

**Latvia University of Life Sciences and Technologies  
Faculty of Engineering and Information technologies**

**25<sup>th</sup> International Scientific Conference  
ENGINEERING FOR RURAL  
DEVELOPMENT**

**Proceedings, Volume 25**

**May 27-29, 2026**

**Jelgava 2026**

## **PROGRAM COMMITTEE**

### **Chairman:**

Aivars Aboltins                      Latvia University of Life Sciences and Technologies, Latvia

### **Members:**

Valeriy Adamchuk	National Academy of Agrarian Science of Ukraine (NAASU), Ukraine
Mariusz Adamski	Bialystok University of Technology, Poland
Zhauyt Algazy	Kazakh National Research Technical University, Kazakhstan
Andres Annuk	Estonian University of Life Sciences, Estonia
Atilgan Atilgan	Suleyman Demirel University, Turkey
Marco Bietresato	Free University of Bozen-Bolzano, Italy
Milan Brozek	Czech University of Life Sciences Prague, Czech Republic
Volodymyr Bulgakov	National University of Life and Environmental Sciences of Ukraine, Ukraine
Lorant Denes David	Eszterhazy Karoly University, Hungary
Jan Dizo	University of Zilina, Slovakia
Givi Gavardashvili	Georgian Technical University, Georgia
Marek Gaworski	Warsaw University of Life Science, Poland
Edwin Gevorkyan	Ukrainian State University of Railway Transport, Ukraine
Algirdas Jasinskas	Vytautas Magnus University, Lithuania
Jan Radoslaw Kaminski	Warsaw University of Life Science, Poland
Jozsef Kapozsta	Hungarian University of Agriculture and Life Sciences, Hungary
Pavel Kic	Czech University of Life Sciences Prague, Czech Republic
Vitalijs Komasilovs	Latvia University of Life Sciences and Technologies, Latvia
Aigars Laizans	Latvia University of Life Sciences and Technologies, Latvia
Chou Li-Chen	Shantou University, China
Tomasz Lipinski	University of Warmia and Mazury in Olsztyn, Poland
Francesco Marinello	University of Padova, Italy
Agris Nikitenko	Riga Technical University, Latvia
Juri Olt	Estonian University of Life Sciences, Estonia
Vitalijs Osadcuks,	Latvia University of Life Sciences and Technologies, Latvia
Andrea Pezzuolo	University of Padova, Italy
Simon Popescu	Transylvania University of Brasov, Romania
Stasys Slavinskas	Vytautas Magnus University, Lithuania
George Srzednicki	University of New South Wales, Australia
Aleksejs Zacepins	Latvia University of Life Sciences and Technologies, Latvia
Wanhao Zhang	University College London, United Kingdom
Yang Zhang	University of Sheffield, United Kingdom

## **EDITORS**

Editors of language: Kaspars Vartukapteinis, Larisa Malinovska

Scientific editors: Aivars Aboltins, Janis Palabinskis, Vitalijs Osadcuks

## **CONFERENCE ORGANISING COMMITTEE**

### **Chairman:**

Janis Palabinskis, Latvia University of Life Sciences and Technologies, Latvia

### **Members:**

Aivars Aboltins, Dainis Berjoza, Baiba Briede, Ilmars Dukulis, Ainars Galins, Gunta Gvalda, Inara Jurgena, Janis Kjakste, Maris Mangalis, Vitalijs Osadcuks, Mareks Smits, Kaspars Vartukapteinis, Gatis Vitols, Natalja Vronska, Olafs Vronskis.

**ABSTRACTED AND INDEXED:** Elsevier SCOPUS, Clarivate Analytics Web of Science, Agricola, AGRIS, CAB Abstracts, CABI full text, EBSCO Academic Search Complete, EBSCO Academic Search Ultimate, EBSCO Central & Eastern European Academic Source, EBSCO Discovery Service, Elsevier Scival.

Scopus<sup>®</sup>



SciVal

**CROSSREF DATABASE:** DOI for each paper



**CROSS-CHECKED BY:** CrossRef.org Similarity Check



**ONLINE:** Proceedings *ENGINEERING FOR RURAL DEVELOPMENT* is available online at <http://iitf.lbtu.lv/conference/proceedings2026/>

**ISBN 978-9984-48-467-9**  
**ISSN 1691-5976**

## CONTENT

<b>Ruta Puziene</b>	
SELECTING LOCATION FOR SOLAR POWER PLANTS USING GIS TECHNOLOGIES: EXAMPLE OF SKIRSNEMUNE ELDERSHIP .....	16
<b>Halyna Boiko, Svitlana Yaheliuk, Nina Merezhko, Tetyana Holovenko</b>	
OPTIMIZATION OF SHAPE STABILITY OF HEMP FOOTWEAR TEXTILES THROUGH CONSTRUCTIVE AND TECHNOLOGICAL SOLUTIONS.....	23
<b>Ivan Openko, Olesia Huretska, Oleg Tsvyakh, Oleksandr Shevchenko, Ruslan Tykhenko, Nataliia Kolesnik, Viktoriia Paschenko</b>	
TIN MODELING OF CURRENT EARTHWORK VOLUMES DURING EXCAVATION PIT CONSTRUCTION FOR DEFENCE PROTECTIVE STRUCTURE.....	31
<b>Tetyana Holovenko, Halyna Boiko, Oleksandr Shovkomyd, Vitalii Pavlenko, Yurii Berezovskyi</b>	
COMPREHENSIVE SCIENTIFIC RESEARCH ON NEW VARIETIES OF INDUSTRIAL HEMP FOR MANUFACTURE OF HIGH-QUALITY INDUSTRIAL PRODUCTS .....	37
<b>Vitalijs Beresnevich, Janis Viba, Maris Eiduks, Martins Irbe, Edgars Kovals, Shravan Koundinya Vutukuru</b>	
APPLICATION OF A SIMPLIFIED MODEL FOR ANALYSING AIRFLOW INTERACTION WITH BODIES OF VARIOUS SHAPES.....	46
<b>Raimonds Valdmanis, Maija Zake</b>	
ACTIVATED THERMAL DECOMPOSITION OF BIOMASS MIXTURES BY MICROWAVE PRETREATMENT OF COMPONENTS .....	54
<b>Vladislav Zavadskiy, Gita Revalde</b>	
ASSESSMENT OF ELECTRICITY STORAGE OPTIONS FOR INTEGRATING RENEWABLE ENERGY IN RURAL KAZAKHSTAN .....	60
<b>Mohamed H. Shaban, Hassan Mohammad Ali</b>	
INTEGRATED MANAGEMENT OF CONSTRUCTION WASTE USING BIM-BASED VISUAL MODELING.....	68
<b>Serhii Yermakov, Mykola Korchak, Taras Hutsol, Oleksandr Hovorov, Serhiy Oleksiyko</b>	
SUBSTANTIATION OF STRIP TILLAGE AFTER CORN HARVESTING BASED ON POST-HARVEST RESIDUE CHARACTERISTICS .....	79
<b>Serhii Yermakov, Julia Galchynska, Pavlo Fedirko, Zoya Pustova, Oleksii Sikora</b>	
MICROSTRUCTURAL ANALYSIS AND IMAGE-BASED EVALUATION OF TEMPERATURE-INDUCED TRANSFORMATIONS IN BIOMASS DURING TORREFACTION.....	87
<b>Olexandr Yaheliuk, Oleksii Prykhodko</b>	
UAV-BASED AUTOMATIC ASSESSMENT OF FLAX FIBER PRODUCTION POTENTIAL USING STEM LENGTH ESTIMATION AND MACHINE LEARNING .....	94
<b>Andrii Martyn, Liudmyla Hunko, Nataliia Medynska, Anatolii Poltavets, Liudmyla Kolosa</b>	
ENGINEERING-ECONOMIC ASSESSMENT OF UKRAINE DIGITAL LAND CADASTRE: QUANTIFYING ADDED VALUE FROM GEODATA ACROSS AGRICULTURE, ENERGY AND TRANSPORT PROJECTS .....	101
<b>Oleg Zagurskiy, Liliya Savchenko, Oleksandr Domin, Maksym Odnorog</b>	
STRATEGIES FOR OPTIMIZING SINGLE-CHANNEL MASS SERVICE SYSTEM WITH NON-STATIONARY INPUT FLOW .....	108
<b>Liliya Savchenko, Oleg Zagurskiy, Viktoriia Opalko, Daria Lemishko</b>	
IMPLEMENTATION OF DIGITAL TWIN OF LOGISTICS SUPPLY CHAIN BASED ON ANT-LOGISTICS FOR ASSESSING RESILIENCE TO PEAK LOADS .....	115
<b>Oleksandr Voinalovych, Vasyl Tymochko, Ivan Horodetsky, Olena Visyn</b>	
ASSESSMENT OF OCCUPATIONAL RISKS OF MECHANIZED PROCESSES FOR CHEMICAL PROTECTION OF PLANTS .....	121

