



**Latvia University
of Life Sciences
and Technologies**

**18th International Scientific Conference
STUDENTS ON THEIR WAY TO SCIENCE
(undergraduate, graduate, post-graduate students)
Collection of Programmes
April 21, 2023**

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PLENARY SESSION

10:00 Opening of the Conference	Moderator: Joseph Horgan
Opening address by Vice-Rector AIGARS LAIZANS, Professor, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
Address by Jevone Nicholas, Counsellor, Embassy of Canada to Latvia	
10.15 – 12.00 Plenary Session	
DIGITALISATION IN BIOECONOMY - THE EFFECTS FOR THE ENTREPRENEURS AND EDUCATORS / Sandija Zēverte-Rivža, Associate professor and researcher, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
GEODESY AND ARTIFICIAL INTELLIGENCE. HOW AND WHEN? / Danielius Ūksas, Lina Kuklienė, Indrius Kuklys, Dainora Jankauskienė, KLAIPĖDA STATE UNIVERSITY OF APPLIED SCIENCES, Lithuania	
INTERACTIVE GIS SOLUTIONS TO SUPPORT MODERN BEEKEEPERS / Daniēls Kotovs, Aleksejs Zacepins, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
APPLICATION OF DIFFERENT GROUND COVERING MATERIALS IN THE PLANNING OF ACTIVE LEISURE AREAS IN THE URBAN ENVIRONMENT / Ilze Janpavle, Una Īle, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
NON-FORMAL ENGLISH LANGUAGE COURSES TO IMPROVE INTEGRATION OF UKRAINIAN REFUGEES / Jenifer Byrne, INDIANA UNIVERSITY, the USA, Kristofers Džons Akenfelds, Australia	
INDIGO DYE: A TRADITIONAL ART CRAFT OF TOKUSHIMA / Hiroshi Sakata, Professor of University of Tokushima, JAPAN	
TORQUE MEASUREMENT IN A ROTATING SHAFT / Dmitrijs Bazarnijs, Vitālijs Osadčuks, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
LANGUAGE OF MUSIC FOR CONNECTIONS BETWEEN LATVIA AND JAPAN / Masaki Nakagawa, representative of UNIVERSITY OF TOKUSHIMA, Japan	

Information Technologies

<i>Moderator: Daniels Kotovs</i>
NATURAL LANGUAGE PROCESSING FOR SOFTWARE ERROR DETECTION: REVIEW / Ainars Belovs-Dvinskis, Vitalijs Komasilovs
MOTORCYCLE TRACKING WITH GPS USING ANDROID / Vanshuk, Rudite Cevere
APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE PROJECT MANAGEMENT / Diana Bobriseva-Goncaruka, Aleksejs Zacepins
HOW BIG DATA INVOLVE IN E-COMMERCE INDUSTRY / Nikhil, Irina Arhipova
SOFTWARE AS A SERVICE WITH CONTAINER-BASED ARCHITECTURE / Oskars Morics, Martins Stals
RESEARCH OF OTDR APPLICATIONS / Mohammed Muhaise, Irina Arhipova
ANALYSIS OF TECHNIQUES FOR OPTICAL CHARACTER RECOGNITION / Ilja Petrovs, Rudite Cevere
FINGERPRINT BASED VOTING PROJECT / Satnam Singh, Irina Arhipova
AIR QUALITY IN COMPUTER LABORATORIES: CO2 SENSOR SOLUTIONS / Ginters Pelmanis, Gatis Vitols
EGG FERTILITY DETECTION IN HATCHERY USING ARTIFICIAL INTELLIGENCE / Sausthene Landry Tsiguia Tetangmo, Liga Paura
ASYNCHRONOUS PROGRAMMING WITH COOPERATIVE MULTITASKING IN MODERN BUSINESS LOGIC OF CRITICAL SYSTEMS / Andrey Galkin, Aleksejs Zacepins
REAL-TIME FACIAL EXPRESSION AND GAZE BEHAVIOR ANALYSIS FOR DECEPTION DETECTION / Gökalp Demirsoy, Liga Paura
BLUETOOTH LOW ENERGY METHODS FOR DISTANCE ESTIMATION AND CALCULATION / Vladislavs Isacenko, Armands Kviesis
DEVELOPMENT OF A WEB APPLICATION FOR NECTAR PLANT POLLINATION SERVICES / Kristaps Vetra, Aleksejs Zacepins
TEACHING METHODS FOR CHILDREN IN A MOBILE APPLICATION / Sintija Zvirgzdina, Jekaterina Smirnova
ARTIFICIAL INTELLIGENCE USAGE IN CRYPTOGRAPHY / Anzelika Maslovskā, Liga Zvirgzdina

