



**Latvia University
of Life Sciences
and Technologies**

**19th International Scientific Conference
STUDENTS ON THEIR WAY TO SCIENCE
(undergraduate, graduate, post-graduate students)
Collection of Programmes
April 19, 2024**

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PLENARY SESSION

10:00 Opening of the Conference	Moderator: Joseph Horgan
Opening address by Vice-Rector Ilze Beitane, Professor, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
Address by Jevone Nicholas, Counsellor, Embassy of Canada to Latvia	
Address by Mārtiņš Šabovics, Chairperson of the Conference "Students on Their Way to Science" Committee, Head of the International Cooperation Centre, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
10.15 – 12.15 Plenary Session	
ASSESSMENT OF RISK AND THE POTENTIAL OF THE USE OF ALGAE IN THE BALTIC SEA REGION / Inese Skapste, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
THE SENSORY PERCEPTION OF COFFEE / Laura Zemlicka, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
CAPABILITIES OF OPENSTREETMAP DATA TO SUPPORT PRECISION BEEKEEPING / Daniēls Kotovs, Aleksejs Zacepins, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
HISTORY AND CULTURE OF TRADITIONAL AWA PAPER MAKING IN TOKUSHIMA / Hiroshi Sakata, Associate Professor, UNIVERSITY OF TOKUSHIMA, JAPAN	
COMPARISON OF REMOTE SENSING METHODS FOR THE RENOVATION OF HISTORIC BUILDINGS / Anna Strukova, Jolanta Luksa, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
ANALYSIS AND DEVELOPMENT OF AN ELECTRIC E-BIKE FOR SRI LANKA CONDITIONS. EFFICIENT AND SUSTAINABLE MOBILITY SOLUTIONS / Sasanka Theekshana Lakshan, Dainis Berjoza, Ilmars Dukulis, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	
ADVANCEMENT OF MOLECULAR RESEARCH TECHNIQUES FOR INVESTIGATING SELF-INCOMPATIBILITY GENETICS IN CHAENOMELES JAPONICA / Shreya Jagtap, Gunars Lacis, LATVIA UNIVERSITY OF LIFE SCIENCES AND TECHNOLOGIES	

Information Technologies

<i>Moderator: Ilva Siliniece</i>
PUBLIC EDUCATIONAL INSTITUTIONS WEBSITE COMPLIANCE TO LATVIAN WEB REGULATIONS/ Ilva Siliniece, Gatis Vitols
BLOCKCHAIN PROTOCOL EFFICIENCY IN SUPPLY CHAIN AUTHENTICATION/ Parwez Akhtar, Liga Paura
COMPARISON OF SEMANTIC SEARCH APPROACHES/ Kirishanth Manivannan, Liga Paura
RECOMMENDER SYSTEMS IN TOURISM: LITERATURE REVIEW / Pradeep Sharma, Tatjana Rubina
USER EXPERIENCE (UX) DESIGN IN E-COMMERCE WEBSITES/ Palak Rawat, Tatjana Rubina
GLUCAGON: AI-BASED INSULIN DOSAGE PREDICTION APPLICATION/ Sandeep Santhosh Kumar, Tatjana Rubina
A COMPARATIVE ANALYSIS OF DEEP LEARNING ARCHITECTURES FOR LIVE VIDEO CAPTIONING SYSTEMS FOR VISUALLY IMPAIRED PEOPLE/ Sailesh Babu, Vitalijs Komasilovs
JAVASCRIPT SOURCE CODE FUNCTIONAL DOMAINS RECOGNITION USING SENTENCE EMBEDDINGS CLUSTERING/ Ainars Belovs-Dvinskis, Vitalijs Komasilovs
UNREGULATED DRONES AND THEIR IMPACT / Swarn Singh Warshaneyan, Ingus Smits
OPEN DATA FOR CYBER THREAT INTELLIGENCE/ Rolands Avisans, Aleksejs Zacepins
FINGERPRINT BASED VOTING PROJECT/ Satnam Singh, Irina Arhipova

