1. Record Nr. UNINA9910878054903321

Autore	Karabegovic Isak
Titolo	New Technologies, Development and Application VII : Advanced Production Processes and Intelligent Sytems, Volume 2 / / edited by Isak Karabegovic, Ahmed Kovaevi, Sadko Mandzuka
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	9783031662713 9783031662706
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (714 pages)
Collana	Lecture Notes in Networks and Systems, , 2367-3389 ; ; 1070
Altri autori (Persone)	KovacevicAhmed MandzukaSadko
Disciplina	006.3
Soggetti	Computational intelligence Engineering mathematics Engineering - Data processing Computational Intelligence Mathematical and Computational Engineering Applications
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Interdisciplinary Research of New Technologies, Their Development and Application Focusing on Advanced Production Processes and Intelligent Systems -- Contents -- Automation, Advanced Control, Digital Technologies and Intelligent Transport in Production Processes -- Towards a Greener Future: Sensor-Based Material Characterization in Waste Sorting for a Sustainable Recycling Model -- 1 Introduction -- 2 Waste Sorting Systems -- 3 FPGA Based Waste Sorting System -- 4 Experimental Evaluation -- 5 Conclusion -- References -- Optimized Digital Twin Networks -- 1 Introduction -- 2 Preliminary Remarks -- 3 Digital Twin -- 4 Knowledge Graph Logistic Networks -- 5 Conclusion -- References -- Application, Challenges and the Future of NFT Technology -- 1 Introduction -- 2 Basics of NFT Technology -- 2.1 Explanation of the Term Non-fungible Token (NFT)? -- 2.2 Price (Monetary Value) of the NFT Creation -- 2.3 Minting -- 3 Advantages of Owning NFT Creations and Applications of NFT Technology -- 4 Examples of Application of NFT Technology -- 5

Conclusion -- References -- Improving Passband in Cosine-Based CIC Decimation Filter with Improved Worst-Case Aliasing Attenuation -- 1 Introduction -- 2 Compensator Design -- 2.1 Design with Multipliers -- 2.2 Multiplierless Design -- 3 Comparisons -- 3.1 Comparison with Method in [10] -- 3.2 Comparison with Method in [5] -- 4 Conclusion -- References -- Predicting Households' Short-Term Power Consumption Utilizing LSTM -- 1 Introduction -- 2 Materials and Methods -- 2.1 Short-Term Power Consumption Prediction -- 2.2 Household Power Consumption Dataset -- 3 Experiments and Results -- 3.1 Experimental Setup -- 3.2 Results -- 4 Conclusion -- References -- The Impact of Digital Transformation to the Criminal Law Assets -- 1 Introduction -- 2 Artificial Intelligence and Automated Decisions in Criminal Justice.
3 Conclusions -- References -- Flexible and Transportable Illumination Control System for Machine Vision Applications -- 1 Introduction -- 2 Hardware Implementation -- 2.1 Module for Manual Control of Light Sources -- 2.2 Module for Automatic (Remote) Control of Light Sources -- 3 Software Implementation -- 4 Application Example -- 5 Conclusion -- References -- Promising AI Applications in Power Systems: Explainable AI (XAI), Transformers, LLMs -- 1 Introduction -- 2 Power System Challenges -- 3 State of AI in the Power Systems -- 3.1 Forecasting -- 3.2 Optimal Control -- 3.3 Challenges and Non-technical Aspects -- 4 Promising AI Applications -- 4.1 Decision Support -- 4.2 Explainable Artificial Intelligence (XAI) -- 4.3 Attention, Transformers and LLMs -- 5 Conclusion -- References -- Developing E-mail Classification Model Using Sentiment Analysis to Improve Customer Support -- 1 Introduction -- 2 Related Research -- 3 Experimental Results -- 4 Conclusion -- References -- Statistical Modeling of Ransomware Attacks Trends -- 1 Introduction -- 2 Data and Methodology -- 3 Results and Discussion -- 4 Conclusion -- References -- Integrated It Systems for the Management of Activities Related to Border Control at the Schengen Space -- 1 Introduction -- 2 The Role of the Schengen it System Within the Schengen Area -- 3 Integrated Information Systems for Management Activities at the Borders of the Schengen Area -- 3.1 Unified Communication System Platform -- 4 Conclusions -- References -- The Impact of SMES Integration on the Power Grid: Current Topologies and Nonlinear Control Strategies -- 1 Introduction -- 2 Configurations: SMES to PG Interconnection -- 2.1 Characterization and Properties of SMES -- 2.2 Interconnection SMES to PG -- 3 Nonlinear Control Strategies -- 3.1 Sliding Mode Controller (SMC) Strategies.
3.2 Partial Feedback Linearization (PFL) Control Strategy -- 3.3 Hysteresis Controller Strategy -- 3.4 Robust Controllers (RC) Strategy -- 3.5 Predictive Controllers (P-C) Strategy -- 4 Applications of SMES-PG Interconnection -- 5 Future Scope of the Manuscript -- 6 Conclusions -- References -- Mobile Application mDating -- 1 Introduction -- 2 About the Application -- 2.1 Web Application eDating -- 2.2 Work with the Application -- 3 Conclusion -- References -- Intelligent Traffic Safety Management on a Section of a Multi-lane Motorway -- 1 Introduction -- 2 Traffic Safety on Multi-lane Motorway -- 3 Modelling Incident Situations on the Motorway Section -- 3.1 Model of the Test Corridor -- 3.2 Development of a Crash Simulation Model -- 4 Monitoring the Use of Mobile Devices on the Motorway -- 5 Conclusion -- References -- A Systematic Literature Review of the Urban Air Mobility Systems that Are Revolutionizing the Urban Transport -- 1 Introduction -- 2 Systematic Literature Review Methodology -- 3 Results and Discussion -- 4 Areas for Research -- 5 Summary and Conclusions -- References -- Using Smart Solutions

