

CONTENTS

Authors	Paper Title	Pp.
Liliana-Laura Bădiță-Voicu, Paul Ancuța, Anghel Constantin, Adrian Cătălin Voicu and Vlad Mangher	TRIBOLOGICAL CHARACTERIZATION OF THE CONTACT SURFACE OF SENSORS USED IN THE STRUCTURE OF EXOSKELETONS	8-14
Ping Wu	RESEARCH ON THE APPLICATION OF A BILSTM-INFORMER HYBRID MODEL IN REAL-TIME ENHANCEMENT PREDICTION OF PHOTOVOLTAIC POWER GENERATION OUTPUT	15-25
Yi Pan, Yanjun Hu	VENUE ENVIRONMENT MONITORING AND INTELLIGENT REGULATION SYSTEM BASED ON IMPROVED RBF NEURAL NETWORK AND ZIGBEE TECHNOLOGY	26-37
Olexandr Badovskyi, Anna Balaniuk, Gennadii Oborskyi, Alexandr Orgiyan, Vitalii Ivanov	ENHANCING VIBRATION STABILITY IN END-FACE TRIMMING USING WIDE-BLADED CUTTERS	38-46
Bo Wang, Liping Huang, Qijing Zhang	MICROSTRUCTURE AND PROPERTIES OF DIAMOND CUTTING EDGES IMPROVED BY NANOMATERIALS IN TOOL POLISHING	47-57
Shulin Chen and Vladimir Y. Mariano	AUTOMATED STUDENT ENGAGEMENT DETECTION USING HYBRID DEEP LEARNING MODELS	58-73
Roxana-Mariana Nechita, Ana Maria Eulampia Rolea, Cozmin Cristoiu and Oliver Ulerich	BIBLIOMETRIC ANALYSIS OF SOFT ROBOTICS IN MINIMALLY INVASIVE SURGERY	74-88
Bogdan-Nicolae Stoian, Constantin-Adrian Popescu, Roxana-Mariana Nechita, Bogdan Marian Verdete	ATLAS-ALMA ARCHITECTURE FOR THE INTELLIGENT OPERATION OF MULTIMODAL FREIGHT TRANSPORT NETWORKS: CONCEPTUAL MODEL AND IMPLEMENTATION FRAMEWORK	89-98
Lu Wang	PATH PLANNING AND TRAJECTORY TRACKING CONTROL OF WHEELED MOBILE ROBOTS BASED ON RRT-MPC MODEL	99-111
Wan Ming	AUTOMATIC GENERATION OF SOFTWARE ENGINEERING TEST CASES AND CONSTRUCTION OF COVERAGE IMPROVEMENT MODEL BASED ON GENETIC ALGORITHM OPTIMIZING NEURAL NETWORK	112-126
Sarvar Tursunbaev, Boburjon Ibrokhimov, Umidjon Mardonov, Fatxulla Abdullaev, Sardor Uktamov, Nigora Giyasova, Nigora Rizaeva, Mavjuda Baratova, Abdulaziz Yusupov	STUDY ON THE INFLUENCE OF MECHANICAL PROPERTIES OF MALLEABLE CAST IRON VIA NICKEL MODIFICATION	127-134
Abdiev Bobur, Khamidov Boburjon, Yakhshiev Sherali, Ravshanov Jamshid, Isaev Doniyor, Zayniev Shavkat	SOUND BASED SINGLE SENSOR MILLING TOOL MONITORING AND FAULT DETECTION	135-144
Salwan Obaid Waheed Khafaji, Fawaz F. Al-Bakri, Hasan H. Ali	OPTIMIZING THE ELECTRICAL CURRENT AND FLUID-FILM THICKNESS TO CONTROL A MAGNETO - RHEOLOGICAL (MR) FLUID BRAKE USING AN ANALYTICAL APPROACH	145-154

Yaoming Zhang, Xuliang Zhang, Fudong Liu, Pengcheng Wang, Jianfei Wang, Fei Zhan, Rui Ma	COMPARATIVE STUDY AND OPTIMIZATION OF SPECIAL-SHAPED METAL SEALING RINGS WITH SURFACE IMPERFECTIONS FOR MANDREL CASING HANGERS	155-165