Social Sciences

<i>Moderator: MBA Linda Groma</i>
REPOWEREU AND ENERGY MARKET IN THE EUROPEAN UNION: POSSIBILITIES FOR DEPLOYMENT OF BLOCKCHAIN TECHNOLOGY / Anete Kalniņa, Gunita Mazūre , Latvia
PARTICIPATION OF THE POPULATION IN THE DECISION-MAKING OF THE MUNICIPALITY OF MARUPE / Edijs Upmalis, Ginta Kronberga , Latvia
XBRL AS A DIGITAL REPORTING FORMAT FOR COMPANIES: EUROPEAN EXPERIENCE / Juliya Saveljeva, Jekaterina Novicka , Latvia
TERRITORIAL DEVELOPMENT IN THE CONTEXT OF POST-KEYNESIAN THEORY / Inga Megne, Modrīte Pelše , Latvia
SOLAR ENERGY PRODUCTION AND CONSUMPTION IN LATVIAN HOUSEHOLDS: A CASE STUDY / Normunds Stanka, Ingrīda Jakušonoka , Latvia
IMPACT OF DECLINE AGRICULTURE OUTPUT ON RURAL COMMUNITIES AND RURAL DEVELOPMENT : A CASE OF PAKISTAN / Ahmad Raza Khan, Dina Popluga , Latvia
THEORIES OF AGGLOMERATION EFFECT / Ksenija Furmanova, Modrīte Pelše , Latvia
CHALLENGES OF INTEGRATING ELECTRIC VEHICLES IN LITHUANIA / Paulius Remeika, Ingrida Brazioniene , Lithuania
DIGITAL TRANSFORMATION IN MUNICIPALITIES: AN INVESTIGATION OF EMPLOYEE DIGITAL SKILLS / Lilita Ābele, Elita Jermolajeva , Latvia
POTENTIAL FOR SEAWEED EXTRACT AS A BIOPESTICIDE IN ORGANIC FARMING IN LATVIA / Inese Skapste, Aina Dobele , Latvia
REASSESSING DURKHEIM'S SUICIDE TYPOLOGY THROUGH AN ANALYSIS OF DIFFERENCES IN VIEWS OF SUICIDE AMONG LATVIAN AND JAPANESE YOUTH / Kisari Komatsu, Signe Dobelniece , Latvia
INTERNAL AUDIT AS A MANAGEMENT TOOL IN INCREASING CYBER RESILIENCE / Lasma Baltina, Tatjana Volkova , Latvia
ECONOMIC LINKAGES FOR GREEN HYDROGEN INDUSTRY DEVELOPMENT IN THE BALTIC STATES / Ilgmārs Lejnīeks, Modrīte Pelše , Latvia

EFFECTS OF END USER EMPOWERMENT IN DIGITAL TRANSFORMATION – A BIBLIOGRAPHICAL REVIEW TO ESTABLISH A CONCEPTUAL MODEL FOR QUANTITATIVE AND QUALITATIVE RESEARCH / **Francisco Colorado, Tatjana Volkoka**, Latvia

OUTFLOW OF YOUNG PEOPLE FROM THE RURAL AREA TO THE CITY: EXAMPLE OF MADONA DISTRICT / **Diāna Tarasova, Signe; Dobelniece**, Latvia

ALCOHOL CONSUMPTION AMONG THE STUDENTS OF LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES / **Alfebin Ubaidulla Vadayil, Signe Dobelniece**, Latvia

