## SATURS CONTENTS

## Information Technologies

Aigars Andersons, Rafail Prodani, Jozef Bushati, Gjulio Zefi PHYSICAL ACTIVITY RECOVERY MODEL IN POST COVID-19 PERIOD: LATVIA CASE STUDY	17
<b>Miglena Angelova</b> PROS AND CONS OF USING ALGORITHMIC MANAGEMENT IN HUMAN RESOURCE	22
Ilmars Apeinans, Marks Sondors, Lienīte Litavniece, Sergejs Kodors, Imants Zarembo, Daina Feldmane	
CHERRY FRUITLET DETECTION USING YOLOV5 OR YOLOV8?	29
Ilmars Apeinans, Valdis Tārauds, Lienīte Litavniece, Sergejs Kodors, Imants Zarembo ANT DETECTION USING YOLOV8: EVALUATION OF DATASET TRANSFER IMPACT	34
Ilmars Apeināns OPTIMAL SIZE OF AGRICULTURAL DATASET FOR YOLOV8 TRAINING	38
Milka Asenova	
INCOLAB INFORMATION SYSTEM FOR BETTER MANAGEMENT OF ECOSYSTEMS IN THE TRANSBOUNDARY REGION OF THE DANUBE RIVER	43
Fayzi Bekkamov, Yashin Sharifov EXTENDED USER PROFILING APPROACHES FOR RECOMMENDATION SYSTEMS	49
Angela Rumenova Borisova NETWORK ATTACK RECOGNITION USING FUZZY LOGIC	55
<b>Galina Chipriyanova, Mihail Chipriyanov, Kiril Luchkov</b> INVESTIGATION AND ANALYSIS OF ATTITUDES TOWARDS THE IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN INTERNAL BUSINESS PROCESSES	61
<b>Akvelina Čuladytė, Aleksandra Batuchina</b> ANALYSIS OF VIRTUAL TOURISM OPPORTUNITIES IN KLAIPĖDA, LITHUANIA	68
<b>Maryna Davydiuk, Oksana Fushtei, Anna Khilya, Irina Sarancha</b> THE IMPACT OF ONLINE SOCIAL COMMUNICATION ON THE TRAINING OF SOCIAL WORKERS AND EDUCATORS (UKRAINIAN UNIVERSITIES)	74
<b>Dimitar Dimitrov, Ivan Manchev</b> METHODOLOGICAL AND TECHNICAL ASPECTS OF MODELS FOR DIGITAL MANAGEMENT OF TRANSPORT SYSTEMS	79
<b>Dimitar Dimitrov, Krassimir Lalov</b> INTELLIGENT RAIL TRANSPORT MANAGEMENT SYSTEMS - METHODOLOGICAL ESSENCE, GOALS AND TASKS	83

<b>Dimitar Dimitrov</b> DIGITIZATION AND INTELLIGENT MANAGEMENT SYSTEMS IN TRANSPORT: AN OVERVIEW OF PROBLEMS AND SOLUTIONS	89
<b>Elina Elere, Andra Ulme, Lucio De Paolis</b> ARTIFICIAL INTELLIGENCE IN ARCHITECTURE AND ART EDUCATION	97
<b>Matīss Eriņš, Zigurds Markovičs</b> CALCULATION OF HUMAN FATIGUE IN THE ENVIRONMENT OF LINGUISTIC VARIABLES	104
Ivan Gaidarski, Neda Chehlarova MANAGEMENT APPROACHES AND APPLICATION AREAS OF INFORMATION SECURITY IN ORGANIZATIONS	110
Peter Grabusts, Olegs Uzhga-Rebrov, Lasma Prizevoite, Inta Kotane DECISION TREE METHODS IN GRAIN YIELD FORECASTING	114
<b>Ekaterina Hristova, Daniel Denev, Tsvetoslav Tsankov</b> A SURVEY OF DATA QUALITY IN INDUSTRIAL NETWORKS AND ENHANCING THEIR RELIABILITY COMPLEX INDICATOR FOR THE NEEDS OF THE INDUSTRY	120
<b>Rosen Iliev, Miroslav Kochankov</b> A GENERALIZED NET MODEL OF COMMAND AND CONTROL SYSTEM	127
Anatolii Yarovyi, Andrii Yarovyi, Svitlana Kizim, Volodymyr Ozeranskyi INNOVATIVE TRENDS IN THE FIELD OF MODERN ARTIFICIAL INTELLIGENCE METHODOLOGY	132
Radoslav Yoshinov, Monka Kotseva, Anastas Madzharov, Neda Chehlarova SKILLS AND ATTITUDES TOWARDS USING AI BASED CHATBOTS	138
Ilmārs Kangro, Harijs Kalis ON SPECIAL FINITE DIFFERENCE APPROXIMATIONS FOR SOLVING SECOND ORDER DIFFERENTIAL EQUATIONS	143
Komil Kerimov, Zarina Azizova, Fayzi Bekkamov, Mekhriddin Rakhimov, Mannon Ochilov	
ENSURING INFORMATION SECURITY IN THE INTELLIGENT SCIENTIFIC AND TECHNICAL INFORMATION SYSTEMS	150
<b>Komil Kerimov, Zarina Azizova</b> METHODOLOGY OF INFORMATION SECURITY RISK ASSESSMENT OF ELECTRONIC RESOURCES UNDER UNAUTHORIZED ACCESS THREATS	155
Vitalii Kyslitsyn, Liudmyla Shevchenko, Volodymyr Umanets, Lina Sikoraka, Yaroslav Angelov	
APPLYING THE PYTHON PROGRAMMING LANGUAGE AND ARDUINO ROBOTICS KITS IN THE PROCESS OF TRAINING FUTURE TEACHERS OF COMPUTER SCIENCE	162
<b>Evija Klave, Renāte Cane</b> DIGITAL TRANSFORMATION OF HIGHER EDUCATION: INTEGRATING MULTIMEDIA SYSTEMS INTO THE STUDY PROCESS	168