Social Sciences

<i>Moderator: Lelde Petko</i>
DECOMPOSING PRICE DEFLATORS OF LATVIAN FOODSTUFF/ Felipe Angeles Nuno, Dina Popluga
POST-KEYNESIAN THEORIES OF REGIONAL GROWTH/ Jeļena Šaicāne, Modrīte Pelše
SUPPORT OPPORTUNITIES AND CHALLENGES FOR DIGITIZING BUSINESS PROCESSES/ Ita Bekerta, Inguna Leibus
GREENWASHING ISSUES IN LATVIA: TRENDS, PROBLEMS, SOLUTIONS/ Ksenija Furmanova, Gunta Grīnberga-Zālīte
APPLICATION OF THE FRAMEWORK CONVENTION FOR THE PROTECTION OF ETHNO-LINGUISTIC MINORITIES: THE CASES OF LATVIA AND ITALY/ Cecilia Frego, Lara Piccardo
INSIGHT INTO PRESENCE OF TATTOO STIGMA IN PERCEPTION AND ATTITUDE/ Kisari Komatasu, Signe Dobelniece
ASSESSMENT OF MUNICIPAL SUPPORT FOR FAMILIES WITH CHILDREN IN THE RURAL MUNICIPALITIES OF LATVIA/ Tatjana Ajubova, Ženija Krūzmētra
THE QUALITY OF VOCATIONAL EDUCATION PEDAGOGUES' WORKING LIFE IN THE CONTEXT OF CHANGES IN LATVIAN EDUCATION SYSTEM/ Sanda Vanaga, Ginta Kronberga
QUALITY OF LIFE OF FAMILY MEMBERS WHO CARE FOR ONCOLOGY PATIENTS/ Diāna Tarasova, Ginta Kronberga
DIFFERENCES BETWEEN MAJORITARIAN AND PROPORTIONAL ELECTORAL SYSTEMS IN THE CONTEXT OF LATVIA/ Atis Laksis, Jānis Kūsis
STUDENTS IN THE CENTER OF CHEMISTRY CLASSES: INQUIRY-BASED LEARNING / Vanda Peto, Magdolna Chrappan

Land Management and Geodesy

<i>Moderator: Vita Celmiņa</i>
EVALUATION OF LAND CADASTRAL ASSESSMENT CASES IN ACCORDANCE WITH THE REQUIREMENTS OF REGULATORY ACTS Krista Dārziņa, Liāna Ribkinska
THE ANALYSIS OF GEOSPATIAL INFORMATION FOR EVALUATION OF THE AMELIORATION CADASTRE INFORMATION SYSTEM Gustavs Indrēvics, Jolanta Luksa, Ainis Lagzdiņš
SOLAR PANEL PARK PLACEMENT IN AGRICULTURAL TERRITORY Elēna Blumbaha, Ivars Bergmanis
DIFFERENCES BETWEEN TRADITIONAL SURVEYING METHODS AND DRONE SURVEYING Vladimirs Šinkus, Armands Celms
THE IMPORTANCE OF MOTION PLANNING AND DATA QUALITY FOR UAVs Arnis Blumbergs, Jolanta Luksa
TRENDS IN THE DEVELOPMENT OF RIVER VALLEY CONSTRUCTION AND THEIR STUDY BY REMOTE SENSING METHODS Juris Freimanis, Ivars Bergmanis
REMOTE SENSING DATA USAGE IN CIVIL DEFENCE PLANNING AND MILITARY OPERATIONS Salome Rēdmane, Armands Celms

Civil Engineering

<i>Moderator: Sandra Gusta</i>
PORTLAND CEMENT WAYS OF PRODUCTION REDUCING CO ₂ EMISSIONS / Ronaldas Banys, Lina Jonušė, Dainora Jankauskienė
GREEN ARCHITECTURE SUSTAINABILITY AND EFFICIENCY IN TODAY'S AND FUTURE SOCIETIES / Greta Baskeviciutė, Kamilė, Masiulytė, Dainora Jankauskienė
THE BENEFITS AND EFFICIENCY OF AERODYNAMIC ARCHITECTURE IN TODAY'S CLIMATE / Rokas Griauslys, Kristupas Dabulskis, Dainora Jankauskienė
USE OF WASTE MATERIALS IN BRICKS / Jevgenijs Letko, Irina Orlova
USE OF BIM IN CONSTRUCTION / Nikita Zukovs, Sandra Gusta
IMPLEMENTATION OF PRINCIPLES OF CIRCULAR CONSTRUCTION IN LATVIA / Samanta Jurevica, Sandra Gusta