Di Zheng, Baobao Zheng	DESIGN AND IMPLEMENTATION OF INTELLIGENT PROTECTION SYSTEM FOR CHARGING DEVICE OF NEW ENERGY VEHICLE	166-181
Xudong Ma, Ling Jiang, Shengfu Wang, Shengcheng Dong, Yitao Zhang, Guangxiuyuan Zhu	ELECTRO-OPTIC EFFECT-BASED DETECTION OF ZERO-VALUE INSULATORS IN 220 KV TRANSMISSION LINES	182-192
Oleg Krol, Vladimir Sokolov, Oleksandr Logunov, Marin Zhilevski, Mikho Mikhov, Krasimir Kanev	SELECTION OF IMPROVED DESIGN FOR MACHINE CENTRE TOOL SPINDLE SUPPORT	193-204
Can Wang, Bin Chang	TEMPERATURE DRIFT COMPENSATION OF INDUSTRIAL PRESSURE TRANSMITTER BASED ON ADAPTIVE FILTERING AND MULTI-SENSOR FUSION	205-219
Jianli Kang, Guoqiang Chen, Yahui Qiao, Fei Yang, Yuegong Wang	A NOVEL POSE CONTROL METHOD OF 3-PRS PARALLEL ROBOT	220-230
Roman Obertyukh, Andrii Slabkyi, Oleksandr Povstyanoy, Serhiy Kotyk, Olha Serdiuk	METHODOLOGY FOR THE DESIGN CALCULATION OF A HYDRAULIC PULSE DRIVE CONTROLLED BY A SINGLE-STAGE HIGH-CAPACITY PRESSURE PULSE GENERATOR	231-241
Sylvester Bozherikov, Ventsislav Dimitrov, Konstantin Raykov, Rumen Yankov, Georgi Tonkov, Gergana Tonkova, Hristo Stoianov	DESIGN AND ENGINEERING ANALYSIS OF A ROTATING WELDING TABLE FOR MULTI-SIZE TUBE ASSEMBLIES	242-253
Alexandra Cojocar, Florentina Badea, Bogdan Nicolae Stoian, Bogdan Marian Verdete	HUMAN-ROBOT COLLABORATION: STUDENTS' RISK PERCEPTION AND ADAPTATION	254-264
Doniyor Kholikulov, Olmos Boltaev, Mohinur Elchiyeva, Bakhtiyor Niyazmetov, Madina Barmenshinova	CHARACTERIZATION OF OXIDIZED COPPER ORES FROM THE KALMAKYR DEPOSIT (UZBEKISTAN)	265-272
Xiali Yue	INTELLIGENT FAULT DIAGNOSIS OF ELECTROMECHANICAL EQUIPMENT BASED ON IOT AND DEEP LEARNING	273-283
Linlin Li, Xumin Liu	ENERGY-SAVING RECONSTRUCTION SCHEME OF BUILDINGS BASED ON ENERGY CONSUMPTION DATA	284-298
Ning Feng, Bo Yao, Xuanmin Huo, Wei Zhang, Hua Dang, Yujie Jia, Hao Su	HYDROGEN ENERGY STORAGE SAFETY EARLY WARNING MODEL BASED ON MULTI-SOURCE SENSING	299-310
Wei Guo	REAL-TIME EARLY WARNING AND DYNAMIC CONTROL OF CONSTRUCTION PROJECT SCHEDULE USING DIGITAL TWIN AND BIM: A DATA-DRIVEN APPROACH WITH LSTM PREDICTION AND NSGA-II OPTIMIZATION	311-324
Krasimir Kanev, Marin Zhilevski, Mikho Mikhov, Oleg Krol, Vladimir Sokolov	ANALYSIS AND OPTIMIZATION OF CUTTING PARAMETERS AND MACHINING TIME FOR ALUMINUM ALLOYS	325-334

Anton Skorkin, Oleg Kondratyuk, Viktoriia Kniazieva, Kyrylo Shoful	TECHNOLOGICAL SUPPORT FOR MANUFACTURING COMPLEX GEOMETRY HYPERBOLOID GEARS IN A CNC ENVIRONMENT	335-341