<b>Igor Tsiz, Serhii Khomych, Tetiana Tsyz, Valentyn Holii</b> STUDY OF TANGENTIAL STICKINESS FORCE OF MIXTURES BASED ON ORGANIC SAPROPEL .....	127
<b>Jacek Caban, Jakub Skoczylas, Mateusz Waskowicz, Petr Jilek</b> SIMULATIONS OF PIEZOELECTRIC ENERGY HARVESTING SYSTEM FOR DIESEL ENGINE .....	133
<b>Vladyslav Sokol, Bohdan Korinenko, Tetiana Tkachenko, Vitalii Yevdokymenko</b> COMPREHENSIVE APPROACH TO POLYETHYLENE WASTE RECYCLING .....	140
<b>Olha Tykhenko, Andrii Martyn, Oleksandr Shevchenko, Ruslan Tykhenko, Ivan Openko, Andrii Synieutskyi</b> INVESTIGATION OF AGRICULTURAL LAND MARKET IN UKRAINE .....	146
<b>Oleg Zagurskiy, Liliya Savchenko, Viktoriia Opalko, Sergii Bondariiev</b> ASSESSMENT OF TRANSPORT PROCESS QUALITY IN CONTEXT OF LOGISTICS DIGITALIZATION .....	152
<b>Egle Jotautiene, Davut Karayel, Hasan Yilmaz, Sigitas Petkevicius</b> EXPERIMENTAL STUDY OF PRECISION SEEDING METERING SYSTEM SEED FALL RATE .....	159
<b>Olena Nalobina, Mykola Holotiuk, Oleh Bundza, Artem Mykhailov</b> GREEN COMPOSITE BASED ON RECYCLED RUBBER FOR TRACKED DRIVE OF MULTI-PURPOSE AGRICULTURAL ROBOTIC PLATFORM .....	164
<b>Oleksandr Savoiskyi, Viktor Sirenko, Oleksandr Solarov, Viktor Kozin, Oleksandr Tatsenko</b> INFLUENCE OF HEAT CARRIER VELOCITY ON DRYING KINETICS OF CAPILLARY-POROUS MATERIALS UNDER COMBINED CONVECTIVE AND DIRECT ELECTRIC HEATING .....	172
<b>Moustafa Ali Wassouf</b> PREDICTING DURABILITY OF GREEN CONCRETE USING INTEGRATED MATHEMATICAL MODELING AND BUILDING INFORMATION MODELING (BIM) WITHIN SUSTAINABLE CONSTRUCTION FRAMEWORK .....	180
<b>Tomas Mickevicius, Rytis Zautra, Povilas Saulys</b> INVESTIGATION OF EFFECTS OF OIL ADDITIVE IN INTERNAL COMBUSTION ENGINE .....	190
<b>Miroslav Blatnický, Jan Dizo, Ivana Domanikova, Patrik Slusnak</b> DESIGN OF CLAMPING DEVICE STRUCTURE AS PART OF SEMI-AUTOMATIC PROCESSES OF MOBILE WORKING MACHINE .....	196
<b>Boranbay Ratov, Volodymyr Mechnik, Edvin Hevorkian, Mirosław Rucki</b> ENHANCEMENT OF C <sub>DIAMOND</sub> -(WC-CO)-CrB <sub>2</sub> -ZrO <sub>2</sub> COMPOSITE WITH ALUMINA NANOPOWDER .....	203
<b>Taliat Azizov, Nataliia Sribniak, Liudmyla Tsyhanenko, Dmytro Volkov</b> PROBLEMS OF USING PLANAR FINITE ELEMENTS (THIN PLATE THEORY) AND THEIR ENGINEERING SOLUTION IN THE ANALYSIS OF REINFORCED CONCRETE SLABS .....	209
<b>Edgars Buksans, Kristaps Grinbergs</b> IMPROVEMENT OF REACTION TO FIRE PERFORMANCE FOR WOOD RIBBON PANELS MADE OF ASPEN OR THERMALLY MODIFIED ASPEN WOOD LAMELLAS .....	215
<b>Nataliia Sribniak, Liudmyla Tsyhanenko, Hennadii Tsyhanenko, Valerii Lutskovskyi, Serhii Halushka, Oleksandr Dranyk</b> STEEL STRUCTURAL SOLUTION FOR EFFICIENT ROOF SYSTEM .....	223
<b>Victor Melnyk, Oleksandr Solarov, Oleksandr Savoiskyi, Oleksandr Tatsenko, Vitalii Kolodnenko</b> PATTERNS OF SOIL BULK DENSITY CHANGES RESULTING FROM REPEATED IMPACT OF MACHINE-AND-TRACTOR UNIT RUNNING GEAR .....	229

<b>Andriy Novitskiy, Ivan Holovach, Oleksandr Bannyi, Yuriy Novitskiy</b> ASSESSMENT OF OPERATIONAL RELIABILITY OF MIXER-FEEDER MACHINES UNDER CONDITIONS OF LIVESTOCK ENTERPRISES.....	236
<b>Katrina Muizniece, Inga Grinfelde, Jovita Pilecka-Ulcugaceva</b> COMBINING SENSITIVITY ANALYSIS AND NON-PARAMETRIC STATISTICS TO ASSESS FARM-LEVEL GHG EMISSION DRIVERS.....	242
<b>Augustina Pruteanu, Alexandru Ionescu, Gheorghe Stroescu</b> EVALUATING EFFICIENCY OF SMART ACOUSTIC SYSTEM FOR PROTECTION OF APPLE ORCHARDS AGAINST PESTS .....	248
<b>Vasyl Khmelovskiy, Victor Rebenko, Svitlana Potapova, Oleg Zabolotko</b> IMPROVING EFFICIENCY OF GRAIN COMPONENT PREPARATION FOR CATTLE FEEDING.....	255
<b>Vadims Serguns, Maris Gailis</b> IMPACT OF SIMPLIFIED ELECTRONIC CYLINDER DEACTIVATION ON SPECIFIC FUEL CONSUMPTION OF SPARK-IGNITION ENGINE .....	261
<b>Viktor Tesliuk, Yulia Kolomiyets, Viktor Baranovsky, Raisa Kovbasenko</b> ENGINEERING AND TECHNOLOGICAL JUSTIFICATION FOR THE BIOTECHNOLOGICAL PRODUCTION OF A MYCOBIOLOGICAL PREPARATION .....	270
<b>Yevhenii Aftandiliants, Svyatoslav Gnyloskurenko, Iulia Kvasnytska, Kateryna Kvasnytska, Volodymyr Noha</b> INFLUENCE OF EXTERNAL DEFECTS ON MECHANICAL PROPERTIES OF BIMETALLIC CASTINGS AND CAST-WELDED BIMETALLIC CONSTRUCTIONS .....	276
<b>Yurii Chovniuk, Anna Moskvitina, Serhii Rybachov, Petro Zynych</b> MODELLING AND ANALYSIS OF ENERGY-EFFICIENT HEAT TRANSFER PROCESSES IN NON-LINEAR STRUCTURED FLUIDS OF GROUND HEAT EXCHANGERS IN HEAT PUMP HEATING SYSTEMS OF INDOOR SPORTS FACILITIES.....	283
<b>Yurii Chovniuk, Anna Moskvitina, Serhii Rybachov, Petro Zynych</b> RESEARCH INTO NON-STATIONARY HEAT TRANSFER PROCESSES FOR HYPERBOLIC TRANSFER MODELS IN GROUND HEAT EXCHANGERS INCREASING ENERGY EFFICIENCY OF HEAT PUMP HEATING SYSTEMS IN SPORTS BUILDINGS .....	293
<b>Edward Kozlowski, Piotr Laskowski, Magdalena Zimakowska-Laskowska, Piotr Wisniowski, Andrzej Swiderski</b> ASSESSMENT OF NO <sub>x</sub> EMISSION CHARACTERISTICS OF E85-FUELLED VEHICLE WITH IMPLICATIONS FOR RURAL TRANSPORT SYSTEMS .....	303
<b>Viktor Sheichenko, Dmytro Petrachenko, Denys Sheichenko, Oleksandr Shapoval</b> DETERMINING EFFECT OF GROWING CONDITIONS ON HEMP SEED PROPERTIES .....	308
<b>Joonas Paales, Gregor Randla, Yevhen Ihnatiev, Tormi Lillerand, Juri Olt</b> DEVELOPMENT OF TRACTION CONTROL SYSTEM FOR ELECTRIC UNMANNED GROUND VEHICLE .....	315
<b>Andriy Redko, Oleksandr Redko, Ihor Redko, Yurii Burda</b> RADIATIVE WATER-COOLING SYSTEM UTILIZING DEEP SPACE RADIATION ENERGY AT NIGHT.....	321
<b>Ernests Ozolins, Arturs Macanovskis, Nikola Sinica, Maris Tupesis</b> IMPACT OF INCORPORATING GRAPHENE NANOPLATELET DISPERSIONS ON STRENGTH DEVELOPMENT OF LOW-CARBON CEMENTITIOUS MATRICES.....	328
<b>Ernests Ozolins, Arturs Macanovskis, Nikola Sinica, Maris Tupesis</b> IMPACT OF RECLAIMED WASTEWATER FILTER CAKE MATERIAL ON RHEOLOGY AND COMPRESSIVE STRENGTH OF CONCRETE MADE WITH CEM II AND CEM III BINDERS .....	339