<b>Miroslav Kochankov, Rosen Iliev</b> A GENERALIZED NET MODEL FOR ACCESSING INFORMATION RESOURCES IN A SECURE ENVIRONMENT	175
Sergejs Kodors, Guna Kanepe, Daniēls Zeps, Imants Zarembo, Lienīte Litavniece RAPID DEVELOPMENT OF CHATBOT FOR TOURISM PROMOTION IN LATGALE	179
<b>Tetiana Koval, Nataliia Oliinyk, Tetiana Kryvosheya, Anna Khilya</b> APPLICATION OF GAMIFICATION IN HIGHER EDUCATION: TRAINING OF EARLY CHILDHOOD AND PRIMARY EDUCATION TEACHERS IN UKRAINE	183
<b>Inga Kudeikina, Sandra Kaija</b> LIMITS OF THE USE OF ARTIFICIAL INTELLIGENCE IN LAW – ETHICAL AND LEGAL ASPECTS	188
<b>Milena Kuleva, Ognyan Miladinov</b> EXPLORING THE EFFICACY OF ONLINE PROCTORING IN ONLINE EXAMINATIONS: A COMPREHENSIVE REVIEW	192
<b>Milena Kuleva</b> EXPLORING THE INTEGRATION OF VIRTUAL REALITY IN PHYSICAL EDUCATION: A COMPREHENSIVE REVIEW	197
<b>Dmytro Mamchur, Janis Peksa</b> AN IMPLEMENTATION OF BRAIN-COMPUTER INTERFACE IN RESEARCH ACTIVITIES	202
Daniela Mirtcheva-Ivanova APPLICATION OF ARTIFICIAL INTELLIGENCE IN E-LEARNING	208
Mukhammadjon Musaev, Marat Rakhmatullaev, Sherbek Normatov, Kamoliddin	
<b>Shukurov, Malika Abdullaeva</b> INTEGRATED INTELLIGENT SYSTEM FOR SCIENTIFIC AND EDUCATIONAL INFORMATION RETRIEVAL	212
<b>Borislav Nikolov</b> APPROACH TO DEVELOPING A MARITIME CYBERSECURITY VIRTUAL TRAINING ENVIRONMENT	220
<b>Oļegs Ņikadimovs, Velga Vēvere</b> THE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION: UNIVERSITY SOCIAL RESPONSIBILITY AND STAKEHOLDERS' PERCEPTIONS	226
<b>Stanimir Parvanov</b> RESEARCH OF DIFFERENT TURBO CODE SPEEDS, TYPES OF MODULATIONS, DECODING METHODS AND THEIR COMPATIBILITY WITH ENCRYPTION TECHNIQUES	232
<b>Pavel Petrov, Vassil Milev</b> ANALYSIS AND APPLICATION OF CRM SYSTEMS IN THE FIELD OF EDUCATION	237
<b>Irena Petrova</b> APPLIED METHODOLOGICAL ESSENCE OF PROJECT MANAGEMENT IN TRANSPORT THROUGH ARTIFICIAL INTELLIGENCE	242