Jintao Zhang, Yongyu Zhang	TUNABLE LIQUID LENS COMPENSATION OF FIELD CURVATURE IN MEMS-BASED MINIATURIZED MICROSCOPES FOR OPTOGENETIC APPLICATIONS	342-351
Mingchao Geng, Tiezheng Cui, Donghao Wu, Xukun Yin, Zhenxing Wang	STUDY ON BRAKING STABILITY OF MULTI-FRICTION DISC WET-TYPE BRAKE BASED ON THERMAL-FLUID-SOLID COUPLING	352-259
Chundong Liu, Xiaopu Hao, Qiang Zhang, Longchuan Li, Zhongxu Sang and Shuai Kang	EXPERIMENTAL INVESTIGATION OF DYNAMIC TORQUE CHARACTERISTICS OF A ROTATING DRAG BODY IN GRANULAR MEDIA	360-368
Mikhail Podrigalo, Oleksandr Polianskyi, Mykola Artiomov, Dmytro Klets, Maksym Krasnokutskyi, Maksym Baitsur, Mykhailo Kholodov	IMPROVING THE HANDLING OF PASSENGER CARS THROUGH THE USE OF A COMBINED STEERING METHOD	369-378
Serhii Sokolik, Andrii Kozhushko, Vladyslav Zubko, Mykhailo Shuliak, Oleksandr Yaryta	MODELING OF TIRE-SOIL INTERACTION: THE INFLUENCE OF INFLATION PRESSURE AND PERMISSIBLE LOADS ON CONTACT PATCH AREA	379-387
Ivan Koliesnik, Ihor Shevchenko, Yuliana Koliesnik, Oleg Blesnyuk, Serhii Shushliapin, Bogdan Sarzhanov	TRANSVERSE DYNAMICS OF MOTION OF A WHEEL TRACTOR WITHOUT ELASTIC SUSPENSION	388-396
Xiu Zheng, Jiyang Zhang, Jie Yang, Qinghua Liao	MULTI-OBJECTIVE SCALE OPTIMIZATION OF POWER SYSTEM ENERGY STORAGE BASED ON EFCPPPO ALGORITHM	397-408
Dushanov Begmamat, Fayziyev Voxid, Mamarajabov Mirsalim, Mavlonov Sherzod, Djumoboeva Yanglish, To'g'izboyev Faxriddin, Narzullayev Shohrukh	INTEGRATED DEEP LEARNING AND IOT-ENABLED FRAMEWORK FOR REAL-TIME ECG ARRHYTHMIA DETECTION VIA WAVELET-BASED SIGNAL PROCESSING	409-418
Subbotin Oleksandr, Bilozerov Valerii, Subbotina Valeriia, Barannikov Vyacheslav, Bobrov Volodymyr, Fesyukov Sergey	PHASE COMPOSITION AND PROPERTIES OF MAO COATINGS ON ZINC-ALLOYED ALUMINUM ALLOYS	419-424
Andriy Fadieiev, Olena Naboka, Iana Maksymenko, Myroslav Voropaiev and Fatima Yevsyukova	THEORETICAL PRINCIPLES FOR DEVELOPING A METHODOLOGY OF ADVANCED DIGITAL TWIN CONSTRUCTION AND ITS APPLICATION IN PRODUCT RECOVERY PRODUCTION SYSTEMS	425-433
Bogdan Marian Verdete, Sorin-Ionuț Badea, Cristian Radu Badea, Cristina Luciana Dudici, Alexandra Cojocar	OFFLINE PROGRAMMING AND SIMULATION PLATFORMS FOR INDUSTRIAL ROBOTS: A REVIEW WITH A RESEARCH-ORIENTED PERSPECTIVE ON ROBODK	434-443
Wutao Li	ANALYSIS OF THE FUNCTION OF HEAT PUMP AIR CONDITIONING SYSTEM IN INTELLIGENT NETWORKING AND AUTOMATIC DRIVING OF NEW ENERGY VEHICLES	444-458