<b>Svitlana Yaheliuk, Vladislav Chasnikov, Vasylyna Shemet</b> ASSESSMENT OF SUITABILITY OF FLAX PULP FOR PRODUCTION OF FOOD PACKAGING PAPER.....	347
<b>Jozsef Kaposzta, Tibor Csonka, Balazs Lorinc</b> EXAMINATION OF REGIONAL CONNECTIONS BETWEEN SMART TRANSPORT SAFETY SYSTEMS .....	354
<b>Ilze Balode, Andrejs Jaunzems</b> PRODUCTIVITY OF COKE AND REFINED PETROLEUM USE IN AGRICULTURE, FORESTRY AND FISHING INDUSTRIES IN THE BALTIC STATES AND FINLAND .....	361
<b>Sergey Kravchenko, Natalia Kravchenko, Viktor Kravchenko, Nikolajs Kulesovs, Kristine Carjova, Daria Panova</b> ARCHITECTURE OF DISTRIBUTED DIAGNOSTIC SYSTEM FOR AGRICULTURAL PROCESSING EQUIPMENT: CASE STUDY OF FREEZE-DRYING SYSTEMS .....	368
<b>Nadezda Kilupe, Gundars Zalcmanis, Juris Kreicbergs</b> ROAD SAFETY OF SENIORS IN LATVIA .....	378
<b>Sergey Kravchenko, Natalia Kravchenko, Nikolajs Kulesovs, Kristine Carjova, Daria Panova</b> EXPERIMENTAL VALIDATION OF LOG-BASED DIAGNOSTIC METHODS FOR FREEZE-DRYING EQUIPMENT USING DISTRIBUTED LABORATORY TEST PLATFORM.....	385
<b>Sergey Kravchenko, Natalia Kravchenko, Viktor Kravchenko, Nikolajs Kulesovs, Kristine Carjova, Daria Panova</b> MICROWAVE-ASSISTED FREEZE-DRYING: PHYSICAL LIMITATIONS AND PLASMA-AWARE SYSTEM ARCHITECTURE .....	393
<b>Sergey Kravchenko, Natalia Kravchenko, Nikolajs Kulesovs, Kristine Carjova, Daria Panova</b> OPERATIONAL ROBUSTNESS ASSESSMENT OF DISTRIBUTED MONITORING SYSTEMS APPLIED TO FREEZE-DRYING EQUIPMENT .....	405
<b>Oleksandr Yeremenko, Oleksandr Voinalovych, Vasyl Khmelovskiy, Sergiy Subota, Tetyana Vozniuk, Tetyana Zubok</b> MODERNIZATION OF RAW MATERIAL FEEDING MECHANISM INTO IMPACT BRIQUETTE PRESS.....	413
<b>Agris Zimelis, Santa Kaleja, Jordane Champion</b> DYNAMICS OF ENERGY WOOD QUALITY DURING LONG-TERM STORAGE IN WOOD PILES IN LATVIA .....	420
<b>Andriy Novitskiy, Valentyna Melnyk, Zinoviy Ruzhylo, Oleksandr Bannyi, Yuriy Novitskiy</b> INTEGRATED MANAGEMENT OF RELIABILITY AND TECHNO-ECONOMIC EFFICIENCY OF VEHICLES BASED ON ENGINE AIR FILTER REPLACEMENT LOGISTICS.....	426
<b>Rimants Jelinks, Una Libkovska</b> QUANTITATIVE FORECASTING APPROACH TO IDENTIFY WORKFORCE GAPS IN ENERGY SECTOR.....	433
<b>Inguna Jurgelane-Kaldava, Viktorija Tabakurska</b> INDICATOR-BASED METHOD FOR EVALUATING RURAL TRANSPORT ACCESSIBILITY.....	439
<b>Nicoleta Vanghele, Valentin Vladut, Andreea Matache, Ana-Maria Tabarasu</b> CHARACTERISTICS OF BIOCHAR FROM MISCANTHUS STEMS OBTAINED AT DIFFERENT PROCESS PARAMETERS.....	445
<b>Juta Karklina, Edgars Karklins</b> NATURE-BASED MOSS BARRIERS FOR URBAN NOISE ABSORPTION: IMPEDANCE TUBE ASSESSMENT OF BOREAL MOSS SPECIES .....	452
<b>Roberta Snapkauskiene, Egidijus Kasiulis, Linas Jurevicius</b> SCENARIO-BASED INUNDATION RISK ANALYSIS OF POTENTIAL SHIP LOCK GATE FAILURE AT KAUNAS HYDROPOWER PLANT .....	459

