

CONTENTS

Authors	Paper Title	Pag.
Nicolae Tanase, Cristinel Ilie, Dragos Ovezza, Ionel Chirita, Marius Popa, Romulus M. Mihai, Mihai Guțu	DYNAMIC ANALYSIS AND TESTING OF A SINGLE GIMBAL CONTROL MOMENTUM GYROSCOPE	7
Guoqiang Chen, Zhongchao Bai, Mengchao Liu	AN INTEGRATED MODEL FOR PRECEDING VEHICLE TARGET DETECTION AND LOCATION BASED ON DEEP VISION	15
Yi Zheng, Jixin Liu, Maohua Xiao	MOTION REALIZATION OF A SMALL DIAMETER DEEP WELL RESCUE ROBOT BASED ON ADAMS-MATLAB CO-SIMULATION	23
Dragos Ovezza, Romulus M. Mihai, Cristinel Ilie, Adrian Nedelcu, Nicolae Tanase, Marius Popa, Mihai Guțu	EXEPRIMENTAL TESTING OF A TREMOR COMPENSATION SYSTEM WITH BIMORPH PIEZOCERAMIC ACTUATORS USING OPTICAL METHODS	31
R. El Abdi, R. Leite Pinto, G. Guérard, C. Capena	INFLUENCE OF ENVIRONMENT ATMOSPHERE ON OPTICAL FIBER STRENGTH	41
Turakhodjaev Nodir, Tashbulatov Sherzod, Chorshanbiev Shukhrat	TECHNOLOGIES FOR EXTRACTION OF COPPER FROM COPPER SLAG BY FLOTATION	45
Turakhodjaev Nodir, Tursunbaev Sarvar, Karimov Kamaldjan, Turakhujaeva Shirinkhon, Alimukhamedov Shavkat, Akramov Mukhammadali	THE EFFECT OF LITHIUM CONTENT ON THE MASS OF THE PART WHEN ALLOYED WITH LITHIUM ALUMINUM	52
Alina Rodica Spanu, Daniel Besnea	MECHATRONIC SUSPENSION SYSTEM WITH DRY AIR INFLATED NETWORK FOR LOWER LIMB PROSTHESIS	57
Gheorghe Silviu Ionut, Negrea Catalin Stefan, Angelescu Dorin, Robert Mangher, Vlad Mangher	STUDY ON THE REALIZATION OF AN UNDETECTABLE MARINE DRONE AND ITS COMMAND-AND-CONTROL METHODS	61

Adrian Olaru, Maria-Giorgiana Khan Gaina	AIRCRAFT FUEL TANK INSPECTION WITH HEXAPOD MOBILE ROBOT	66
D.M. Berdiev, A.A. Yusupov	INFLUENCE OF CYCLIC HEATING MODES ON THE WEAR RESISTANCE OF STEEL	77
Emil-Ionuț Niță, Philip Coandă, Constantin-Daniel Comeagă, Mircea Udrea	RESEARCH ON THE DESIGN AND CONTROL OF ADVANCED EXPERIMENTAL SETUPS USED IN ACTUATORS AND PLATFORMS CHARACTERIZATION	84
Alina Bianca Pop, Aurel Mihail Țițu	VERIFICATION OF THE NORMAL DISTRIBUTION OF EXPERIMENTAL DATA OBTAINED BY MILLING OF ALUMINUM ALLOYS	89
Norkhudjajev F.R., Mukhamedov A.A., Nabiyeu B.N., Khodjimukhamedova M.M., Teshaboyev Abduvakhob Marifovich	MECHANICAL CHARACTERISTICS OF POWDERED ALUMINUM BRONZE OBTAINED FROM METALLURGICAL WASTE	95
Tilabov B.K., Normurodov U.E., Guzashvili K.V., Mirzarakhimova Z.B., Abdurakhmonova M.Kh.	HARDENING HEAT TREATMENT OF WEAR-RESISTANT CARBIDE PARTS MADE BY CASTING ACCORDING TO GASIFIED MODELS	98
Catalin-Stefan Negrea, Silviu Ionut Gheorghe, Mihai Tutoveanu, Dorin Angelescu, Mircea Gabriel Burtoiu	EXPERIMENTAL METHOD FOR REDUCING OXIDE LAYER DEPOSITION ON ELECTRICAL DISCHARGE MACHINING EQUIPMENT	103
Usmanov Jonibek Turdikulovich, Pulatova Ziyoda Mahmudjonovna, Naim Nodira Abduljalolovna, Kushmanova Makhbuba Abdunabiyevna, Alimova Fotima Muratovna	DEVELOPING A MODEL FOR COMPREHENSIVE AND SIMILARITY ANALYSIS OF SYSTEMS	107
Alina Rodica Spanu, Daniel Besnea	ANALYSIS OF THE NETWORK CELL DEFORMATION USED FOR THE SUSPENSION OF LOWER LIMB PROSTHESIS	115
Jakhongir Begatov, Sobirov Bekzodbek Ahmadjonovich, Makhmuda Yakubova, Dilnoza Kuchkarova, Malika Djalilova	THE PROPERTIES OF HIGH-SPEED STEEL P6M5, DEPENDING ON THE COMBINED CHEMICAL HEAT TREATMENT	119