for Creating the Model of Urban Sustainable Mobility -- 1 Introduction -- 2 Solving the Problems of Mobility in Urban Environments -- 3 Technological Changes Applicable to the Concept of Urban Mobility -- 4 Smart Mobility -- 4.1 The Concept of Smart Cities -- 5 Effects of Implementation of Technology in the Concept of Urban Mobility -- 6 Sustainable Urban Mobility Plan (Sump) -- 7 Mobility Solutions and Initiatives in Vienna and Sarajevo -- 7.1 Mobility Solutions and Initiatives in Vienna -- 7.2 Mobility Solutions and Initiatives in Sarajevo -- 8 Conclusion -- References -- Global Electric Car Market -- 1 Introduction -- 2 Global Market for Electric Vehicles -- 3 Electric Vehicle Production in Region.
3.1 Support for the Sale of Electric Cars in the World -- 3.2 Leaders in the Production of Electric Cars -- 4 Adverage Range of Electric Vehicles between 2020 and 2030 -- 5 Conclusion -- References -- Analysis of Opportunities of Software for Optimization of Transport Routes -- 1 Introduction -- 2 The Need for the Introduction of Intelligent Systems in Transport -- 3 Working Principle and Functionality of the System -- 3.1 Dataset -- 3.2 Input Data -- 3.3 Output Data -- 4 Disadvantages of the System -- 5 Conclusion -- References -- The Possibility of Implementing the A-CDM Concept at Smaller Airports up to 2 Million Passengers -- 1 Introduction -- 2 Airport Colaborative Decision Making (A-CDM) -- 2.1 Current Situation with the Implementation of A-CDM Project Across the Europe -- 2.2 A-CDM Concept Elements -- 3 Implementation of an Airport-Cdm Project at Smaller Airports -- 3.1 Benefits of Implementing the A-CDM Concept -- 3.2 A-CDM Implementation Status at the Airports in Bosnia and Herzegovina and the A-CDM Implementation Possibilities -- 4 Conclusion -- References -- Analyzing the Factors Influencing the Performance of Railway Infrastructure Managers -- 1 Introduction -- 2 Factors Influencing the Performance of Railway Infrastructure Managers -- 3 Performance Evaluation of European Railway Infrastructure Managers Using Topsis Method -- 3.1 Literature Review -- 3.2 TOPSIS Method Application -- 4 Conclusion -- References -- A Deep Learning Approach for Traffic Flow Prediction in City of Sarajevo -- 1 Introduction -- 2 Traffic Flow Prediction in City of Sarajevo -- 2.1 Why is Important Traffic Flow Prediction in City of Sarajevo -- 2.2 Data Sources for Traffic Flow Prediction -- 2.3 The Principle of "Deep Learning" in Traffic Flow Planning -- 2.4 Algorithm for Traffic Flow Prediction -- 3 Conclusion -- References.
Technological Inheritability of Parameters of Surface Engineering of Products After Vibrational-Centrifugal Hardening -- 1 Introduction -- 2 Literature Review -- 3 Research Methodology -- 3.1 Analysis of Technological Inheritability of Properties from the Standpoint of Interrelations Between the Elements of Technical Systems: Product-Production Process -- 3.2 Development of Technological Equipment and Fixture for the Implementation of Vibration-Centrifugal Hardening Using Vibrational Machines with an Unbalanced Drive -- 3.3 Planning of Experimental Investigations -- 4 Results -- 5 Conclusion -- References -- Toward Complete Digitalisation of Postal Items Clearance in the Republic of Croatia -- 1 Introduction -- 2 Elements of Digitalisation -- 3 Conclusion -- References -- Air Traffic Flow Analysis of Sarajevo Flight Information Region -- 1 Introduction -- 2 History, Geographical Scope and Structure of BH Airspace -- 3 International Membership -- 4 Bosnia and Herzegovina Agency for Air Navigation Services -- 5 Sarajevo FIR -- 6 Traffic Analysis of Flight Information of Sarajevo FIR -- 7 Conclusion -- References -- Barriers to Smart Mobility Implementation in Urban Context -- 1 Introduction -- 2 Integrating Smart Mobility into the Smart City Concept -- 2.1

