



**RIGA TECHNICAL  
UNIVERSITY**

64<sup>th</sup> International Scientific Conference  
of Riga Technical University

September  
29, 2023

Online

PROGRAMME

# Scientific Problems of Engineering Economics of Construction and Real Estate Management, Regional and Territorial Development

## HEAD OF THE SECTION

Prof. Dr. **INETA GEIPELE**,  
Riga Technical University,  
Latvia

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Prof. Dr. **MAIJA SENFELDE**,  
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Prof. Dr. **JANIS VANAGS**,  
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Mazury in Olsztyn, Poland

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LAPUKE**, Riga Technical  
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**JĀNIS ZVIRGZDINS**,  
Mg.oec., Bc.Sc.Ing., Riga  
Technical University, Latvia

## Friday, September 29

Join Zoom Meeting

<https://rtucloud1.zoom.us/j/92665460641?pwd=ZWVzR3hzcktTbmNjbzYrRWZlHA2UT09>

Moderator:

**JANIS ZVIRGZDINS,  
ANTRA KUNDZINA**

### 9.30-10.00 REGISTRATION OF PARTICIPANTS

### 10.00-10.40 WELCOME TO THE CONFERENCE

Martins Auders, Department of Housing Policy, Ministry of Economics, Latvia  
Laura Tupenaite, Vilnius Gediminas Technical University, Lithuania  
Rūta Bendere, Waste Management Association of Latvia, Latvia  
Ineta Geipele, Riga Technical University, Latvia

### 10.40-13.00 CHALLENGES IN MODELLING THE IMPACT OF GREENER AND ENVIRONMENTALLY FRIENDLY SOLUTIONS APPLICATION IN LAST-MILE DELIVERY IN LATVIA: NATIONAL AND REGIONAL PERSPECTIVE

Astra Auzina-Emsina, Riga Technical University, Latvia

### PRECONDITIONS OF DEVELOPMENT OF SUSTAINABLE SOLUTION FOR TRANSPORTATION SERVICES IN LATVIA

Valerijs Skribans, Riga Technical University, Latvia



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**ASSESSMENT OF THE IMPACT OF ECONOMIC AND ADMINISTRATIVE INSTRUMENTS ON TRANSFORMATION TO A SUSTAINABLE MOBILITY**

Maris Juruss, Riga Technical University, Latvia

Janis Brizga, University of Latvia, Latvia

**OPPORTUNITIES FOR THE WOODEN PUBLIC BUILDINGS' DEVELOPMENT IN LITHUANIA**

Jurga Naimaviciene, Dovile Muizinikiene, Laura Tupenaite, Loreta Kanapeckiene, Tomas Gecys, Vilnius Gediminas Technical University, Lithuania

**MAIN RESULTS WITHIN CLI-MA PROJECT WITH REGARD TO IMPROVE ENERGY PERFORMANCE LEVEL OF RESIDENTIAL BUILDINGS**

Antra Kundzina, Ineta Geipele, Iveta Stamure, Riga Technical University, Latvia

**DIGITAL TWIN AS A TOOL FOR GREEN HYDROGEN PRODUCTION OPTIMIZATION**

Leo Jansons, Ineta Geipele, Namejs Zeltins, Riga Technical University, Latvia

**DIGITAL TWINS IN URBAN ENERGY COMMUNITIES: A DATA ACQUISITION AND PROCESSING MANAGEMENT PROBLEM**

Leo Jansons, Ineta Geipele, Namejs Zeltins, Valerijs Skribans, Riga Technical University, Latvia

**THE CONCEPT OF ENERGY COMMUNITIES IN THE EUROPEAN UNION**

Martins Auders, Ineta Geipele, Sanda Lapuke, Riga Technical University, Latvia

**URBAN RENAISSANCE: NAVIGATING SUSTAINABLE URBANIZATION FOR REGIONAL PROSPERITY**

Regina Veckalne, Tatjana Tambovceva, Riga Technical University, Riga, Latvia

**ASSESSMENT OF IMPLEMENTATION OF CIRCULAR ECONOMY FRAMEWORK IN THE SRI LANKAN CONSTRUCTION SECTOR**

Thilina Ganganath Weerakoon, Sulaksha Wimalasena, Sri Lanka Institute of Information Technology, Sri Lanka

Janis Zvirgzdins, Riga Technical University, Latvia

**IDENTIFYING POTENTIAL HOUSEHOLD WASTE AS SECONDARY RAW MATERIALS IN THE CONSTRUCTION INDUSTRY: A CASE STUDY OF SRI LANKA**

Thilina Ganganath Weerakoon, Sulaksha Wimalasena, Sri Lanka Institute of Information Technology, Sri Lanka

Janis Zvirgzdins, Riga Technical University, Latvia

**RETROSPECTION OF DEVELOPMENT OF CIRCULAR ECONOMY CONCEPT**

Janis Zvirgzdins, Ineta Geipele, Sanda Lapuke, Riga Technical University, Latvia

**FROM INDUSTRIAL REVOLUTION TO THE NEED OF CIRCULAR ECONOMY IMPLEMENTATION**

Janis Zvirgzdins, Kaspars Plotka, Ineta Geipele, Riga Technical University, Latvia

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13.00–13.30

**LUNCH BREAK**

13.30–16.00

**UNDERLINING THE NEED OF CIRCULAR ECONOMY IN URBAN ENVIRONMENT**

Janis Zvirgzdins, Kaspars Plotka, Ineta Geipele, Riga Technical University, Latvia

