



# 12th World Conference "Intelligent System for Industrial Automation" (WCIS-2022) : Volume 2 /

Monografía

<https://rebiunoda.pro.baratznet.cloud:28443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMzYwMTYyNjM>

---

**Título:** 12th World Conference "Intelligent System for Industrial Automation" (WCIS-2022) Volume 2 edited by R. A. Aliev, Nodirbek Rustambekovich Yusupbekov, Janusz Kacprzyk, Witold Pedrycz, M. B. Babanli, Fahreddin M. Sadikoglu, S. M. Turabdjanov

**Edición:** 1st ed. 2024

**Editorial:** Cham Springer Nature Switzerland Imprint: Springer 2024

**Descripción física:** 1 online resource (388 pages)

**Mención de serie:** Lecture Notes in Networks and Systems 2367-3389 912

**Contenido:** Intro -- Preface -- Organization -- Contents -- Implementation of the Thematic Text Analysis Algorithm Using Machine Learning -- 1 Introduction -- 2 Methods -- 3 Results -- 4 Discussion -- 5 Conclusion -- References -- Development of a Mathematical Model of Sequential Arrangement of a Group of Wagons Along Station Tracks -- 1 Introduction -- 2 Materials and Methods -- 3 Results and Discussion -- 4 Conclusion -- References -- A Bert Model with Deep Learning Approach in Natural Language Processing (NLP) -- 1 Introduction -- 2 Methodology -- 2.1 Datasets -- 2.2 Preprocessing -- 2.3 Feature Extraction -- 2.4 Classifiers -- 3 Results -- 4 Discussions -- 5 Conclusions -- References -- Application of Outline Methods for Image Processing -- 1 Introduction -- 2 Emphasizing the Contours of Images -- 3 Conclusion -- References -- Structure of a Pragmatically-Oriented Model of an Agglutinative Natural Language Exemplified with Tatar -- 1 Introduction -- 2 Decentralized NL Model -- 3 Semiotic Models of Lexical and Grammatical Means of NLs -- 4 Software-Algorithmic Content of NL Modelling Systems -- 5 On Potential of Tatar Language Grammar for Developing Intelligent Systems -- 6 Conclusion and Plans for Future Research -- References -- Application of a Piecewise Linear Decision Tree Algorithm to Detect Phishing URLs in IoT Devices -- 1 Introduction -- 2 Basic Concepts and Methods for Phishing Attacks -- 2.1 Techniques in Phishing Attacks -- 2.2 Methods and Algorithms for Classifying Phishing URLs -- 3 Selection of Attributes for Detecting Phishing Attacks -- 4 Computational Experiments -- 5 Conclusion -- References -- The Potential of Machine Learning for Tackling Flood Disaster in Monrovia -- 1 Introduction -- 2 Methodology -- 2.1 Study Area -- 2.2 Data Type and Source -- 2.3 Cascade Forward Neural Network (CFNN) -- 2.4 Training and Testing 2.5 Model Accuracy Evaluation -- 2.6 Root Mean Square Error (RMSE) -- 2.7 Input and Output Variables -- 3 Results -- 3.1 Cascade Feedforward Neuron Networks with All Five Inputs -- 3.2 Elman Neuron Network with All Five Inputs --