<b>Milen Simeonov, Marin Marinov</b> DETERMINE THE LOCATION OF NODES IN WIRELESS SENSOR NETWORK BY USING GENETIC ALGORITHM	247
Svetlana Syarova, Stefka Toleva - Stoimenova, Alexander Kirkov, Samuel Petkov, Krasimir Traykov DATA LEAKAGE PREVENTION AND DETECTION IN DIGITAL CONFIGURATIONS: A SURVEY	253
<b>Krasimir Slavyanov, Radostin Dimov</b> APPLICATION OF FUZZY LOGIC IN CYBERSECURITY DECISION MAKING AND ANALYSIS AFTER A CYBER INCIDENT DETECTION	259
<b>Krasimir Slavyanov</b> FUZZY INFERENCE SYSTEM FOR INVESTMENT VALUE ASSESSMENT BASED ON HISTORICAL DATA	264
<b>Krasimir Slavyanov</b> ONE APPROACH FOR APPLICATION OF GEOGRAPHIC INFORMATION SYSTEMS AND FUZZY LOGIC IN BUSINESS DECISION-MAKING	268
Andrejs Snipkis, Guna Semjonova, Daina Smite USABILITY AND UTILITY OF THE SNIPTOUCH INNOVATIVE AGILITY TRAINING DEVICE PROTOTYPE IN PATIENTS WITH UPPER EXTREMITY IMPAIRMENTS AFTER STROKE: A MULTIPLE CASE STUDY	273
<b>Diyora Talipova, Barno Ganiyeva, Sherbek Normatov, Marat Rakhmatullaev</b> A METHOD FOR DETERMINING AND EVALUATING WEBOMETRIC INDICATORS OF PUBLIC LIBRARIES	281
<b>Ivan Trenchev, Tereza Trencheva, Vladimir Angelov, Yordan Spirov, Yana Karshiyska, Kamelia Shumanova</b> INTEGRATING MIXED REALITY WITH NEURAL NETWORKS FOR ADVANCED MOLECULAR VISUALIZATION IN BIOINFORMATICS: A MATHEMATICAL FRAMEWORK FOR DRUG DISCOVERY	286
<b>Tsvetoslav Tsankov, Liliya Staneva, Ivelina Vardev, Dimitar Iliev</b> APPLICATION OF A GENERALIZED NET MODEL IN THE COMMUNICATION OF TWO INDEPENDENT TRAFFIC IN FACULTY OF TECHNICAL SCIENCES AT KONSTANTIN PRESLAVSKI UNIVERSITY OF SHUMEN	293
<b>Olegs Uzhga-Rebrov, Peter Grabusts</b> REVIEW OF METHODS FOR CLASSIFYING AND ASSESSING INFORMATION UNCERTAINTY	297
<b>Velga Vevere, Kamaldeep Singh, Iveta Linina</b> FRAMEWORK FOR ENHANCING CUSTOMER LOYALTY OF TELECOMMUNICATION COMPANIES IN INDIA: A CASE OF RELIANCE JIO INFOCOMM LTD	303
<b>Olga Vindaca, Anda Abolina, Liga Danilane</b> TRANSFORMING HIGHER EDUCATION IN THE ERA OF ARTIFICIAL INTELLIGENCE CHAT TOOLS: CASE STUDY	310