<b>Aigars Strubergs, Nikolass Jaunzems, Agris Zimelis</b> PRODUCTIVITY AND FUEL CONSUMPTION ANALYSIS OF PONSSE FORWARDERS BASED ON DATA ACCUMULATED UNDER PRODUCTION CONDITIONS.....	465
<b>Raitis Normunds Melniks, Janis Ivanovs, Andis Lazdins</b> LIDAR DECISION SUPPORT TOOL FOR FOREST DRAINAGE MAINTENANCE .....	471
<b>Raitis Normunds Melniks, Arta Bardule, Andis Lazdins</b> MODELLING DISSOLVED ORGANIC CARBON (DOC) EXPORT FOR GREENHOUSE GAS (GHG) ACCOUNTING IN DRAINED ORGANIC FOREST SOILS .....	480
<b>Dana Purvina, Arta Bardule, Zaiga Anna Zvaigzne, Andis Lazdins</b> EFFECT OF DEEP FURROWING ON METHANE FLUXES IN NON-DRAINED PEATLAND FOREST CLEARCUTS .....	489
<b>Iloņa Skrandā, Aldis Butlers, Arta Bardule, Andis Lazdins</b> CASE STUDY ON GHG FLUX CONTRASTS BETWEEN NON-DRAINED AND DRAINED PEATLAND FORESTS BEFORE AND AFTER REGENERATIVE FELLING.....	497
<b>Raitis Normunds Melniks, Zaiga Anna Zvaigzne, Arta Bardule, Martins Vanags Duka, Andis Lazdins</b> COMPARISON OF GREENHOUSE GAS (GHG) EMISSIONS FROM FORWARDING RUTS IN CLEARCUTS IN ORGANIC AND MINERAL SOILS .....	503
<b>Igors Krasavcevs, Astra Auzina-Emsina</b> MODELLING OF ENERGY WOOD FLOWS IN COUNTRIES WITH ABUNDANT FOREST RESOURCES AND EXPORT-ORIENTED FOREST INDUSTRIES .....	512
<b>Anna Levicka, Inna Samuilik</b> QUALITATIVE ANALYSIS AND CHAOTIC DYNAMICS OF NONLINEAR THREE- DIMENSIONAL SYSTEM .....	518
<b>Jana Grave, Inga Grinfelde, Jovita Pilecka-Ulcugaceva</b> EVALUATING SONOCHEMICAL POTENTIAL FOR PFAS MITIGATION IN DIFFUSE AGRICULTURAL SYSTEMS .....	525
<b>Viktor Baranovsky, Vitalii Pankiv, Roman Komar, Viktor Tesliuk, Viktor Makarov</b> ANALYSIS OF ROOT CROP SCREW GRINDER-MIXER PERFORMANCE .....	532
<b>Vitalii Pankiv, Viktor Baranovsky, Natalia Dubchak, Oleg Huryk, Andrii Pastushenko</b> EXPERIMENTAL STUDIES OF SPECIFIC POWER CONSUMPTION OF COMBINED SCREW CONVEYOR.....	539
<b>Gheorghe Voicu, Cristina Apetrei, Paula Tudor, Gabriel-Alexandru Constantin, Gabriel Musuroi, Sorin- Dan Iordache, Marina-Teodora Dudau</b> RESEARCH ON WEAR VARIATION OF BRAKE PADS AND DISCS OF ROMANIAN DACIA LOGAN CARS.....	545
<b>Volodymyr Bulgakov, Ivan Holovach, Volodymyr Martyniuk, Oleksandra Trokhaniak, Dainis Viesturs, Adolfs Rucins, Juri Olt, Yevhen Ihnatiev</b> RESEARCH ON PROCESS OF CLEANING TABLE BEET ROOT CROPS WITH SPIRAL CLEANER.....	552
<b>Volodymyr Bulgakov, Ivan Holovach, Volodymyr Martyniuk, Oleksandra Trokhaniak, Aivars Aboltins, Adolfs Rucins</b> INVESTIGATION OF DEGREE OF DAMAGE TO TABLE BEET ROOTS DURING CLEANING WITH SPIRAL CLEANER.....	559
<b>Oleksandra Trokhaniak</b> STUDY OF DEVICE WITH FLEXIBLE SCREW CONVEYOR FOR REMOVING DAMAGED SOIL CLEARED FROM CRATER.....	566
<b>Volodymyr Bulgakov, Aivars Aboltins, Adolfs Rucins, Viktor Antoshchenkov, Ivan Holovach, Oleksandra Trokhaniak, Juri Olt, Yevhen Ihnatiev, Nadia Khomyk, Roman Antoshchenkov, Vadym Yaremenko</b> IMPROVEMENT OF MOVEMENT STABILITY OF TRACTOR-MACHINE UNIT DURING INTER-ROW CULTIVATION OF SUGAR BEET.....	573

<b>Volodymyr Bulgakov, Aivars Aboltins, Adolfs Rucins, Roman Antoshchenkov, Viktor Kis, Ivan Holovach, Oleksandra Trokhaniak, Viktor Antoshchenkov, Oleh Chernysh, Yevhen Ihnatiev</b> SYNTHESIS OF MACHINE-TRACTOR UNIT AUTOMATIC CONTROL SYSTEM FOR INTER-ROW CULTIVATION OF SUGAR BEET.....	581
<b>Volodymyr Belchenko, Nonna Pishchanska, Aivars Aboltins, Adolfs Rucins, Igor Podmazko, Oksana Bulgakova, Andrii Pylypenko</b> STUDY ON EFFECTS OF MICROCLIMATIC PARAMETERS ON DEVELOPMENT AND PRODUCTIVITY OF INSECT CULTURES.....	589
<b>Igor Bepalov, Nina Pyliak, Aivars Aboltins, Adolfs Rucins, Raisa Vozhehova, Oksana Bulgakova, Maksym Porodko</b> TECHNICAL AND TECHNOLOGICAL SOLUTION FOR SMALL-SCALE PRODUCTION OF LIQUID MICROBIOLOGICAL RODENTICIDE IN FERMENTER .....	596
<b>Dmytro Kovalchuk, Viktor Dorovskikh, Dainis Viesturs, Adolfs Rucins, Oksana Bulgakova, Margarita Stepanova, Oleh Zhurylo</b> HARDWARE AND SOFTWARE SYSTEM FOR RECORDING BIOPREPARATION PRODUCTION PROCESS PARAMETERS.....	603
<b>Nina Pyliak, Vladislav Yaroshevsky, Mycola Tkachenko, Aivars Aboltins, Adolfs Rucins, Oksana Bulgakova, Oleksandra Trokhaniak, Hanna Tsyon</b> TECHNOLOGY FOR OBTAINING COMPLEX MICROBIAL PREPARATION FOR BIOLOGICAL PROTECTION OF PLANTS FROM PESTS AND DISEASES USING BIOREACTOR.....	610
<b>Vladislav Yaroshevsky, Serhii Yasynskiy, Tetiana Osypenko, Volodymyr Bulgakov, Yevhenii Bakulin, Dainis Viesturs, Valentina Bakulina</b> INVESTIGATION OF JET-LOOP BIOREACTOR JET AERATOR OPERATION MODES .....	617
<b>Olga Onyshchenko, Ivan Semenenko, Yevheniia Holub, Iaroslav Gadzalo, Viktor Kaminskyi, Adolfs Rucins, Aivars Aboltins, Volodymyr Bulgakov</b> BIOLOGIZED TECHNOLOGY ELEMENTS IN CONFECTIONERY SUNFLOWER: EFFECTIVENESS ASSESSMENT .....	625
<b>Oleksandra Trokhaniak, Myroslav Budzanivskiy, Volodymyr Martyniuk, Aivars Aboltins, Adolfs Rucins</b> STUDY OF FORCE PARAMETERS OF FLEXIBLE SCREW CONVEYOR DURING TRANSPORTATION OF EXCAVATED CONTAMINATED SOIL FROM CRATER CENTER .....	632
<b>Oleksandra Trokhaniak, Stanislav Kovalchuk</b> STUDY OF WORKING BODY FOR REMOVING DAMAGED SOIL LAYER INSIDE CRATER.....	642
<b>Deepak Kumar Yadav, Tatevik Yezekyan, Alessia Cogato, Marco Sozzi, Francesco Marinello</b> EVOLUTION OF POWER AND MASS IN SPECIALISED AGRICULTURAL TRACTORS: TREND ANALYSIS.....	649
<b>Mikhail Podryhalo, Nikolay Artiomov, Volodymyr Krasnokutskiy, Vitalii Shein</b> CONSTRUCTION OF MODEL SERIES OF CARS, TRACTORS AND SELF-PROPELLED CHASSIS USING CONDITIONAL ENTROPY .....	655
<b>Rodions Saltanovs, Alexey Shevchenko, Janis Usans</b> ADAPTIVE MULTI-BAND LORA-BASED SYSTEM FOR DATA TRANSMISSION IN CIVIL DEFENCE MONITORING AND ALERTING.....	661
<b>Ayoola Rilwan Lawal, Tarmo Koppel, Romans Putans</b> AI GOVERNANCE FOR SAFE RURAL AUTOMATION: GLOBAL SURVEY OF LITERACY, OVERSIGHT AND REGISTRATION PRACTICES .....	670
<b>Astra Auzina-Emsina, Alberts Auzins, Armands Veveris, Andris Lismanis</b> MODELLING AGRICULTURAL COMPETITIVENESS SENSITIVITY TO FACTOR PRICE FLUCTUATIONS IN THE EU .....	689
<b>Andras Szeberenyi, Agnes Furesz, Imre Matyas Kovacs</b> UNDERSTANDING GREENWASHING AND CONSUMER TRUST IN HUNGARIAN CONTEXT .....	698