**CONCEPTUALIZATION OF SYNERGY IN URBAN ENVIRONMENT**

Kaspars Plotka, Riga Technical University, Latvia

**THE PROCESS OF ABOLISHMENT OF MUNICIPALITY REAL ESTATE RIGHT OF FIRST REFUSAL IN LATVIA**

Janis Viesturs, Armands Auzins, Riga Technical University, Latvia

**EFFICIENCY AND EFFECTIVENESS IN BUSINESS AND BEYOND: CRITICAL AND ANALYTICAL APPROACH**

Janis Vanags, Ineta Geipele, Riga Technical University, Latvia

**VALUES OF HIGHER EDUCATION INSTITUTIONS: THEIR CRITICAL AND ANALYTICAL EVALUATION**

Janis Vanags, Ineta Geipele, Riga Technical University, Latvia

**THE CONTEMPORARY DYNAMICS OF QUANTITATIVE EFFECTS OF BUSINESS PARTNERSHIPS OF CONSTRUCTION ENTERPRISES**

Janis Vanags, Ineta Geipele, Riga Technical University, Latvia

Andris Vanags, Turiba University, Latvia

**TECHNOLOGICAL ADVANCEMENTS IN REAL ESTATE MANAGEMENT ASSISTANCE OF VIRTUAL 3D TOUR**

Jurga Naimaviciene, Lina Leimontaite, Loreta Kanapeckiene, Laura Tupenaite, Vilnius Gediminas Technical University, Lithuania

**LOW-RENT HOUSING CONSTRUCTION OPPORTUNITIES**

Iveta Amolina, Riga Technical University, Latvia

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**SITUATION IN ENERGY CERTIFICATION OF RESIDENTIAL BUILDINGS IN LATVIA**

Antra Kundzina, Sanda Lapuke, Riga Technical University, Latvia

**THE EFFECT OF EXTERNAL AND INTERNAL FACTORS ON MANAGEMENT EFFECTIVENESS WITHIN INDIAN CONSTRUCTION COMPANIES**

Rashmi Jaymin Sanchaniya, Cijo George Thomas, Ineta Geipele, Riga Technical University, Riga, Latvia

**CIRCULAR ECONOMY STRATEGIES IN BUILDING DESIGN: PRIORITIZING SUSTAINABILITY THROUGH BEST-WORST DECISION-MAKING METHOD (BWM)**

Soroush Saneimoghaddam, Janis Zvirgzdins, Sanda Lapuke, Riga Technical University, Latvia

**ECONOMIC CRISIS ADAPTATION IN SRI LANKAN CONSTRUCTION: PATHWAY TO PROSPERITY**

Thilina Ganganath Weerakoon, Sulaksha Wimalasena, Department of Civil Engineering, Sri Lanka Institute of Information Technology, Sri Lanka, Riga Technical University, Riga, Latvia

Kristine Fedotova, Riga Technical University, Riga, Latvia

**COMPATIBILITY OF LVS EN 16310:2020 WITH CONSTRUCTION DESIGN METHODS**

Janis Uzulens, Zanda Zarina, Jurisconsultus Ltd., Latvia

**TECHNICAL CONDITION OF SOVIET-ERA APARTMENT BUILDINGS, RELATED PROBLEMS AND POSSIBLE SOLUTIONS IN LATVIA**

Zanda Zarina, Janis Uzulens, Jurisconsultus Ltd., Latvia

**DEVELOPMENT OF THE MUNICIPAL REAL ESTATE STRATEGY IN LATVIA**

Liva Voitehovica, Antra Kundzina, Riga Technical University, Latvia

**FACTORS INFLUENCING THE ADOPTION OF SMART BUILDING AND SERVICE PREFERENCES IN SRI LANKA**

Thilina Ganganath Weerakoon, Sulaksha Wimalasena, Nivethan Moganaraj, Riga Technical University, Latvia

**COMPARATIVE ANALYSIS OF THE CONSTRUCTION SECTOR OF LATVIA AND AZERBAIJAN**

Regina Veckalne, Humbat Humbatov, Riga Technical University, Latvia

**ENVIRONMENTALLY FRIENDLY CONSTRUCTION DEVELOPMENT STRATEGY IN LATVIA**

Andris Dulbinskis, Kristine Fedotova, Riga Technical University, Latvia

**THE CONSTRUCTION COST INDICES: THE CASE STUDY IN LATVIA**

Ineta Geipele, Janis Kaminskis, Riga Technical University, Latvia

**DISTINCTIVE CHARACTERISTICS OF CONSTRUCTION MATERIALS AND THEIR EVALUATION APPROACHES IN LATVIA AND UKRAINE**

Mariia Mykhalova, Kyiv National University of Construction and Architecture, Ukraine

Iveta Stamure, Sanda Lapuke, Riga Technical University, Latvia

**MARINE CADASTRE AND SPATIAL PLANNING ASPECTS IN THE BALTIC SEA REGION: COMPARISON OF LATVIA AND POLAND**

Kamil Kowalczyk, University of Warmia and Mazury in Olsztyn, Poland

Jānis Kaminskis, Iveta Stamure, Riga Technical University, Latvia

**ANALYSIS OF MULTI-APARTMENT RESIDENTIAL HOUSING MANAGEMENT PROCESSES**

Lelde Zvirbule, Civinity Ltd., Latvia, Riga Technical University, Latvia

Iveta Stamure, Riga Technical University, Latvia

Una Pavulane, Property management, Germany

**PUBLIC REAL ESTATE MANAGEMENT IN THE UNITED KINGDOM**

Raimonds Stamurs, IKEA Ltd., United Kingdom, Riga Technical University, Latvia

Ineta Geipele, Iveta Stamure, Sanda Lapuke, Riga Technical University, Latvia

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**DISCUSSIONS AND SUMMARY**

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