

1. Record Nr.	UNINA9910483846803321
Titolo	11th world conference "Intelligent System for Industrial Automation" (WCIS-2020) / / Rafik Aziz Aliev [and four others] editors
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-68004-5
Descrizione fisica	1 online resource (xvii, 615 pages) : illustrations
Collana	Advances in Intelligent Systems and Computing ; ; v.1323
Disciplina	670.28563
Soggetti	Intel·ligència artificial Aplicacions industrials Artificial intelligence - Industrial applications Congressos Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- 11th International Conference on Intelligent Systems for Industrial Automation, WCIS-2020, Tashkent, Uzbekistan, November 26-28 -- Organization -- Co-chairmen and Editors -- International Program Committee -- Organizing Committee -- Chairmen -- Co-chairmen -- Members -- Conference Organizing Secretariats -- Contents -- Prediction Intervals for the Artificial Neural Network (ANN) and Adaptive Neuro-Fuzzy Inference System (ANFIS) via the LUBE Method -- 1 Introduction -- 2 Methods -- 2.1 Study Area and Data Sets -- 2.2 Artificial Neural Network (ANN) -- 2.3 Adaptive Neuro-Fuzzy Inference System (ANFIS) -- 2.4 PIs Construction by LUBE Method -- 3 Results -- 4 Discussion -- 5 Conclusions -- References -- Analysis and Modeling of Information Security Systems in Industry 4.0 -- 1 Introduction -- 2 Analysis and Modeling -- 3 Conclusion -- References -- Using Non-linear Integral Models in Automatic Control and Measurement Systems for Sensors' Input Signals' Recovery -- 1 Introduction -- 2 Methods for Solving Polynomial Integral Equations -- 2.1 Model Regularization -- 2.2 Algorithms for Solving Polynomial Integral Equations -- 2.3 Solving Polynomial Integral Equations

with Tabular-Type Kernels in an Infinite Period -- 3 Results
and Practical Application of the Offered Methods -- 4 Conclusions --
References -- Neural Network Method and Algorithm for Document
Detection Based on Signaling Analysis -- 1 Introduction -- 2 The Main
Part -- 3 Conclusion -- References -- Using Fuzzy Probabilistic
Implication in Z-set Based Inference -- 1 Introduction -- 2
Preliminaries -- 3 Statement of the Problem -- 4 Solution Method -- 5
Numerical Example -- 6 Conclusion -- References -- Accounting
Experience Between Fuzzy Integral and Z-numbers -- 1 Introduction --
2 Calculation of Fuzzy Integral by the Fuzzy Measure.
3 Calculation on the Basis of the Combination of Z-numbers -- 4 To
Carry Out Computational Experiments on the Basis of Z-numbers -- 5
Conclusion -- References -- A Recurrent Method for Structural-
Parametric Identification of Fuzzy Neural Networks -- 1 Introduction --
2 Weighed Mamdani FNNs and Its Learning Problem -- 2.1 Weighed
Mamdani Model -- 2.2 Statement of the Problem -- 3 New Approach
for the Identification of Weighed Mamdani FNN -- 4 Structure
and Parameter Initialization of the Proposed Method -- 5 Parameter
Learning Using a Gradient Descent Method -- 6 Numerical Experiments
-- 7 Conclusion -- References -- Voltage Control System for Electrical
Networks Based on Fuzzy Sets -- 1 Introduction -- 2 Problem
Statement and Main Results -- 3 Practical Results -- 4 Conclusion --
References -- Algorithms for the Synthesis of Optimal Linear-Quadratic
Stationary Controllers -- 1 Introduction -- 2 Problem Definition -- 3
Control Law -- 4 Solution -- 5 Conclusion -- References -- Toward
Ordering of n-Tuples of Z-Numbers -- 1 Introduction -- 2 State
of the Art -- 3 Preliminaries -- 4 Statement of the Problem and Method
of Solution -- 5 Conclusion -- References -- Determining the Activity
of Fullerene Nanoparticles Using QSAR Models -- 1 Introduction -- 2
Methods -- 2.1 Data -- 2.2 Data Pre-processing -- 2.3 Feature
Selection -- 2.4 QSAR Model Development -- 3 Results -- 3.1 Outliers
Treatment -- 3.2 Processing Null Values -- 3.3 Bivariate Analysis --
3.4 Multicollinearity -- 3.5 Feature Selection Using Wrapper Methods --
3.6 Model Building -- 3.7 Evaluating and Optimizing Models -- 3.8
Predictions -- 4 Discussion -- 5 Conclusion -- Appendices --
References -- Selection of the Optimal Class of Features
for Recognition of the Azerbaijani Handprinted Characters -- 1
Introduction -- 2 Thinning -- 3 Extraction of Soft Features for Hand-
Printed Recognition.
4 Results of Experiments -- 5 Conclusion -- References -- About One
Feature Selection Algorithm in Pattern Recognition -- 1 Introduction --
2 Methodology -- 2.1 Mathematical Formulation of the Problem -- 2.2
Algorithm -- 2.3 Example of Comparison -- 3 Conclusion --
References -- The Neural Network Based Decision Support System
Using Aggregated Opinions of Public Observers -- 1 Introduction -- 2
Problem Definition -- 3 Fuzzy Utility Function -- 4 NN Model
for Aggregation of Recipient Assessments -- 5 Conclusion --
References -- Multi-model Virtual Analysers of Parameters
of Technological Processes -- 1 Introduction -- 2 Machine Learning --
3 Conclusion -- References -- Fuzzy Assessment of Technological
Risks in the Main Oil Pipeline -- 1 Introduction -- 2 Solution
and Discussion of the Problem -- 3 Conclusion -- References -- The
Efficiency of the FSV Model in an Intelligent Search Engine -- 1
Introduction -- 2 Main Chapter -- 3 Conclusion Remarks -- References
-- Neural-Network Based Approach to Mechanism of Liquid Extraction
-- 1 Introduction -- 2 Experimental Part -- 3 Conclusions
and Disscussion -- References -- Predicting the Performance of Marital
Gas Pipelines with Different Coatings -- 1 Introduction -- 2