DIMENSIONS OF HUMAN CAPITAL IN LATVIA / **Nauris Štolcs, Andra Zvirbule**, Latvia

TAXES ON UNHEALTHY FOOD PRODUCTS / **Anete Kalniņa, Inguna Leibus**, Latvia

JSC "SADALES TĪKLS" STRATEGY ANALYSIS / **Mārtiņš Rauziņš, Elīza Līga Līdaka**, Latvia

SUSTAINABLE DEVELOPMENT / **Inese Trusina, Elita Jermolajeva**, Latvia

Food Sciences and Agriculture

<i>Moderator: Ilze Beitane</i>
THE EFFECT OF COCONUT FIBRES ON LACTIC ACID BACTERIA GROWTH DURING THE MILK FERMENTATION / Amala Joseph, Inga Ciproviča (Latvia)
REFINED AND UNREFINED OIL OXIDISABILITY / Alvīne Henriete Auziņa, Andris Jugāns, Velga Miķelsone (Latvia)
POSSIBILITIES OF STEVIA APPLICATION FOR MANUFACTURING OF PRODUCTS FOR PATIENTS WITH DIABETES / Juta Grinberga, Ilze Beitāne (Latvia)
PHYSICAL PARAMETER CHANGES IN PINE CONE JAMS DURING STORAGE / Klīnta Kārklīņa, Liene Ozola (Latvia)
THE SIGNIFICANCE AND HEALTH IMPLICATIONS OF ANTIMICROBIAL SUSCEPTIBILITY PATTERN OF BACTERIA ISOLATED FROM LOCALLY MADE SNACKS IN NIGERIA / Bayode Aremo, Olajumoke Owoeye, Lawal A. Azeez, Sulaimon O. Kamorudeen, Timothy Ajayi (Nigeria)
BOTRYTIS PSEUDOCINEREA AS ONE OF THE CAUSAL AGENTS OF TOMATO GRAY MOLD / Lilija Dučkēna, Gunita Bimšteine (Latvia)
RESEARCH OF FERMENTED CARROT JUICE PRODUCTION / Daina Eglīte-Antona, Kristīne Majore (Latvia)
SURVIVAL OF LACTIC ACID BACTERIA GROWN IN ORGANIC AND CONVENTIONAL MILK IN THE HUMAN GASTROINTESTINAL MODEL / Alana Pious Jose, Inga Ciproviča (Latvia)
NUTRITION'S IMPACT ON MENTAL HEALTH / Lāsma Plociņa, Ilze Beitāne (Latvia)
ANALYSIS OF POPULATION STRUCTURE AND INBREEDING IN THE LATVIAN HEAVY WARBLOOD HORSE POPULATION / Viktorija Nikonova, Daina Jonkus (Latvia)

Forestry and Wood Processing

<i>Moderators: Lauris Ruško, Solveiga Luguza</i>
NON-NATIVE WOODY PLANT SPECIES DISTRIBUTION IN SUBURBAN FORESTS, LATVIA / Alta Egliņa, Inga Straupe
WIND EFFECT ON SPRUCE (PICEA ABIES (L.) H. KARST.) STANDS / Liene Sūniņa-Biedre, Eva Daniela Pokule, Solveiga Luguza
SEED CHARACTERISTICS, GERMINATION AND INITIAL GROWTH / Rūdolfs Sīpenieks, Elvis Redlihs, Tomass Toms Dārziņš, Solveiga Luguza
ROLE OF THE LONG NIGHT SYSTEM IN FOREST TREE NURSERIES / Māriņš Sūrums, Lauris Ruško, Agnese Gailīte, Solveiga Luguza
STORAGE AND SALE OF PLANTING MATERIAL / Antra Umbraško, Lauris Stikuts, Patriks Kikusts, Solveiga Luguza
RESEARCH OF BIRCH TREE (BETULA SPP.) DISEASES IN NURSERIES / Līga Ķipste, Luīze Druviņa, Ilmārs Duncis, Solveiga Luguza
FOREST NURSERY PESTS / Antra Jansone, Karīna Kurica, Zanda Paulova, Solveiga Luguza
SOIL AND SUBSTRATE IN FOREST TREE NURSERIES / Elīna Ancāne, Līga Kriškāne, Aldis Sproģis, Solveiga Luguza
THE USE OF BIOGAS DIGESTATE AND WOOD ASH MIXTURE FOR THE FERTILIZATION OF SCOTS PINE PINUS SYLVESTRIS L. / Samanta Līva Avota, Inga Straupe, Austra Zuševica
THE IMPACT OF CLIMATIC CONDITIONS ON TAXUS BACCATA L. / Anna Lele, Inga Straupe; Solveiga Luguza