<b>Dmitrijs Rusovs, Sandis Gromovs, Janis Meikulans</b> MODULAR BOILER HOUSE FOR DISTRIBUTED BIOMASS AND RDF CO-INCINERATION .....	705
<b>Georgi Hrenov, Merle Kuttim, Helery Tasane, Wolfgang Gerstlberger</b> ROUTE-LEVEL TECHNO-ECONOMIC ASSESSMENT OF ALTERNATIVE FUELS FOR SHORT-SEA SHIPPING UNDER EU EMISSIONS TRADING SYSTEM.....	713
<b>Rodions Saltanovs, Alexey Shevchenko</b> PARTIAL POWER CONVERTERS IN MOBILE MODULAR ROBOT POWER SUPPLY SYSTEM .....	722
<b>Yuriy Semirnenko, Svetlana Semirnenko, Oleksandr Savoiskyi, Oleksandr Sarzhanov</b> THEORETICAL STUDY OF ENERGY-EFFICIENT STRAW DRYING BASED ON SENSIBLE HEAT RECOVERY FROM POST-PRESSED BRIQUETTES .....	730
<b>Viacheslav Bratishko, Vasyl Khmelovskiy, Victor Rebenko, Oksana Achkevych, Stanislav Kostiuik</b> JUSTIFICATION OF COMPONENT COMPOSITION OF SOLID COMPOSITE BIOFUEL BASED ON SEWAGE SLUDGE AND CEREAL STRAW.....	737
<b>Adolfs Rucins, Dainis Viesturs, Aivars Aboltins, Ikars Melnalksnis, Pavel Semenchuk, Artem Slobolinskyi</b> DEVELOPMENT OF DATA-SUPPORTED METHODOLOGY FOR CREATING DIGITAL CO <sub>2</sub> EMISSION CALCULATOR TO PROMOTE BEHAVIOURAL CHANGES IN PUBLIC TRANSPORT PASSENGERS .....	745
<b>Balazs Lorinc, Tibor Csonka, Jozsef Kaposzta</b> ENSURING AFFORDABLE AND CLEAN ENERGY: DRIVERS OF SUSTAINABLE DEVELOPMENT AND RESILIENCE WITHIN THE EUROPEAN UNION.....	757
<b>Dagnija Grabuza, Ruta Ozola-Davidane, Linda Grinberga, Kersti Kangro, Krista Alikas, Mirjam Uusoue</b> EARLY-STAGE TESTING OF MINERAL-BASED SORBENT PROTOTYPE SYSTEMS FOR PHOSPHORUS CAPTURE IN EUTROPHIC LAKES OF LATVIA AND ESTONIA .....	763
<b>Sanjay-Rajni Vejanand, Alexander Janushevskis</b> ANALYSIS OF VENTILATION POSITIONING INFLUENCE ON COOLING EFFICIENCY OF PROTECTIVE CLOTHING .....	770
<b>Arturs Dzenis, Ainars Uzuls, Vilnis Jakovlevs, Uldis Spulle</b> EFFECT OF PINE WOOD MOISTURE CONTENT ON COATING ADHESION AND PROCESS STABILITY UNDER UV-LED AND UV MERCURY CURING .....	778
<b>Uldis Strautins, Maksims Marinaki, Vanesa Vevere</b> ON MODELLING AND SIMULATION OF BUOYANCY-DRIVEN BALLOONS WITH EVOLVING ENVELOPES .....	785
<b>Andrejs Kovalovs, Pavel Akishin, Vanesa Dhalivala, Ugis Cabulis</b> NUMERICAL STUDY AND ANALYSIS OF COMPOSITE STRUCTURES WITH GRADED FOAM.....	792
<b>Pavel Akishin, Andrejs Kovalovs, Oleh Derkach</b> IMPACT DAMAGE INFLUENCE ON VIBRATION CHARACTERISTICS OF WOVEN COMPOSITES .....	800
<b>Harikrishnan Krishnan Muraleedharan, Vishnu Vijayan, Abhaydev Kavalackal Prasad, Jaymin Vrajlal Sanchaniya</b> MECHANICAL AND THERMAL PROPERTIES OF RECYCLED HIGH-DENSITY POLYETHYLENE: EXPERIMENTAL INVESTIGATION .....	806
<b>Gregor Randla, Yevhen Ihnatiev, Tormi Lillerand, Juri Olt</b> DESIGN AND EXPERIMENTAL VALIDATION OF FLUTED ROLLER FOR FERTILISER METERING SYSTEM.....	812
<b>Harikrishnan Krishnan Muraleedharan, Anandhu Aravind, Vishnu Vijayan, Jaymin Vrajlal Sanchaniya</b> EFFECT OF BUILD ORIENTATION ANGLE ON MECHANICAL PROPERTIES AND FRACTURE BEHAVIOUR OF FDM 3D PRINTED PLA.....	818

<b>Sergii Liashenko, Anton Kelemesh, Oleksii Burlaka, Andrii Lazorenko</b> RESEARCH OF INDICATORS OF HUMUS CONTENT IN SOILS OF POLTAVA REGION (UKRAINE) AND TECHNOLOGIES OF ITS RESTORATION AND INCREASE .....	824
<b>Vishnu Vijayan, Abhishek Kottapadikkal Pradeep, Harikrishnan Krishnan Muraleedharan, Jaymin Vrajlal Sanchaniya</b> FUNCTIONALLY GRADED INFILL FOR ENHANCED FLEXURAL PERFORMANCE IN 3D-PRINTED PLA .....	838
<b>Martin Aller, Yevhen Ihnatiev, Tormi Lillerand, Juri Olt</b> JUSTIFICATION OF SCHEME AND PARAMETERS OF PNEUMATIC WORKING BODY FOR PRECISE APPLICATION OF TECHNOLOGICAL MATERIALS IN CROP PRODUCTION .....	844
<b>Rashmi Jaymin-Sanchaniya, Ganesalingam Kireksi Romenath, Nikunj Niranjanbhai Pandya, Antra Kundzina, Janis Vanags</b> REAL ESTATE DEVELOPMENT STRATEGY IN EMERGING REGIONAL CITIES: DATA-DRIVEN FRAMEWORK FOR INFRASTRUCTURE AND SUSTAINABILITY PLANNING.....	852
<b>Karlis Amatnieks, Ruslans Smigins, Gunars Krikscuns, Aivars Birkavs</b> IMPACT OF HYDROGEN INJECTION ON PERFORMANCE AND EMISSIONS OF TRACTOR DIESEL ENGINE OPERATING ON HVO.....	860
<b>Rashmi Jaymin-Sanchaniya, Vihanga Akushla De Silva Weligodage, Nikunj Niranjanbhai Pandya, Antra Kundzina, Janis Vanags</b> ECONOMIC DETERMINANTS OF URBAN HOUSING AFFORDABILITY: COST- BENEFIT ANALYSIS OF CONSTRUCTION AND FINANCING FACTORS.....	868
<b>Viktorija Politika, Andrejs Sisovs, Jelena Pundure, Tatjana Tambovceva</b> FROM TECHNICAL SPECIFICATIONS TO OPERATIONAL ALIGNMENT: FIREFIGHTING VEHICLE PLANNING IN RURAL AREAS.....	877
<b>Raimonds Ernsteins, Arturs Skute, Toms Bringulis</b> LOCAL RIVER WATER BASIN GOVERNANCE MONITORING DEVELOPMENTS IN LATVIA: TOWARDS STAKEHOLDER'S CO-MANAGEMENT .....	884
<b>Adrian Pandeale, Bogdan Ovidiu Duran, Dragos Mihail Preda, Gheorghe Voicu</b> DOUBLE ROTATION WIND TURBINE .....	901
<b>Uldis Zaimis, Alberto Bonomi, Armands Jurjevs</b> COST-EFFECTIVE DUAL-FUEL COMBUSTION STRATEGY COMBINING LPG WITH PROTECTIVE INTAKE WATER INJECTION.....	908
<b>Uldis Zaimis, Edgars Skruodis</b> PREDICTIVE ANGULAR POSITION CONTROL USING EVENT-TIME ESTIMATION AND LATERALLY POLARIZED PERMANENT MAGNET.....	920
<b>Rolands Breza, Uldis Strautins</b> MATHEMATICAL MODELING OF TEXTILE ABRASION IN MARTINDALE TEST.....	927
<b>Aleksejs Hilkevics</b> COMPARATIVE ANALYSIS OF TECHNOLOGY TRANSFER EFFICIENCY IN AGRI-FOOD SECTORS OF EUROPEAN COUNTRIES.....	933
<b>Uldis Karlsons, Dace Brizga</b> SURVIVAL SKILLS IN EVENT OF NATURAL DISASTER .....	944
<b>Eliza Elza Lipsane, Gunita Mazure</b> IMPLEMENTATION PROFILE OF SOLAR ENERGY SOLUTIONS THROUGH EU FUNDED ENERGY PROJECTS.....	949
<b>Svetlana Atslega, Marija Dobkevich, Felix Sadyrbaev</b> ENERGY APPROACH TO STUDY ON DUFFING EQUATION .....	957
<b>Maria Pankiv, Viktor Baranovsky, Natalia Dubchak, Valentin Potapenko, Vasyl Ramsh</b> CONTACT INTERACTION COEFFICIENT BETWEEN ROOT AND SCREW TURN .....	963