## **Education in Engineering Sciences**

317

<b>Sergey Arakelov, Barno Ganieva</b> INFORMATION AND LIBRARY EDUCATION IN THE CONTEXT OF DIGITALIZATION OF SOCIETY: PROMISING TRENDS AND REQUIREMENTS	325
<b>Nataliia Aristova, Oleksandr Malykhin, Liudmyla Dybkova</b> TRANSVERSAL SKILLS THAT MATTER TO COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY UNDERGRADUATES AND STRATEGIES FOR THEIR DEVELOPMENT IN ENGLISH CLASSROOM	332
<b>Olha Chaikovska, Olha Stoliarenko, Nataliia Hlushkovetska, Iryna Semenyshena</b> ENHANCING STUDENTS' LISTENING COMPREHENSION SKILLS THROUGH AI- BASED PODCAST ACTIVITIES: A STUDY IN SELF-STUDY MODE	336
Franz Tito Coronel-Zubiate, Carlos Alberto Farje-Gallardo, Edward Enrique Rojas de	
la Puente ENVIRONMENTAL IMPACT OF WASTE IN DENTAL CARE: EDUCATIONAL STRATEGIES TO PROMOTE ENVIRONMENTAL SUSTAINABILITY	340
<b>Gergana Dimcheva, Ivaylo Stoyanov</b> MODERN PERSPECTIVES IN BULGARIAN ENGINEERING EDUCATION THROUGH THE PRISM OF EXPERTS FROM THE IT SECTOR (EMPIRICAL STUDY)	345
<b>Vihra Dimitrova, Nikolay Nikolov, Todor Gospodinov</b> EDUCATION IN THE ERA OF SMART CITIES: TRANSFORMATION AND OPPORTUNITIES	352
Natalia Dmitrenko, Iryna Shkola, Bohdana Saliuk, Violetta Panchenko, Svitlana	
<b>Neshko</b> CANVA PLATFORM: VISUAL CONTENT FOR DEVELOPING WRITING SKILLS OF PROSPECTIVE ENGINEERS IN ESP CLASSES	358
Georgi Dobrev, Nikolay Paunkov, Radoslava Terzieva, Misho Matsankov, Iva	
Naydenova, Dilyana Budakova ALGORITHM FOR DETERMINING PHOTORESIST CHARACTERISTICS	364
<b>Mirosław Grewiński, Marek Kawa</b> THE IMPACT OF TECHNOLOGY ON CHANGES IN LABOR MARKETS AND COMPETENCES	371
<b>Svetlana Gribanova</b> WHAT MOTIVATES THE CREATIVITY OF GENERATION Z EMPLOYEES? THE INFLUENCE OF EXTRINSIC AND INCRISTIC MOTIVATING FACTORS ON THE EXAMPLE OF IT SPECIALISTS FROM EU COUNTRIES	380
<b>Bonka Karaivanova- Dolchinkova</b> ANALYSIS OF GOOD PRACTICES IN STEM EDUCATION IN THE SCHOOLS OF THE VELIKO TARNOVO REGION IN THE SECOND YEAR OF THE NATIONAL PROGRAM	387

onka Encheva Karaivanova-Dolchinkova, Penka Kozhuharova ONITORING AND ANALYSIS OF THE ACHIEVED RESULTS OF USING THE FEM OFFICES IN VELIKO TARNOVO REGION AFTER THE LAUNCH OF THE	
NATIONAL PROGRAM	393
<b>Vanya Katsarska</b> SYNERGY OF COMPETENCES IN AERONAUTICAL ENGLISH EDUCATION	399
<b>Anna Khilya, Halyna Kukharchuk, Yuliia Sabadosh, Alona Korol</b> PRINCIPLES OF CREATING AND DESIGNING VIDEO CONTENT FOR ASYNCHRONOUS LEARNING	405
<b>Anna Khilya, Olena Kolosova, Tatyana Kronivets, Iryna Sarancha</b> FEATURES OF SYNCHRONOUS AND ASYNCHRONOUS E-LEARNING ON THE EXAMPLE OF TEACHING THE EUROPEAN EXPERIENCE OF SOCIAL INCLUSION	410
Eivin Laukhammer, Eugenijus Mačerauskas, Andzej Lučun, Antoni Kozič, Romanas	
<b>Tumasonis</b> APPLICATION OF AI-ENHANCED IMAGE PROCESSING METHODS FOR EDUCATIONAL APPLIED PHYSICS EXPERIMENTS	417
<b>Oleksandr Malykhin, Nataliia Aristova, Liudmyla Dybkova</b> TITLE ORGANISING PERSONALISED LEARNING IN THE ENGLISH LANGUAGE CLASSROOM: COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY UNDERGRADUATES PERSPECTIVES	424
Oleksandr Malykhin, Nataliia Aristova, Maryna Vyshnevska, Kseniia Kugai, Inna Makhovych EXPLORING COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY UNDERGRADUATES' VIEWS ON DEVELOPING THEIR INNOVATIVE THINKING IN ENGLISH CLASSROOM	428
<b>Marin Jordanov Marinov</b> SYNTHESIS OF EIGHT MIDDLE LOST MECHANISMS FINALLY DISCHARGED DISCREET POSITIONS	435
<b>Marin Jordanov Marinov</b> VECTOR-MATRIX COMPUTER METHOD FOR DRAFTING CIRCLING-POINT CURVES AND CENTERING-POINT CURVES OF BURMESTER	440
Jūlija Mironova, Viktoriia Riashchenko, Remigijus Kinderis, Valentina Djakona,	
<b>Sevdalina Ilieva Dimitrova</b> ETHICAL CONCERNS IN USING OF GENERATIVE TOOLS IN HIGHER EDUCATION: CROSS - COUNTRY STUDY	444
<b>Daniela Mirtcheva-Ivanova</b> APPLICATION OF ELECTRONIC PLATFORMS TO INCREASE THE KNOWLEDGE OF LEARNERS	448
<b>Tatyana Odintsova</b> ESG COMPETENCES AND SKILLS IN LIFELONG EDUCATION FOR SUSTAINABILITY	453