Construction of a Dynamic Model for a Time Series -- 3 Choosing the Dimension of the Embedding Space -- 4 Direct and Iterative Forecasting Methods Based on Dynamic Model Mapping -- 5 Numerical Implementation of the Method and Discussion of Results -- References -- Enhancing Teaching Approach with 3D Primitives in Virtual and Augmented Reality -- 1 Introduction -- 2 Augmented and Virtual Reality (AR/VR) in E-Learning -- 2.1 Using AR in Education -- 2.2 Virtual Reality (VR) for Education -- 2.3 The Need for Virtual Reality in Education -- 3 How to Implement Graphics Field -- 4 Implication of 3D Modeling by Software -- 5 Conclusion -- References.

Modelling of Gas Lift Dynamic Processes Using ANFIS and ANN -- 1 Introduction -- 2 Method -- 3 Results -- 4 Discussion -- 5 Conclusion -- References -- Recognition and Classification of Pollen Grains Based on the Use of Statistical, Dynamic Image Characteristics, and Unique Properties of Neural Networks -- 1 Introduction -- 2 Main Part -- 2.1 Main Features, Principles, and Characteristics of the Technology for Identifying Images of Pollen Grains -- 2.2 Generalized Algorithms for Identification, Recognition, and Classification of Images of Micro-objects -- 3 Conclusion -- References -- Fuzzy Type-2 Decision Making Method on Project Selection -- 1 Introduction -- 2 Preliminaries -- 3 Statement of the Problem -- 4 Solution of the Problem -- 5 Conclusion -- References -- IoT and Intelligent Wireless Sensor Network for Remote Monitoring Systems of Solar Power Stations -- 1 Introduction -- 2 Configuration of Intelligent WSN -- 3 The Principle of Construction of Intelligent Wireless Sensor Networks -- 4 Construction Concept of SPS Remote Monitoring System -- 5 Simulation and Results -- 6 Conclusion -- References -- Path Planning Collision Free for Warehouse Mobile Robot -- 1 Introduction -- 2 Method -- 2.1 Current Situation and Warehouse Mobile Robot -- 3 Results and Discussions -- 4 Conclusion -- References -- Simulation Model of the Multi-position Mechatronic Module Functioning of an Intelligent Robot -- 1 Introduction -- 2 Research Methodology -- 3 Analysis and Results -- 4 Conclusion -- References -- Decision-Making in the Production of Hard-To-Recover Oil Reserves Under Uncertainty -- 1 Introduction -- 2 A Brief Overview of Optimization Methods for Gas-Lift Production -- 3 Problem Statement -- 4 Results of Research -- 5 Conclusion -- References -- Automatic Recognition of Uzbek Speech Based on Integrated Neural Networks -- 1 Introduction.

2 End-to-End Speech Recognition Systems -- 3 Experiments -- 4 Conclusion -- References -- Software Selection Problem by Using Single Valued Neutrosophic (SVN)-Based TOPSIS Method -- 1 Introduction -- 2 Preliminaries -- 3 Statement of the Problem -- 4 Solution of the Problem -- 5 Conclusion -- References -- Neural Network Model for Adaptive Control of Nonlinear Dynamic Object -- 1 Introduction -- 2 Main Part -- 3 Conclusion -- References -- Identification and Ranking of Key Factors for Pattern of Consumer Buying Decisions in Digital Marketing -- 1 Introduction -- 2 Preliminaries -- 3 Statement of the Problem -- 4 Solution of the Problem -- 5 Conclusion -- References -- The Possibilities of Using Cloud Computing for Applications of Industrial Automation -- 1 Introduction -- 2 Methodical Aspects of Using Cloud Computing in Industry -- 3 Generalized Scenario of Virtualization in the Cloud Infrastructure -- 4 Conclusion -- References -- Application of Fuzzy AHP Method to Material Selection Problem -- 1 Introduction -- 2 Preliminaries -- 3 Fuzzy AHP -- 4 Application -- 4.1 Calculations for Criteria -- 4.2 Calculations for Impact Strength Criterion -- 4.3 Calculations for "Brinell Hardness" Criterion -- 4.4 Calculations

for Machinability Index Criterion -- 4.5 Calculations for Estimated Cost Per Lbs Criterion -- 5 Global and Local Weights Calculations -- 6 Decision Matrix -- 7 Ranking the Alternatives -- 8 Discussion and Conclusion -- References -- Problems of Visualization and 3d Modeling in Chemistry: Analysis of Electronodonor Properties and Spatial Complex-Forming Structure of the Obtained Sulfocationite -- 1 Introduction -- 2 Method of Calculation -- 3 DFT Analysis -- 4 Research of Including Complex-Forming -- 5 Conclusion -- References.
Application of Modern Technologies for Planning Improvement and Saving on Costs in the Enterprise of the Industry 4.0.