<b>Abbas Abasov, Nikoloz Kapanadze, Svetlana Sokolova</b> AERODYNAMIC ANALYSIS OF FORMULA STUDENT FRONT WING USING CFD .....	970
<b>Sebastian Krakowiak, Radoslaw Nowak, Jaroslaw Senko</b> MODELING STABILITY OF ZIEGLER COLUMN WITH CONSIDERATION OF DRY FRICTION .....	979
<b>Jaroslaw Senko, Mikolaj Szycza, Przemyslaw Rumianek, Maciej Jurewicz</b> USING AI TOOLS TO MODEL PASSENGER FLOW IN PUBLIC TRANSPORT .....	986
<b>Agnieszka Jurkowska, Ewa Karwowska, Szymon Dowkontt, Jaroslaw Senko</b> METHODOLOGY FOR TESTING BIOLOGICAL CONTAMINATION OF CABIN FILTERS AT TEST STATION SIMULATING PASSENGER CAR VENTILATION .....	994
<b>Imants Plume, Aleksandrs Adamovics, Aivars Kakitis, Lauris Plume</b> EFFECT OF WHEAT STRAW AND PEAT ADDITIVES ON MECHANICAL STRENGTH OF POULTRY MANURE GRANULES .....	1004
<b>Oleksandr Yeremenko, Mykola Volokha, Mykola Tolstushko, Olena Turitsyna, Ievgen Antypov, Svitlana Tarasenko</b> STUDY OF INFLUENCE OF FINGER WORKING ELEMENT CONFIGURATION ON PROCESS OF CAPTURING STEM MATERIAL .....	1010
<b>Florian Zill, Inese Mavlutova</b> HOW FAST DEVELOPMENT AND ADOPTION OF DIGITIZED PROCESSES ALLOW MANUFACTURING COMPANIES TO MANAGE COMPLEXITY: BIBLIOMETRIC NETWORK ANALYSIS .....	1018
<b>Serhii Pustiulha, Volodymyr Samchuk, Yuliia Bondarchuk, Mykola Tolstushko, Nataliya Tolstushko, Ihor Holovachuk</b> IMPACT OF FRACTAL PARAMETERS OF POWDER-BED PACKING ON PART QUALITY AND PROCESS PERFORMANCE IN SLS PRINTING OF MECHANICAL ENGINEERING COMPONENTS .....	1028
<b>Olena Glazunova, Ihor Bolbot, Volodymyr Kravchenko, Roman Rudenskyi, Oleksii Tsyganov</b> APPLICATION OF ARTIFICIAL INTELLIGENCE FOR DETECTION OF LAND PLOTS .....	1035
<b>Igor Kryvovyazyuk, Serhii Smerichevskyi, Svitlana Korobka, Iryna Kaminska, Nataliya Tolstushko, Mykola Tolstushko</b> INTEGRATED ENGINEERING-ECONOMIC APPROACH TO MODELING AIR LOGISTICS EFFICIENCY IN RURAL REGIONS .....	1040
<b>Ivan Rogovskii, Viktor Krushelnytskyi, Maksym Dombrovskiy</b> OSCILLATIONS OF HEATING PLATFORM FOR 3D PRINTING OF AGRICULTURAL DRONE PARTS .....	1050
<b>Serhiy Korobka, Mykola Tolstushko, Igor Stukalets, Viktor Sheichenko, Igor Kryvovyazyuk, Nataliya Tolstushko</b> INVESTIGATION OF HEAT AND MASS EXCHANGE PROCESSES OF HELIUM DRYER OPERATION BY ANALYTICAL METHOD AND USING CFD ANALYSIS IN SOLIDWORKS FLOW SIMULATION ENVIRONMENT .....	1056
<b>Marek Gaworski, Slawomir Maciejak</b> SOME INDICATORS OF MILKING ROBOT EFFICIENCY: CASE STUDY ON POLISH FARM WITH ONE-STALL AMS .....	1064
<b>Viktor Sheichenko, Oleksii Hizzatullin, Mykola Tolstushko, Misha Shevchuk, Yurii Fedorus, Larysa Pylypiuk</b> ADAPTIVE CONTROL OF TECHNOLOGICAL MACHINE MODES TAKING INTO ACCOUNT CHARACTERISTICS OF RAW MATERIALS AND ENVIRONMENT .....	1070
<b>Viktor Sheichenko, Igor Dudnikov, Yuliia Skoriak, Mykola Tolstushko, Vitaliy Shevchuk, Larysa Pylypiuk</b> STUDY OF FLAT MOVEMENT OF FLATTENING ROLLERS ALONG HEMP STEMS .....	1076
<b>Yurii Bulik, Vasyl Pavliuk, Mykola Tolstushko, Nataliya Tolstushko</b> INFLUENCE OF FRICTION IN JOINTS ON FORCE CHARACTERISTICS OF SCISSOR ROLLING BRIDGE JACK .....	1082