Advancing Smart Mobility with Multimodal Journey Planners (MJPs) -- 3 Technological and Urban Transport Barriers in Smart Mobility Implementation -- 4 User Experience Barriers and Opportunities in Smart Mobility Implementation -- 5 Conclusion -- References -- Using Machine Learning to Predict Additional Taxi-Out Time as a Airport Key Performance Indicator in the Eurocontrol Zone -- 1 Introduction -- 2 Related Research -- 3 Dataset -- 4 Results -- 5 Conclusion and Future Research -- References -- Intelligent Vehicle Functions in Reducing the Uncertainty of the Driver's Environment and Reducing Risk.
1 Introduction.

Sommario/riassunto

This book features papers focusing on the implementation of new and future technologies, which were presented at the International Conference on New Technologies, Development and Application—Advanced Production Processes and Intelligent Systems held at the Academy of Science and Arts of Bosnia and Herzegovina in Sarajevo on 20–22 June 2024. It covers a wide range of future technologies and technical disciplines, including complex systems such as Industry 4.0; robotics; mechatronics systems; automation; manufacturing; cyber-physical and autonomous systems; sensors; networks; control, energy, renewable energy sources; automotive and biological systems; vehicular networking and connected vehicles; and intelligent transport, effectiveness and logistics systems, smart grids, nonlinear systems, power, social and economic systems, education, and IoT. The book New Technologies, Development and Application VII is oriented toward Fourth Industrial Revolution “Industry 4.0”, which implementation will improve many aspects of human life in all segments and lead to changes in business paradigms and production models. Further, new business methods are emerging, transforming production systems, transport, delivery, and consumption, which need to be monitored and implemented by every company involved in the global market.