Environment and Water Management

<i>Moderator: Linda Grinberga</i>
MICROPLASTICS IN CENTRALISED DRINKING WATER SUPPLY SYSTEM IN JELGAVA CITY/ Sintija Ponomarjova, Linda Grinberga
MODELING OF EMERGENCY SITUATIONS IN WASTEWATER TREATMENT PLANTS/ Uldis Egle, Armands Celms, Aivars Ratkevičs
THE POTENTIAL OF SAND – POLONITE FILTERS FOR REDUCING TOTAL PHOSPHORUS CONCENTRATION IN WASTEWATER/ Dagnija Grabuža, Linda Grinberga
THE EFFECT OF GREEN ROOFS ON WASTEWATER IN THE CITY/ Ņikita Ančipanovs, Laima Bērziņa
EVALUATION OF SEDIMENTATION BASIN EFFICIENCY IN FOREST LANDS/ Artūrs Legzdiņš, Linda Grinberga
EVALUATION OF THE ENERGY POTENTIAL AND HYDROLOGICAL REGIME OF THE SMALL HYDROELECTRIC POWER PLANT/ Kaspars Celmiņš, Artūrs Veinbergs, Einārs Pundurs

Engineering

<i>Moderator: Janis Kjakste</i>
DEVELOPMENT OF LEAF COLLECTION EQUIPMENT FOR INSTALLATION ON A ROBOTIC PLATFORM / Rihards Petersons, Vilnis Pirs
BATTERY ENERGY STORAGE FOR PROVISION OF PRIMARY FREQUENCY REGULATION (FCR) / Ivans Zotovs, Indulis Straume
REDUCING ELECTRICITY COSTS IN SINGLE-FAMILY HOMES THROUGH MARKET PRICE FLUCTUATIONS / Viesturs Bukans, Janis Berzins
OPTIMIZING CAM PROFILES TO MINIMIZE FOLLOWER ACCELERATION IN BOOK STITCHING MACHINE OPENERS / Arturs Feldmanis, Karlis Banis
ENVIRONMENTAL IMPACT ANALYSIS OF INTERNAL COMBUSTION MOTOR CARS AND ELECTRIC CARS / Rihards Millers, Dainis Berjoza

Forestry

<i>Moderators: Alta Egliņa, Solveiga Luguza</i>
MEDICINICAL PROPERTIES OF WELL-KNOWN TREES AND SHRUBS IN LATVIA / Alta Egliņa, Inga Straupe, Solveiga Luguza
BIODIVERSITY IN URBAN FORESTS / Sintija Strautmane, Edvards Rjabkovs, Solveiga Luguza, Aija Pētersone
FOREST FIRE CONSEQUENCES ON PINUS SYLVESTRIS L. SCOTS PINE / Amanda Lejniece, Roberts Akers, Solveiga Luguza
EUTROPHICATION OF STRENČU INLAND DUNE MASSIF / Antra Jansone, Inga Straupe
AFRICAN SWINE FEVER IN LATVIA / Loreta Meikšāne, Evelīna Laine Antāne, Baiba Jansone
DIGESTATE AND PEAT MOSS / Aldis Sproģis, Solveiga Luguza, Dagnija Lazdiņa
ESTIMATING FOREST STAND CHARACTERISTICS USING UNMANNED AERIAL VEHICLES / Matīss Mūrnieks, Vita Celmiņa, Juris Zariņš

