

CONTENTS

MATERIAL PROCESSING IN MECHANICAL ENGINEERING

Bernatskyi A.V., Yurchenko Yu.V., Siora O.V., Sokolovskyi M.V., Siora I.V.

STUDY OF THE EFFECT OF LASER RADIATION ON GLASS-CONTAINING COMPOSITE MATERIALS.....1

AIRCRAFT AND AEROSPACE TECHNIQUES

Stratonov V.M., Yurchenko D.S.

ANALYSIS OF THE SECURITY STATE OF CIVIL AVIATION: RISKS OF RECRUITMENT AND BRIBERY OF AVIATION SECURITY SERVICE EMPLOYEES9

ELECTRICAL ENGINEERING

Bilevska O.S.

FLEXIBLE PRINTED BOARDS. ANALYSIS OF CURRENT OPPORTUNITIES.....15

Haryst A.V.

AUTOMATION ASSEMBLY TECHNOLOGY PRINTED CIRCUIT BOARDS.....20

EQUIPMENT

Prokopchenko S.V.

PRACTICAL EVALUATION OF THE INTERCALIBRATION INTERVAL OF THE TEST EQUIPMENT.....25

RADIO ENGINEERING AND TELECOMMUNICATIONS

Zagreba A.Ya., Lebedev D.Yu.

IMPLEMENTATION OF A SOFTWARE APPLICATION FOR ASSESSING AUDITORY PERCEPTION IN USERS.....31

Katin P.Yu. Mishyn O.V.

METHODOLOGY FOR SIMPLIFYING THE ANALYTICAL CALCULATION OF THE SPECTRUM OF COMPLEX PULSE SIGNALS IN RADIO CONTROL SYSTEMS.....38

Madinov M.L.

STUDY OF NONLINEAR EFFECTS OF THE PROPAGATION OF SOLITONS IN FIBER-OPTIC TRANSMISSION SYSTEMS.....45

Maruniak S.T.

ENHANCING INFORMATION SECURITY IN DYNAMIC ROUTING PROTOCOLS WITH THE HELP OF MACHINE LEARNING USING A NAIVE BAYES CLASSIFIER.....51

Mustafaiev O.V.

MODERN TECHNOLOGIES OF PROTECTION AGAINST GPS SPOOFING IN NAVIGATION SYSTEMS.....58

Sokolov K.A., Zhuk S.Ya.

ADAPTIVE CORRELATION ALGORITHM FOR TRACKING SMALL UAVS.....62

Sushyn I.O., Lysenko O.I.

EVALUATION OF METHOD EFFECTIVENESS FOR MAINTAINING CONNECTIVITY IN A MOBILE NETWORK WITH DIRECTED ACTION SENSORS USING TELECOMMUNICATION AERIAL PLATFORMS AT DIFFERENT LOCATION LEVELS.....71

Shevtsov K.O., Zhivkov O.P.

RECTANGULAR MICROSTRIP RESONATORS AS A RECTENNA ELEMENT AND THEIR METAMATERIAL PROPERTIES.....79

INFORMATICS, COMPUTER ENGINEERING AND AUTOMATION

Bohdan H.A., Hlushchenko M.O.

CURRENT STATUS AND FUTURE PROSPECTS OF GAS SENSORS.....85

Volk M.O., Buhrii A.M., Kovtun Ye.I., Brestovytskyi R.M., Sorobey B.V., Lobach Ya.V. MODELS OPTIMIZATION OF RESOURCES IN CLOUD COMPUTING: A HYBRID APPROACH TO AUTOMATION OF OPERATIONS AND ENERGY SAVING.....	91
Voloshyn V.S., Opanasiuk M.Yu. INNOVATIVE APPROACHES TO THE DEVELOPMENT OF THE SERVER PART OF THE HOUSEHOLD BUDGET CONTROL WEB APPLICATION USING EXPRESS.....	97
Herashchenko O.O., Novikov P.V. AUTOMATION OF CLEAN ROOM VENTILATION SYSTEM USING MACHINE LEARNING METHODS.....	102
Golovko I.G., Savenko O.S., Medzaty D.M., Ivanchenko O.V. ADVANCED TECHNIQUES IN OF SOFTWARE CODE OBFUSCATION USING ARTIFICIAL INTELLIGENCE.....	115
Denysiuk D.O., Savenko B.O., Kashtalian A.S., Ivanchenko O.V. METHOD FOR DETECTING MALICIOUS SOFTWARE BASED ON SYSTEM BEHAVIORAL PATTERN ANALYSIS.....	124
Dereza A.Yu. PRACTICAL TRAINING AND INTERNSHIPS FOR STUDENTS IN IT COMPANIES: MODELS OF INTERACTION BETWEEN UNIVERSITIES AND INDUSTRY.....	130
Zavgorodnii V.V., Zavgorodnya A.A., Vasiliev S.V., Prusov V.O. DEVELOPMENT OF A METHODOLOGY FOR USER ANONYMITY AND ANTI-TRACKING ONLINE.....	137
Zozulia V.A., Osadchii S.I. ALGORITHMS FOR REDUCING A SINGLE-LOOP MULTIDIMENSIONAL TRACKING CONTROL SYSTEM TO EQUIVALENT STABILIZATION SYSTEMS.....	143
Ivanyshyn V.V., Moshensky A.O. THE CONCEPT OF AN AUTOMATED APIARY MONITORING SYSTEM BASED ON LORA TECHNOLOGY USING REAL-TIME SENSORS.....	149
Karpenko M.I., Chumachenko S.M., Moshenskyi A.O., Guida O.H. ARGUMENTATION OF THE EFFICIENCY OF ALTERNATIVE MONITORING MEANS USING MESHTASTIC AND APRS.....	154
Korolenko Ya.R., Pavlovska Yu.O. SIMULATION OF THE MOVEMENT OF A WALKING ROBOT WITH A DAMAGED LIMB IN MATLAB.....	161
Lysenko O.I., Tachynyna O.M., Ponomarenko S.O., Furtat O.V., Hetman O.V., Podobyyed V.V. METHODOLOGY FOR THE SYNTHESIS OF A REGULAR CONDITION MONITOR FOR DIGITAL REGULATORS OF THE ELECTRIC DRIVES OF THE MAIN ROTORS OF SMALL CIVIL AVIATION.....	170
Lysyuk H.P. SYNTHESIS OF THE HEAT LOAD CONTROL SYSTEM OF THE DRUM BOILER IN THE COMBUSTION OF SOLID DOMESTIC WASTE.....	178
Marynych I.A., Makohonov A.V. DETECTION OF UAVS USING MACHINE VISION TECHNOLOGIES.....	188
Melnichenko D.V., Vakaliuk T.A., Farrakhov O.V., Kot N.S. ANALYSIS OF THE TOOLS FOR IMPLEMENTING A WEB APPLICATION FOR WORKING TIME MANAGEMENT.....	197
Movchan K.O. MODERN DRONE NAVIGATION STRATEGIES IN GPS-DENIED ENVIRONMENTS.....	203
Nazarova S.O., Nazarov D.L. TECHNOLOGY FOR DEVELOPING SOFTWARE TOOLS FOR MANAGING REMOTE WORK ACTIVITIES EXECUTORS OF IT PROJECTS.....	211
Nechyporenko V.A. UAV CONTROL METHODS USING COMPUTER VISION.....	217

