION OF ARTIFICIAL LIGHT AT NIGHT (ALAN) BASED ON 3D GAUSSIAN SPLATTING
- 9:30 – 9:45 **M. Kalinka.** *Latvia*
SPATIAL DATA AS A TOOL FOR UAV MOBILITY IN CITIES
- 9:45 – 10:00 **V. Rathinasamy, M. S. B.M.Roslee, A. Z. B. A. Husaini, J. Luo, M.A.M. Ismail, R. M. Bhatawdekar, E. K. Suparmanto.** *Malaysia*
UAV-BASED ROCK MASS CHARACTERIZATION FOR GEOLOGICAL STRENGTH INDEX (GSI) ASSESSMENT AND COMPARISON WITH CONVENTIONAL FIELD MAPPING
- 10:00 – 10:15 **R. Skowroński, C. Kowalczyk, R. Kaźmierczak.** *Poland*
EVALUATING PERCEPTUAL RESPONSES TO CULTURAL HERITAGE MODELS IN VR-BASED URBAN DIGITAL TWIN ENVIRONMENTS: A SMART CITY EXPERIMENT
- 10:15 – 10:45** **Coffee break / 2nd floor, near Aula Magna Hall**
- 10:45 – 11:00 **E. K. Paršeliūnas, R. Obuchovski, D. Šlikas.** *Lithuania*
PROCESSING THE MARINE GRAVITY MEASUREMENTS
- 11:00 – 11:15 **J. Rostek, C. Kowalczyk, R. Kaźmierczak.** *Poland*
SYSTEMIC LIMITS OF SPATIAL PLANNING REFORM: CAN POLAND STOP SUBURBANIZATION
- 11:15 – 11:30 **U. P. Udoka, K. Pavelka.** *Nigeria, Czechia*
SPATIOTEMPORAL DYNAMICS OF SURFACE WATER EXTENT IN THE KANO RIVER BASIN, NIGERIA: AN ANALYSIS USING LANDSAT AND SENTINEL-2 MULTI-SPECTRAL IMAGERY (2000-2025)

- 11:30 – 11:45 **M. H. Zienkiewicz, G. Bystrzycka, Z. Iciak, R. Obuchowski.**
Poland, Lithuania
SENSITIVITY TO GROSS ERRORS OF NEW VARIANTS OF M_{split} ESTIMATORS
- 12:00 – 13:00 Lunch / 1st floor, Hall near the Dressing Room and Aula Magna Hall**
- 13:00 – 13:15 **P. S. Dabrowski, P. Burdziakowski, R. Obuchowski, E.K. Paršeliūnas, J. Szulwic, P. Tysiac, M.H. Zienkiewicz.**
Poland, Lithuania
POINT CLOUD SPATIAL EXPANSION METHOD IN HBIM APPLICATIONS – STATE OF THE ART AND CURRENT CHALLENGES
- 13:15 – 13:30 **A. Chiappini, G. Passerini.** *Italy*
MAPPING URBAN AIR POLLUTION IN DATA-SCARCE AREAS USING GIS AND SATELLITE DATA

24 APRIL

POSTER PRESENTATIONS

Session 2

- Location:** VILNIUS TECH
Poster session time: 2nd floor, near Aula Magna Hall
Room: 13:00 – 15:30
Coffee break: 14:15 – 14:45 / 2nd floor, near Aula Magna Hall

Chairmen:

- R. Birvydienė.** *Vilnius Gediminas Technical University, Lithuania*
E. K. Paršeliūnas. *Vilnius Gediminas Technical University, Lithuania*

- G. Metrikaitytė-Gudelė, J. Sužiedelytė Visockienė.** *Lithuania*
THE LOST CARBON OPPORTUNITY: SOC SEQUESTRATION POTENTIAL OF COVER CROPS DURING BARE SOIL PERIOD
- M. A. Sh. Fahim, J. Sužiedelytė Visockienė.** *Lithuania*
HIGH-RESOLUTION PM₁₀ PREDICTION USING A GIS-INTEGRATED SPATIAL–TEMPORAL MACHINE-LEARNING APPROACH IN VILNIUS
- R. Bražiūnas, J. Sužiedelytė Visockienė, E. Tumelienė, R. Birvydienė, A. Stanionis.** *Lithuania*
COASTAL FLOOD DETECTION IN ŠILUTĖ DISTRICT USING SENTINEL-1 SAR AND COMPARISON WITH MODELED 2022 FLOOD-RISK ZONES

4. **F. Mohammadyari, K. Abdollahi, E. Tumelienė, R. Birvydienė, A. Stanionis.** *Iran, Lithuania*
SPATIAL QUANTIFICATION AND ECONOMIC VALUATION OF RECREATIONAL ECOSYSTEM SERVICES IN IRAN'S ZAGROS MOUNTAINS: A SUB-WATERSHED ANALYSIS USING THE RECREATION OPPORTUNITY SPECTRUM (ROS) FRAMEWORK
5. **R. Bražiūnas, R. Puzienė, J. Sužiedelytė Visockienė.** *Lithuania*
RIVERBED MONITORING AND MODELING USING GIS