Veterinary Medicine

<i>Moderator: Annija Ance Valdmane and Dr.med.vet., assoc.prof. Laima Liepa</i>
ADIPOSIITY-PROMOTING FACTORS IN NEUTERED CATS/ Patrīcija Socka, Aija Ilgaža
PHYSICAL EFFORT, FUR, AIR AND DEEP-BODY TEMPERATURE INFLUENCE ON EUROPEAN BISON'S (<i>BISON BONASUS</i>) WATER METABOLISM/ Pauline Aurora Odete Markizo, Aija Ilgaža
DETERMINATION OF MICROBIOLOGICAL CONTAMINATION IN COLOSTRUM AND ITS EFFECT ON CALF HEALTH/ Alise Vimba, Laima Liepa
PREVALENCE OF ECTOPARASITES IN POPULATIONS OF MUTE SWANS (<i>CYGNUS OLOR</i>) AND WHOOPER SWANS (<i>CYGNUS CYGNUS</i>) IN THE TERRITORY OF LATVIA/ Ance Bīrone, Linda Valkovska, Alīna Kļaviņa
INSULIN DYSREGULATION AND LAMINITIS IN CLINICALLY HEALTHY, OBESE HORSES AND PONIES/ Zane Gaiķēna, Dana Laizāne
ULTRASONOGRAPHIC EXAMINATION OF CANINE GALLBLADDER MUCOCELE: AN ANALYSIS/ Orinta Kalinauskaitē, Monika Laukutē
EVALUATION OF THE APPLICATION OF ULTRASOUND IN SMALL ANIMAL CLINICAL OPHTHALMOLOGY/ Meda Tamaševičiūtē, Janina Mickutē
COMPARATIVE ANALYSIS OF PATHOGENS IN FOUR LEVELS OF PERIODONTAL DISEASE IN DOGS/ Laura Šakarnytē, Modestas Ružauskas
CORTISOL CHANGES DURING LAPAROSCOPIC AND OPEN OVARIECTOMY IN BITCHES WITH THE SAME ANESTHESIA PROTOCO/ Sandra Čechovičienē, Dalia Juodžentē, Aidas Grigonis
RESEARCH ON THE EXPRESSION, DETECTION, AND ASSESSMENT OF ESTRUS CRITERIA IN LIMOUSIN AND ANGUS CATTLE BREEDS TO ENHANCE REPRODUCTIVE PERFORMANCE/ Inga Merkelytē, Artūras Šiukščius, Rasa Nainienē

Agriculture and Food Science

<i>Moderator: Irina Sivicka</i>
THE INFLUENCE OF <i>BACILLUS AMYLOLIQUEFACIENS</i> ON THE EXPRESSION OF GENES OF PATHOGENESIS-RELATED (PR) PROTEINS OF TOMATO PLANTS AND THEIR ROLE IN PLANT DEFENCE / Sofia Kozlova, Vira Boroday, Artur Likhanov
ANALYSIS OF SAFETY PARAMETERS IN THE STUDY OF <i>TENEBRIO MOLITOR</i> LARVAE AS SUBSTRATE USING BY-PRODUCTS / Agnė Jankauskienė, Aistė Kabašinskienė
COMPARISON OF POWDERED MORINGA OLEIFERA FROM DIFFERENT ORIGINS / Amala Joseph, Zanda Krūma
CARBONATE CONTENT VARIATIONS IN THE SOILS OF ZEMGALE PLAIN / Eduards Vanags, Aldis Kārklīš
THE INFLUENCE OF VARIOUS WINE YEAST STRAINS ON THE PHYSICO-CHEMICAL PARAMETERS OF CRANBERRY - HONEY WINE / Monta Jurģe, Inga Madžule, Zanda Krūma
EFFECT OF PASTEURISATION ON VOLATILE COMPOUNDS FOR CALORIE-FREE, CARBONATED PEPPERMINT (<i>MENTHA PIPERITA</i> L.) TEA / Alvīne Henriete Auziņa, Jūlija Krjukova, Elza Katrīna Egle, Zanda Krūma
SENSORY EVALUATION OF INNOVATIVE ENERGY DRINKS BASED ON SPRUCE SPROUT, FRUIT JUICE AND COLD BREW COFFEE / Klīta Karklina, Liene Ozola
THE CONTRIBUTION OF BIOECONOMY TO THE DEVELOPMENT OF COUNTRY'S ECONOMY: USING THE EXAMPLE OF AGRICULTURE, FORESTRY AND FISHERIES / Dilshoda Mutalova, Alisher Mutalov, Sherzod Murodov