Novak D.S., Oleshchenko L.M., Vasylenko V.M., Guida O.H., Ometsynska N.V. DEVELOPMENT OF SOFTWARE FOR CREDIT CARD CHARACTER RECOGNITION IN PYTHON.....	226
Palonyi A.S., Nechypurenko A.G. MODELLING THE DYNAMICS OF OCCUPATIONAL STRESS IN AIR TRAFFIC CONTROL.....	231
Panaskin D.V. APPLICATION OF CVAE AUGMENTATION METHODS TO IMPROVE LEARNING OF NEURAL NETWORKS IN LUNG SOUND ANALYSIS.....	240
Patsora A.A. ANALYSIS OF PROSPECTIVE WAYS OF INVOLVING BLOCKCHAIN AND WEB 3.0 IN EDUCATIONAL PROCESSES.....	246
Povkhan I.F., Saroz V.Ia., Leheza A.V. A MODIFIED METHOD OF THE SECOND-TYPE ALGORITHM TREE IN CLASSIFICATION TASKS.....	254
Prokofiev I.G., Savenko O.S., Medzatiy D.M. METHOD OF STATISTICAL ANALYSIS OF SOFTWARE CODE USING COMPLEX PARAMETERS.....	262
Samofalov A.V., Tereikovskiy I.A. CONCEPTUAL MODEL OF THE FORMATION OF WEB-ORIENTED DATABASES OF EMOTIONALLY COLORED VOICE SIGNALS.....	270
Selotkin V.O., Voloshchuk V.A. AUTOMATED OPTICAL INSPECTION SYSTEM OF PRINTED CIRCUIT BOARDS. TECHNOLOGY OVERVIEW.....	275
Skulysh M.A., Dmytrenko O.A. A METHOD OF ORGANISATION OF MICROSERVICES ON KUBERNETES SERVER GROUPS.....	291
Slabinoha M.O., Boichuk T.V. AUTOMATED SYSTEM OF COMPUTER HARDWARE ASSETS MANAGEMENT AS A PART OF COMPLEX UNIVERSITY INFORMATION SYSTEM.....	298
Stopkin A.V. ALGORITHM FOR EXPLORATION OF A SIMPLE UNDIRECTED GRAPH BY A COLLECTIVE OF AGENTS.....	303
Tarasenko M.M., Nykolaychuk M.Ya. DEVELOPMENT AND TESTING OF REMOTE NOTIFICATION ALGORITHMS OF OPERATORS OF GAS DISTRIBUTION STATIONS WITH EMERGENCY ALARM FUNCTIONS BASED ON GSM-COMMUNICATION.....	310
Turchyn O.B. PREDICTING THE EFFICIENCY OF PUMPJACKS BASED ON RFID DATA AND MACHINE LEARNING METHODS.....	321
Fokin A.I. METHODS AND MODELS OF IDENTIFICATION OF RENEWABLE ENERGY MODELS.....	328
Cherniak I.O. RESEARCH OF DISTILBERT MODEL OPPORTUNITIES FOR FURTHER USE IN THE SYSTEM OF AUTOMATION OF ELECTRONIC DOCUMENTATION.....	337
Shevtsov I.O. HYBRID COMPUTING MODELS (FOG AND EDGE) FOR OPTIMIZING REMOTE MONITORING OF CHRONIC DISEASES.....	343
 CHEMICAL TECHNOLOGY	
Ivanchenko A.V., Voronov V.V. ADSORPTIVE REMOVAL OF PHOSPHATES AND SURFACTANTS FROM LIQUID WASTE BY CHEMICALLY MODIFIED ZEOLITE.....	354
INFORMATION ABOUT AUTHORS.....	360