<b>Nargiza Pazilova</b> PROBLEMS AND SOLUTIONS TO IMPROVE THE EFFICIENCY OF USING ELECTRONIC INFORMATION RESOURCES AT UNIVERSITIES IN UZBEKISTAN	460
<b>Todor Rachovski, Desislava Petrova, Ivan Ivanov</b> AUTOMATED CREATION OF EDUCATIONAL QUESTIONS: ANALYSIS OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES AND THEIR ROLE IN EDUCATION	465
Ausra Repeckiene, Renata Zvireliene, Karolina Janickiene DEVELOPING MANAGERS' INTERCULTURAL COMPETENCE IN SMALL MANUFACTURING ENTERPRISES	468
Nataliia Saienko, Olena Ilienko, Tetiana Solodovnyk, Anastasiia Ptushka, Zhanna Bogdan THE EXPERIENCE OF DEVELOPING SOCIAL RESPONSIBILITY IN THE NEXT GENERATION OF ENGINEERS AT UKRAINIAN UNIVERSITIES	474
<b>Oleksandra Shykyrynska, Valentyna Liapunova, Olha Melnykova, Kateryna Mnyshenko, Tetiana Petryshyna</b> READINESS OF THE FUTURE PRESCHOOL AND PRIMARY EDUCATION SPECIALISTS TO FORM THE FOUNDATIONS OF CHILDREN'S CYBER SECURITY	481
Iryna Shymkova, Svitlana Tsvilyk, Oksana Marushchak, Vitalii Hlukhaniuk, Volodymyr Harkushevskyi APPLICATION OF UPCYCLING TECHNOLOGY IN THE PROJECT ACTIVITY OF FUTURE TEACHERS OF LABOR EDUCATION AND TECHNOLOGY	485
Nataliia Sorokolit, Olha Rymar, Ivanna Bodnar, Olena Khanikiants, Alla Solovey MULTIMEDIA TECHNOLOGIES AS TOOLS FOR FOSTERING DIGITAL LITERACY IN EDUCATION	493
<b>Eugenija Strazdiene, Aiste Laiskonyte</b> THE APPLICATION OF PROCESS SIMULATION SOFTWARE FLEXSIM IN TEXTILE STUDY PROGRAM	499
<b>Tetiana Vasiutina, Liudmyla Ishchenko, Halyna Kit, Yulia Bondar, Anna Khilya</b> ALGORITHM FOR IMPLEMENTING QUEST TECHNOLOGIES IN RESEARCH WORK WITH PRESCHOOL AND PRIMARY SCHOOL CHILDREN	503
<b>Maya Vatzkitcheva, Plamen Savov</b> ATMOSPHERE MONITORING SYSTEM FOR PRACTICAL TRAINING OF STUDENTS PURSUING DEGREES IN ENVIRONMENTAL SCIENCES	508
Vanda Vyshkivska, Yuliia Sylenko, Oksana Golikova, Tetiana Tsehelnyk, Oksana	
<b>Patlaichuk</b> ANALYSIS OF THE EXPERIENCE AND PROSPECTS OF THE IMPLEMENTATION OF THE MOODLE PLATFORM FOR THE ORGANIZATION OF DISTANCE LEARNING IN UKRAINIAN UNIVERSITIES	512
<b>Valentina Voinohovska, Julia Doncheva</b> ENHANCING STUDENTS' CODING SKILLS WITH BLOOM'S TAXONOMY AND THE COMPETENCE APPROACH THROUGH EDUCATIONAL GAME DESIGN	519

**Oksana Voloshyna, Tetiana Melnychuk, Mykyta Sapohov, Nelia Burlaka, Anna Khilya** THE POTENTIAL OF DEVELOPING AND CREATING ONLINE APPLICATIONS FOR TEACHER TRAINING

525