3.3 Discussion -- 4 Conclusion -- References -- Wireless Charging Technology orWireless Transmission ofElectrical Energy: Theoretical andPractical Importance -- 1 Introduction -- 2 Research Methods -- 3 Research Results andDiscussion -- 4 Conclusion -- References -- Development ofanIndicator ofSocial Success ofSocial Network Users toImprove Intelligent Management Systems -- 1 Introduction -- 2 Data -- 3 Methods -- 3.1 Constructing Social Graphs toCalculate Metrics ofNetwork Users -- 3.2 Normalization ofUser Metrics Data -- 3.3 Correlation Analysis -- 4 Results -- 5 Discussion -- 6 Conclusion -- References -- Development ofanEducational Intelligent System toDetect Particles Suitable for3D-Printing -- 1 Introduction -- 2 Research Methods -- 3 Study -- 4 Implementation -- 5 Code Listing -- 6 Conclusion -- References -- Modeling andControl ofDecentralized Microgrid Based onRenewable Energy andElectric Vehicle Charging Station -- 1 Introduction -- 2 Methods -- 2.1 Mathematic Modeling -- 3 Results andDiscussion -- 4 Conclusion -- References -- Intelligent Glass Production Process Control System -- 1 Introduction -- 2 Method forImproved Control oftheGlass Melting Process -- 3 Application ofIntelligent Control System inGlass Melting Process Control -- 4 Conclusion -- References -- Digital OntoMath Ecosystem Tools forManaging andDeveloping Mathematical Knowledge -- 1 Introduction -- 2 Composition oftheOntoMath Ecosystem -- 3 Semantic Services oftheOntoMath Digital Ecosystem -- 4 Conclusion -- References -- Development andOptimization ofDigital Twin Model fortheDeethanizer Distillation Unit 1 Introduction -- 2 Description ofScientific-Technical Solution -- 3 Research Results -- 4 Conclusion -- References -- Intelligent Processing Time Characteristics oftheFlow oftheImpulse Component oftheTrain Shunt Resistance -- 1 Introduction -- 2 Material andMethods -- 3 Results andDiscussions -- 4 Conclusion -- References -- Algorithm ofGenerating One-Time Passwords forTwo-Factor Authentication ofUsers -- 1 Introduction -- 2 Main Part -- 2.1 The Proposed Two-Factor Authentication Algorithm -- 3 Conclusion -- References -- Modified Base Vector Method andAlgorithm forDetecting Spam Messages -- 1 Introduction -- 2 Main Part -- 3 Conclusion -- References -- Prediction ofMechanical Power ofNew Design ofSavonius Wind Turbine Using Various Empirical Models -- 1 Introduction -- 2 Material andMethods -- 2.1 Experimental Setup -- 2.2 Machine Learning Models (MLMs) -- 2.3 ARIMA Model -- 2.4 MLR Model -- 3 Results andDiscussion -- 3.1 Estimating theMechanical Power Using Various Empirical Models -- 3.2 Evaluation oftheModel's Performance -- 4 Conclusions -- References -- Account Transport Demand When Modeling theMatrix ofInter-District Transport Connection -- 1 Introduction -- 2 Method -- 3 Results -- 4 Discussion -- 5 Conclusion -- References -- AnEffective Probabilistic Model forClutter Signal Representation -- 1 Introduction -- 2 Proposed Statistical Model -- 2.1 Maximum Likelihood Estimation -- 3 Kolmogorov-Smirnov test (K-S) -- 3.1 Data Collection -- 4 Results -- 5 Conclusion -- References -- Security Management Methods forInfocommunication Systems -- 1 Introduction -- 2 Method -- 3 Results -- 4 Conclusion -- References -- "Turkic Morpheme": From thePortal totheLinguistic Platform -- 1 Introduction -- 2 Linguistic Platforms Review -- 3 "Turkic Morpheme" Platform Description -- 4 Conclusion -- References Verification oftheOntology ofProfessional Mathematics OntoMathPRO -- 1 Introduction -- 2 OntoMathPRO Architecture -- 3 Verification andCorrection oftheOntoMathPRO Ontology -- 3.1 Main Found Issues -- 3.2 Different Conceptualizations -- 4 Conclusion -- References -- Control ofDistorted Image Points Based ontheMechanism ofIdentification ofaMicro-object withaCosine Transform -- 1 Introduction -- 2 Main Part -- 2.1 Methods forOptimizing theIdentification ofMicro-objects Based ontheMechanisms forUsing Redundant Structural Components oftheImage -- 2.2 The Results ofIdentification ofMicro-objects Based ontheMechanisms ofUsing Redundant Structural Components -- 3 The Discussion oftheResults -- 3.1 Applications ofModified Algorithms fortheIdentification ofImages ofMicro-objects -- 4 Conclusion -- References -- Magnetolectric Actuating Device forProviding Delicate Capture oftheObject ofManipulation inIntelligent Robots -- 1 Introduction -- 2 Main Part -- 3 Calculation ofthePermissible Current Density intheArmature Circuit -- 4 Results oftheStudy oftheThrust Force ofaLinear Magnetoelectric Direct Current Element -- 5 Calculation oftheDiameter oftheWire Wound ontheAnchor Core -- 6 Conclusions -- References -- CNN Based Deep Learning forVehicle Re-identification -- 1 Introduction -- 2 Deep Learning forVehicle Identification -- 3 Structure ofVehicle Re-identification System -- 4 Simulations -- 5 Conclusion -- References -- Algorithm forProvision ofDistributed Cloud Data Center Resources Based onCentral Management System -- 1 Introduction -- 2 Formulation oftheProblem -- 3 Problem Solving -- 4 Results andAnalysis -- 5 Conclusion -- References -- Design anEfficient Electrochemical System forTreatment Oil-Polluted Waters -- 1 Introduction -- 2 Methodology -- 3 Experimental Results andDiscussions 4 Conclusion -- References -- Honeywell PROFIT BLENDING AND MOVEMENT Commissioning Experience atOffshore Terminal -- 1 Introduction -- 2 Problem Statement -- 3 PROFIT BLENDING AND MOVEMENT Solution -- 3.1 Profit Blending Suite Software Package -- 3.2 Profit Movement Suite software complex -- 4 Conclusion -- References -- Structural Mode Graphs ofElectromagnetic andMechatronic Modules ofIntelligent Robots -- 1 Introduction -- 2 Research

Methodology -- 3 Analysis and Results -- 4 Conclusion -- References -- Assessment of Severity Degree of Lost Circulation During Well Drilling Based on Integrated Geological and Technological Information Using Fuzzy Cluster Analysis -- 1 Introduction -- 2 Research Methods -- 3 Research Results -- 4 Discussion and Analysis of the Obtained Results -- 5 Conclusion -- References -- Platform Enablers for Digital Transformation: Case For Smart Campus Service Architecture -- 1 Introduction -- 2 Motivation -- 3 Methodology -- 3.1 Smart campus platform enablers for digital transformation and modeling aspects -- 4 Conclusion -- References -- Features of Mathematical Modeling in Urban Planning and Transport Planning -- 1 Introduction -- 2 The Main Part -- 3 Conclusion -- References -- The Choice of a Generalized Criterion for the Efficiency of an Automated Electric Drive of a Railway Rolling Stock -- 1 Introduction

**ISBN:** 3-031-53488-3

---

## **Baratz Innovación Documental**

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- [informa@baratz.es](mailto:informa@baratz.es)