<b>Serhii Yukhymchuk, Svitlana Yukhymchuk, Mykola Tolstushko, Leonid Datsiuk, Victor Tarasiuk</b> DETERMINATION OF AVERAGE DIAMETER AND TAPER OF FLAX STEM .....	1089
<b>Volodymyr Bulgakov, Aivars Aboltins, Adolfs Rucins, Dainis Viesturs, Olena Glazunova, Oleksandra Trokhaniak, Zinoviy Ruzhylo, Mykhailo Chernovol, Arlindo Almeida</b> STUDY OF FINGER-TYPE SAFETY CLUTCH .....	1095
<b>Volodymyr Bulgakov, Simone Pascuzzi, Dainis Viesturs, Adolfs Rucins, Olena Glazunova, Oleksandra Trokhaniak, Mariia Ruzhylo, Mykola Klendii, Mykhailo Chernovol</b> STUDY OF UNIT ENERGY PARAMETERS TILLING SOIL WITH HARROW USING SCREW WORKING BODIES.....	1101
<b>Nina Pyliak, Olena Nikipelova, Antonina Barabash, Oksana Bulgakova, Aivars Aboltins, Adolfs Rucins, Anatoliy Zaryshnyak, Anatoliy Bondarchuk</b> USAGE OF MICROBIAL FUNGICIDAL PREPARATIONS IN APPLE ORCHARDS AND THEIR EFFECT ON FRUIT STORAGE UNDER REFRIGERATION CONDITIONS .....	1108
<b>Valerii Adamchuk, Igor Savchenko, Petro Rykhliivskiy, Aivars Aboltins, Adolfs Rucins</b> RESEARCH ON WEED DESTRUCTION MECHANIZED PROCESS BY FLAME CULTIVATION OF VEGETABLE AND ROW CROPS IN ORGANIC FARMING.....	1113
<b>Viktor Trokhaniak, Dainis Viesturs, Adolfs Rucins, Yevhenii Bakulin, Oleksandr Synyavskiy, Larysa Kolomyets, Valentina Bakulina</b> CFD MODELLING OF NEW DESIGNED HEAT EXCHANGER.....	1121
<b>Jan Novotny, Stefan Michna</b> TRIBOLOGICAL ANALYSES OF COMPOSITE MULTILAYER COATINGS APPLIED FOR MOLDS IN TIRE PRODUCTION .....	1128
<b>Aigars Laizans, Andris Backurs, Martins Tisenkopfs, Nikita Roldugins</b> PORTFOLIO-STRUCTURED SEGMENTATION AND FORECAST-GUIDED TARGETING OF DAYTIME-COMMERCIAL SMES ELECTRIC ENERGY USAGE PATTERNS.....	1134
<b>Andris Backurs, Leo Jansons, Aigars Laizans, Sanda Lapuke</b> TECHNO-ECONOMIC ASSESSMENT OF PV-PEM INTEGRATION FOR KURZEME COASTAL REGION .....	1144
<b>Dainis Berjoza, Inara Jurgena, Janis Laceklis-Bertmanis</b> EXPERIMENTAL INVESTIGATION OF ACCELERATION PERFORMANCE OF LOW-POWER TWO-WHEELED ELECTRIC VEHICLES .....	1152
<b>Gulzada Umirova, Zaira Matayeva, Oleksandr Kamyshatskyi, Zhanel Aubakirova</b> SIMULATION AND EXPERIMENTAL EVALUATION OF EROSION WEAR OF ANTI-SAND FILTERS AT HIGH FLOW VELOCITIES AND PRESENCE OF FINE SAND .....	1160
<b>Gulzada Umirova, Aidar Kuttybayev, Mars Narbaev, Irzabek Tovassarov</b> DEVELOPMENT AND TESTING OF SELF-CLEANING SAND RETENTION SCREENS FOR HIGH-TEMPERATURE WELLS .....	1167
<b>Boranbay Ratov, Oleksandr Pashchenko, Arailym Zhanggirkhanova, Nursulu Tovbassarova</b> INFLUENCE OF THERMO-CYCLIC LOADS AND ABRASIVE WEAR ON DURABILITY OF PDC CUTTERS IN HIGH-TEMPERATURE WELLS .....	1173
<b>Samal Muratova, Volodymyr Khomenko, Oleksandr Pashchenko, Kuanysh Tavassarov</b> DEVELOPMENT OF REAL-TIME FORECASTING METHODOLOGY FOR DRILLING FLUID PROPERTY CHANGES BASED ON SURFACE SENSOR DATA .....	1180
<b>Samal Muratova, Volodymyr Khomenko, Yersain Jalgassov, Nursulu Tovbassarova</b> COMPARATIVE ANALYSIS OF RHEOLOGICAL MODELS FOR WATER-BASED DRILLING FLUIDS BASED ON VISCOMETRIC MEASUREMENTS.....	1186
<b>Juri Olt, Olga Liivapuu, Yevhen Ihnatiev</b> DEVELOPMENT TREND OF AGRICULTURAL DRONES BASED ON PATENT RESEARCH .....	1193
<b>Erik Sven Paertin, Olga Liivapuu, Yevhen Ihnatiev, Juri Olt</b> STUDY OF GRANULAR FERTILISER DOSING UNIFORMITY USING IMPROVED ROLLER DESIGNS BASED ON DEM MODELLING .....	1201

## Reviewers

Abbas Abasov, Aivars Aboltins, Oksana Achkevych, Valerii Adamchuk, Aleksandrs Adamovics, Yevhenii Aftandiliants, Hafiz Ayyaz Ahmed, Pavel Akishin, Hassan M. Ali, Krista Alikas, Martin Aller, Arlindo Almeida, Karlis Amatnieks, Roman Antoshchenkov, Viktor Antoshchenkov, Ievgen Antypov, Cristina Apetrei, Anandhu Aravind, Nikolay Artiomov, Svetlana Atslega, Zhanel Aubakirova, Astra Auzina-Emsina, Alberts Auzins, Taliat Azizov.

Andris Backurs, Yevhenii Bakulin, Valentina Bakulina, Ilze Balode, Oleksandr Bannyi, Oleksandr Bannyi, Antonina Barabash, Viktor Baranovsky, Arta Bardule, Volodymyr Belchenko, Vitalijs Beresnevich, Yurii Berezovskyi, Dainis Berjoza, Igor Bepalov, Aivars Birkavs, Gints Birzietis, Miroslav Blatnický, Halyna Boiko, Ihor Bolbot, Anatoliy Bondarchuk, Yuliia Bondarchuk, Sergii Bondariev, Alberto Bonomi, Viacheslav Bratishko, Rolands Breza, Baiba Briede, Toms Bringulis, Dace Brizga, Myroslav Budzanivskyi, Edgars Buksans, Volodymyr Bulgakov, Oksana Bulgakova, Yurii Bulik, Oleh Bundza, Yurii Burda, Oleksii Burlaka, Aldis Butlers.

Jacek Caban, Ugis Cabulis, Kristine Carjova, Kristine Carjova, Jordane Champion, Vladislav Chasnikov, Mykhailo Chernovol, Oleh Chernysh, Yurii Chovniuk, Alessia Cogato, Gabriel A. Constantin, Tibor Csonka.

Leonid Datsiuk, Oleh Derkach, Vanesa Dhalivala, Jan Dizo, Marija Dobkevich, Ivana Domanikova, Maksym Dombrovskyi, Oleksandr Domin, Viktor Dorovskikh, Szymon Dowkontt, Oleksandr Dranyk, Natalia Dubchak, Marina T. Dudau, Igor Dudnikov, Martins Vanags Duka, Ilmars Dukulis, Bogdan Ovidiu Duran, Arturs Dzenis.

Maris Eiduks, Raimonds Ernsteins.

Pavlo Fedirko, Yurii Fedorus, Agnes Furesz.

Iaroslav Gadzalo, Maris Gailis, Julia Galchynska, Ainars Galins, Marek Gaworski, Wolfgang Gerstlberger, Olena Glazunova, Svyatoslav Gnyloskurenko, Dagnija Grabuza, Jana Grave, Linda Grinberga, Kristaps Grinbergs, Inga Grinfelde, Sandis Gromovs, Gunta Gvalda.

Serhii Halushka, Edvin Hevorkian, Aleksejs Hilkevics, Oleksii Hizzatullin, Valentyn Holii, Mykola Holotiuk, Ivan Holovach, Ihor Holovachuk, Tetyana Holovenko, Yevheniia Holub, Ivan Horodetskyi, Oleksandr Hovorov, Georgi Hrenov, Liudmyla Hunko, Olesia Huretska, Oleg Huryk, Taras Hutsol.

Yevhen Ihnatiev, Yevhen Ihnatiev, Alexandru Ionescu, Sorin-Dan Iordache, Martins Irbe, Janis Ivanovs.

Vilnis Jakovlevs, Yersain Jalgassov, Leo Jansons, Alexander Janushevskis, Andrejs Jaunzems, Nikolass Jaunzems, Rimants Jelinks, Petr Jilek, Egle Jotautiene, Linas Jurevicius, Maciej Jurewicz, Inguna Jurgelane-Kaldava, Inara Jurgena, Armands Jurjevs, Agnieszka Jurkowska.

Aivars Kakitis, Santa Kaleja, Iryna Kaminska, Viktor Kaminskyi, Oleksandr Kamyshatskyi, Kersti Kangro, Nikoloz Kapanadze, Jozsef Kaposzta, Davut Karayel, Davut Karayel, Juta Karklina, Edgars Karklins, Uldis Karlsons, Ewa Karwowska, Egidijus Kasiulis, Anton Kelemesh, Ahmad Raza Khan, Vasyl Khmelovskyi, Volodymyr Khomenko, Serhii Khomych, Nadia Khomyk, Nadezda Kilupe, Viktor Kis, Janis Kjakste, Mykola Klendii, Nataliia Kolesnik, Vitalii Kolodnenko, Yulia Kolomiyets, Larysa Kolomyets, Liudmyla Kolosa, Roman Komar, Tarmo Koppel, Mykola Korchak, Bohdan Korinenko, Serhiy Korobka, Svitlana Korobka, Stanislav Kostiuk, Imre Matyas Kovacs, Dmytro Kovalchuk, Stanislav Kovalchuk, Andrejs Kovalovs, Edgars Kovals, Raisa Kovbasenko, Viktor Kozin, Edward Kozlowski, Sebastian Krakowiak, Igors Krasavcevs, Volodymyr Krasnokutskyi, Viktor Kravchenko, Natalia Kravchenko, Sergey Kravchenko, Volodymyr Kravchenko, Juris Kreicbergs, Gunars Krikscuns, Viktor Krushelnyskyi, Igor Kryvovyazyuk, Merle Kuettim, Nikolajs Kulesovs, Antra Kundzina, Aidar Kuttybayev, Iulia Kvasnytska, Kateryna Kvasnytska.