Allanazarov A.A.	METHOD OF PERFORMING THERMOPHYSICAL CALCULATION OF A PLASMA CHEMICAL REACTOR OF A NEW TYPE	123
Emil-Ionut Nita, Edgar Moraru, Coanda Philip, Mircea Udrea	EXPERIMENTAL SETUP FOR STATIC CHARACTERIZATION OF STACK-TYPE PIEZOELECTRIC ACTUATORS	131
Gheorghe Silviu Ionut, Negrea Catalin Stefan, Angelescu Dorin, Tutoveanu Mihai, Cumpata Andreea Mirela	THE PROBLEMS OF INDUSTRIAL 3D ABS AND PLA PRINTERS IN CERMISO CENTER	137
Jianying Li, Minsheng Yang, Lijuan Huang	TILT ANGLE DETECTION AND CORRECTION OF LICENSE PLATE BASED ON CONVOLUTIONAL NEURAL NETWORK	141
Simona Istrițeanu, Valentina Băjenaru, Diana-Mura Badea	ASPECTS REGARDING ECO-INNOVATION PRACTICE AND TRENDS FOR A SUSTAINABLE AUTOMOTIVE INDUSTRY	152
Valentina Băjenaru, Simona Istrițeanu, Adriana Angelescu	APPLICATIONS IN MEDICAL RECOVERY USING THE CRYO-SOUND MECHATRONIC SYSTEM	157
Xinning Liu, Chengsi Li	DESIGN OF THE MANIPULATOR SYSTEM FOR AUTOMATIC DETECTION LINE OF MECHATRONIC STRAIGHT SIDE PRESS	163
Chengsi Li, Xinning Liu	DESIGN OF ELECTRONIC DRIVE CONTROL SYSTEM OF THE HYDRAULIC JOINTS OF THE MANIPULATOR	174
Gheorghe Silviu Ionut, Negrea Catalin-Stefan, Angelescu Dorin, Tutoveanu Mihai, Istrițeanu Dan	STAND FOR TESTING THE SATELLITES MOTION, IN LABORATORY CONDITIONS	184
Huaqin Wu	AUTOMATIC DESIGN OF SINGLE-STAGE SOLAR PHOTOVOLTAIC GRID-CONNECTED INVERTER SYSTEM	189
Wuneng Liu, Lilong Liu, Changbing Luo, Bin Li	ONTOLOGY DESIGN AND DEVELOPMENT OF TRANSMISSION LINE IN INSPECTION ROBOT	199
Iulian Sorin Munteanu, Liviu Marian Ungureanu, Ioan Străinescu, Andreea Stanciu	ANALYSIS OF THE EVOLUTION AND PROSPECTS OF INTRODUCING ROBOTS AND ARTIFICIAL INTELLIGENCE IN THE ACTIVITIES OF THE MODERN COMPETITIVE SOCIETY	210

Fugui Wu	MODELLING OF THE FEED SYSTEM IN NUMERICAL CONTROL MACHINE TOOL USING PID CONTROL	216
Hui Liu, Yong Li	APPLICATION OF AVR POWER AUTOMATIC SINGLE-CHIP MICROCOMPUTER TO THE ELECTROMECHANICAL MEASUREMENT AND CONTROL SYSTEM	227
Jie Yue, Changming Dai, Jianglong Fu	ANALYSIS OF WAVELET NEURAL NETWORK ALGORITHM IN INVERTER FAULT DIAGNOSIS	235
Paul-Nicolae Ancuța, Anghel Constantin, Iulian-Sorin Munteanu, Valentin Gornoavă	STUDY ON IMPROVING THE MEASUREMENT ACCURACY BY TOUCH PROBE WITH A COBOTIC MULTI-APPLICATION PLATFORM	243
Nan Li	PARAMETER OPTIMIZATION OF THE FORGING AND FORMING PROCESS USING PARTICLE SWARM OPTIMIZATION	249
Iulian Ilie, Mihaiță Nicolae Ardeleanu, Vasile Adrian Soare	MEMS MEASUREMENT USING A PLASTIC AND METAL ARM INTEGRATED INTO A MECHATRONIC SYSTEM	259
Chenhua Wu	SIMULATION EXPERIMENT OF HEAT TRANSFER TUBES FOR ELECTRONIC HEAT ABSORBER IN THERMAL POWER GENERATION SYSTEM OF POWER PLANTS	266
Kelun Yan, Tong Liu, Huixian Han	DISASSEMBLING PROCESS AND TECHNOLOGY OF AXIAL PISTON PUMP FOR REMANUFACTURING	275
Mingchun Fu, Xishan Yu, Shichao Ying	MECHANICAL PROPERTIES TESTING OF CARBON FIBER REINFORCED COMPOSITES	286
Yevgen Tsegelnyk, Volodymyr Kombarov, Sergiy Plankovskyy, Yevhen Aksonov, Vladyslav Pliuhin, Oleksandr Aksonov	INVESTIGATION OF THE PORTAL-TYPE MACHINE TOOL GEAR-BELT GEARBOX	295
Costin Alexandru Ciobanu, Andreea Dana Alionte, Liviu Marian Ungureanu, Cristian Gabriel Alionte, Munteanu Iulian Sorin	SIMULATION AND OPTIMIZATION OF THE TRAJECTORY FOR HEXAPOD MINI-ROBOT HEXI	303