SECTION 4. ENERGY FOR BUILDINGS

24 APRIL

ORAL PRESENTATIONS

Session 1

Location: VILNIUS TECH
Room: S5 102

Chairmen:

V. Lapinskienė. *Vilnius Gediminas Technical University, Lithuania*

K. Valančius. *Vilnius Gediminas Technical University, Lithuania*

- 9:00 – 9:15 **M. Grinevičiūtė.** *Lithuania*
WHOLE-LIFE CARBON TRADE-OFFS AND CLIMATE CHANGE IMPACTS ON ZERO EMISSION-ORIENTED RESIDENTIAL BUILDINGS
- 9:15 – 9:30 **A. Rusowicz, B. Kowalski.** *Poland*
HEAT BALANCE ANALYSIS FOR AN ELECTRIC CAR
- 9:30 – 9:45 **K. Katana, A. Szelaḡowski, Andrzej Grzebielec.** *Poland*
THERMAL PERFORMANCE OF A SILICA GEL–WATER VAPOR ADSORPTION SYSTEM AS AN ALTERNATIVE COOLING TECHNOLOGY
- 9:45 – 10:00 **A. Grzebielec, K. Katana.** *Poland*
ANALYSIS OF THE OPERATION OF A COLD THERMAL ENERGY STORAGE SYSTEM COOPERATING WITH AN AIR CONDITIONING SYSTEM UNDER TEMPERATE CLIMATE CONDITIONS
- 10:00 – 10:15 **A. Timofejevas, K. Valančius.** *Lithuania*
HYDRAULIC CONFIGURATION ANALYSIS OF CHILLER-BASED COOLING SYSTEMS
- 10:15 – 10:45** **Coffee break / 2nd floor, near Aula Magna Hall**
- 10:45 – 11:00 **A. J. Werner-Juszczuk, D. A. Krawczyk, P. Rynkowski.** *Poland*
ASSESSMENT OF THE POSSIBILITY OF LOCATING PHOTOVOLTAIC PANELS ON KINDERGARTEN ROOFS - A CASE STUDY FOR A SELECTED CITY IN POLAND
- 11:00 – 11:15 **Ł. Jendryasek, M. Tańczuk, M. Szega.** *Poland*
COMPARATIVE ANALYSIS OF LARGE-SCALE HEAT PUMP CONFIGURATIONS FOR WASTEWATER HEAT RECOVERY IN A SECOND-GENERATION DISTRICT HEATING SYSTEM

- 11:15– 11:30 **H. Koshlak.** *Poland*
THERMAL PERFORMANCE AND HEAT FLUX DYNAMICS OF ELECTRICALLY HEATED WINDOWS: A FOUNDATION FOR ENERGY-EFFICIENT ACTIVE GLAZING SYSTEMS
- 11:30 – 11:45 **A. M. M. Reza, G. Streckienė.** *Lithuania*
SUPERMARKET REFRIGERATION SYSTEMS IN COLD-CLIMATE REGIONS:
A COMPREHENSIVE REVIEW OF WASTE HEAT RECOVERY POTENTIAL, COMPATIBILITY WITH DISTRICT HEATING NETWORK INTEGRATION, AND FORWARD-LOOKING FREE-COOLING-ENABLED OPERATION
- 11:45 – 12:00 **J. Bielskus, A. Rogoža, V. Misevičiūtė, G. Streckienė, V. Lapinskienė.** *Lithuania*
AIR-SOURCE HEAT PUMP INTEGRATION TO SUPPORT DISTRICT HEATING DECARBONIZATION IN LITHUANIAN CLIMATE
- 12:00 – 13:00 Lunch / 1st floor, Hall near the Dressing Room and Aula Magna Hall**

24 APRIL

POSTER PRESENTATIONS

Session 2

- Location:** VILNIUS TECH
Poster session time: 2nd floor, near Aula Magna Hall
Room: 13:00 – 15:30
Coffee break: 14:15 – 14:45 / 2nd floor, near Aula Magna Hall

Chairmen:

- V. Misevičiūtė.** *Vilnius Gediminas Technical University, Lithuania*
A. Rogoža. *Vilnius Gediminas Technical University, Lithuania*

- T. Lācis.** *Latvia*
CLIMATE ADAPTATION SOLUTIONS FOR EXISTING BUILDING STOCK
- I. Liene Sanžerevska.** *Latvia*
DEVELOPMENT OF ENERGY COMMUNITIES GAME MECHANICS
- R. Adomaitis, K. Valančius.** *Lithuania*
THE INFLUENCE OF WIND SPEED PROFILES ON THE BEHAVIOUR CONDITIONS OF A SINGLE-FAMILY PASSIVE HOUSE
- M. Krajcik, A. Václavová, , R. Ingeli.** *Slovakia*
CURRENT BUILDING MANAGEMENT SYSTEM CAPABILITIES AND REQUIREMENTS IN SLOVAKIA – PRELIMINARY RESULTS FROM A QUESTIONNAIRE SURVEY

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