Janis Laceklis-Bertmanis, Aigars Laizans, Sanda Lapuke, Magdalena Z. Laskowska, Piotr Laskowski, Ayoola Rilwan Lawal, Andis Lazdins, Andrii Lazorenko, Daria Lemishko, Anna Levicka, Sergii Liashenko, Una Libkowska, Olga Liivapuu, Tormi Lillerand, Eliza Elza Lipsane, Andris Lismanis, Balazs Lorinc, Valerii Lutskovskyi.

Arturs Macanovskis, Slawomir Maciejak, Muhammad A. Mahmood, Viktor Makarov, Maris Mangalis, Maksims Marinaki, Francesco Marinello, Andrii Martyn, Volodymyr Martyniuk, Andreea

Matache, Zaira Matayeva, Inese Mavlutova, Gunita Mazure, Volodymyr Mechnik, Nataliia Medynska, Janis Meikulans, Ikars Melnalksnis, Raitis Normunds Melniks, Valentyna Melnyk, Victor Melnyk, Nina Merezhko, Stefan Michna, Tomas Mickevicius, Anna Moskvitina, Katrina Muizniece, H. K. Muraleedharan, Samal Muratova, Gabriel Musuroi, Artem Mykhailov.

Olena Nalobina, Mars Narbaev, Olena Nikipelova, Volodymyr Noha, Andriy Novitskiy, Yuriy Novitskiy, Jan Novotny, Radoslaw Nowak.

Maksym Odnorog, Serhiy Oleksiyo, Juri Olt, Olga Onyshchenko, Viktoriia Opalko, Ivan Openko, Vitalijs Osadcuks, Tetiana Osypenko, Ruta Ozola-Davidane, Ernests Ozolins.

Joonas Paales, Erik Sven Paertin, Janis Palabinskis, Adrian Pandeale, Nikunj N. Pandya, Maria Pankiv, Vitalii Pankiv, Daria Panova, Viktoriia Paschenko, Simone Pascuzzi, Oleksandr Pashchenko, Andrii Pastushenko, Vitalii Pavlenko, Vasyl Pavliuk, Sigitas Petkevicius, Dmytro Petrachenko, Jovita Pilecka-Ulcugaceva, Vilnis Pirs, Nonna Pishchanska, Imants Plume, Lauris Plume, Igor Podmazko, Mikhail Podryhalo, Viktorija Politika, Anatolii Poltavets, Maksym Porodko, Valentin Potapenko, Svitlana Potapova, Abhishek K. Pradeep, Abhaydev K. Prasad, Dragos Mihail Preda, Augustina Pruteanu, Oleksii Prykhodko, Jelena Pundure, Dana Purvina, Serhii Pustiulha, Zoya Pustova, Romans Putans, Ruta Puziene, Nina Pyliak, Andrii Pylypenko, Larysa Pylypiuk.

Vasyl Ramsh, Gregor Randla, Boranbay Ratov, Victor Rebenko, Andriy Redko, Ihor Redko, Oleksandr Redko, Gita Revalde, Ivan Rogovskii, Nikita Roldugins, Ganesalingam K. Romenath, Adolfs Rucins, Mirosław Rucki, Roman Rudenskiy, Przemyslaw Rumianek, Dmitrijs Rusovs, Mariia Ruzhylo, Zinoviy Ruzhylo, Serhii Rybachov, Petro Rykhlivskiy.

Felix Sadyrbaev, Rodions Saltanovs, Volodymyr Samchuk, Inna Samuilik, Jaymin Vrajlal Sanchaniya, Rashmi J. Sanchaniya, Oleksandr Sarzhanov, Povilas Saulys, Igor Savchenko, Liliya Savchenko, Oleksandr Savoiskiy, Pavel Semenchuk, Ivan Semenenko, Yuriy Semirnenko, Svetlana Semirnenko, Jaroslaw Senko, Vadims Serguns, Mohamed H. Shaban, Oleksandr Shapoval, Denys Sheichenko, Viktor Sheichenko, Vitalii Shein, Vasylyna Shemet, Alexey Shevchenko, Oleksandr Shevchenko, Misha Shevchuk, Vitaliy Shevchuk, Oleksandr Shovkomyd, Oleksii Sikora, Nikola Sinica, Viktor Sirenko, Andrejs Sisovs, Jakub Skoczylas, Yuliia Skoriak, Ilona Skranda, Edgars Skruodis, Arturs Skute, Artem Slobolinskiy, Patrik Slusnak, Serhii Smerichevskiy, Ruslans Smigins, Mareks Smits, Roberta Snapkauskiene, Vladyslav Sokol, Svetlana Sokolova, Oleksandr Solarov, Marco Sozzi, Uldis Spulle, Nataliia Sribniak, Margarita Stepanova, Uldis Strautins, Gheorghe Stroescu, Aigars Strubergs, Igor Stukalets, Sergiy Subota, Andrzej Swiderski, Andrii Synieutskiy, Oleksandr Synyavskiy, Andras Szeberenyi, Mikolaj Szyca.

Viktorija Tabakurska, Ana-Maria Tabarasu, Tatjana Tambovceva, Svitlana Tarasenko, Victor Tarasiuk, Helery Tasane, Oleksandr Tatsenko, Kuanysh Tavasarov, Viktor Tesliuk, Martins Tisenkopfs, Mykola Tkachenko, Tetiana Tkachenko, Mykola Tolstushko, Nataliya Tolstushko, Irzabek Tovassarov, Nursulu Tovbasarova, Oleksandra Trokhaniak, Viktor Trokhaniak, Igor Tsiz, Oleg Tsvyakh, Oleksii Tsyganov, Hennadii Tsyhanenko, Liudmyla Tsyhanenko, Hanna Tsyon, Tetiana Tsyz, Paula Tudor, Maris Tupesis, Olena Turitsyna, Olha Tykhenko, Ruslan Tykhenko, Vasyl Tymochko.

Gulzada Umirova, Janis Usanse, Mirjam Uusoue, Ainars Uzuls.

Raimonds Valdmanis, Janis Vanags, Nicoleta Vanghele, Kaspars Vartukapteinis, Sanjay-Rajni Vejanand, Vanesa Vevere, Armands Veveris, Janis Viba, Dainis Viesturs, Vishnu Vijayan, Olena Visyn, Gatis Vitols, Valentin Vladut, Gheorghe Voicu, Oleksandr Voinalovych, Dmytro Volkov, Mykola Volokha, Raisa Vozhehova, Tetyana Vozniuk, Natalija Vronska, Olafs Vronskis, Shrvan K. Vutukuru.

Abdul Waqas, Mateusz Waskowicz, Moustafa Ali Wassouf, Vihanga A. De Silva Weligodage, Piotr Wisniowski.

Deepak Kumar Yadav, Olexandr Yaheliuk, Svitlana Yaheliuk, Vadym Yaremenko, Vladislav Yaroshevsky, Serhii Yasynskiy, Oleksandr Yeremenko, Serhii Yermakov, Vitalii Yevdokymenko, Tatevik Yezekyan, Hasan Yilmaz, Hasan Yilmaz, Serhii Yukhymchuk, Svitlana Yukhymchuk.

Oleg Zabolotko, Oleg Zagurskiy, Uldis Zaimis, Maija Zake, Gundars Zalcmanis, Anatoliy Zaryshnyak, Rytis Zautra, Vladislav Zavadskiy, Arailym Zhanggirkhanova, Oleh Zhurylo, Florian Zill, Agris Zimelis, Petro Zynych, Tetyana Zubok, Zaiga Anna Zvaigzne.