Civil Engineering

<i>Moderators: Ilmars Preikss, Darja Zienevica</i>
SELF-HEALING ROMAN CONCRÈTE / Adrien Chignon, Dainora Jankauskienė (Lithuania)
CORROSION AND PROTECTION OF METALS / Osvaldas Auryla, Saulius Butkus, Dainora Jankauskienė (Lithuania)
PARTS OF THE BUILDING: FLOORS, WALLS AND ROOF / Kristina Aukškalnytė, Greta Baskevičiūtė, Dainora Jankauskienė (Lithuania)
EXPLOITING WASTE HEAT POTENTIAL BY LONG DISTANCE HEAT TRANSMISSION / Ana Kravčenko, Roberta Kerpauskaitė, Raimonda Sūdžiuvienė (Lithuania)
COMPARISON OF INSTALLATION TECHNOLOGIES FOR SLAB STRUCTURES / Gintas Rudys, Vilma Vaičekauskienė , (Lithuania)
LIGHTWEIGHT CONCRETE / Mindaugas Tamošiūnas, Šarūnas Rudauskas, Dainora Jankauskienė (Lithuania)
THE MAIN PROPERTIES OF BUILDING MATERIALS / Laurynas Buškus, Mildaras Jakštys, Dainora Jankauskienė (Lithuania)
THE MOST FAMOUS GOTHIC BUILDINGS IN LITHUANIA / Roberta Kerpauskaitė, Ana Kravčenko, Dainora Jankauskienė (Lithuania)
TRENDS AND APPLICATION OF REINFORCED CONCRETE / Rokas Jankauskas, Mantas Užandenis, Dainora Jankauskienė (Lithuania)
WOOD DEFECTS / Lukas Petkus, Jonas Mažikas, Dainora Jankauskienė (Lithuania)
ASSEMBLY FOAM AND HUMAN HEALTH / Edgars Haritons, Sandra Gusta, Andris Stankevics (Latvia)
DETERMINATION OF RHEOLOGY FOR PROTEIN BASE FOAM / Darja Zienevica, Ilmars Preikss (Latvia)

Landscape Architecture, Land Management and Geodesy, Environment and Water Management, Engineering

<i>Moderator: Vita Celmina</i>
LANDSCAPE DESIGN OF GLUDA HOME SCHOOL Eva Bukevica, Kristine Vugule (Latvia)
COMPARISON OF LIDAR SCANNERS Laimonas Bružas, Mykolas Alsys, Ineta Jarutienė, Lina Kuklienė (Lithuania)
APPLICATION OF UNMANNED AERIAL VEHICLES IN LAND MANAGEMENT Arnis Blumbergs, Jolanta Luksa (Latvia)
UAV: MULTIROTOR OR FIXED – WING Darius Tirevičius, Robertas Kazlauskas, Lina Kuklienė, Indrius Kuklys (Lithuania)
SOIL SAMPLING STRATEGIES BASED ON REMOTE AND PROXIMAL SENSING TECHNIQUES Vita Dernova, Armands Celms (Latvia)
POLLUTION, ITS CAUSES AND SOLUTIONS IN KLAIPĒDA CITY Povilas Špogis, Osvaldas Auryla, Raimonda Sūdžiuvienė (Lithuania)
TREND OF AMMONIA EMISSIONS FROM AGRICULTURAL SOILS IN LATVIA Olga Skiste, Laima Berzina (Latvia)
SOLUTIONS FOR INCREASING THE EFFICIENCY OF THE SMALL HEPP POWER UNIT Dainis Dreimanis, Aigars Laizans (Latvia)