

TABLE OF CONTENTS

<i>Preface</i>	3
<i>Table of Contents</i>	5
<i>Index of Authors</i>	8

General Information Theory

Theory of Infos <i>Krassimir Markov, Krassimira Ivanova, Ilia Mitov</i>	9
--	---

Hybrid Intelligent Systems

Adaptive Gustafson-Kessel Fuzzy Clustering Algorithm Based on Self-learning Spiking Neural Network <i>Yevgeniy Bodyanskiy, Artem Dolotov, Iryna Pliss</i>	17
The Cascade Growing Neural Network Using Quadratic Neurons and its Learning Algorithms for On-line Information Processing <i>Yevgeniy Bodyanskiy, Yevgen Viktorov, Iryna Pliss</i>	25
The Application of Artificial Neural Networks and Evolutionary Algorithm for the Designing of Gas Nitriding Process <i>Mateusz Kosikowski, Zbigniew Suszyński, Roman Olik, Jerzy Ratajski, Tomasz Suszko</i>	33

Knowledge Discovery and Data Mining

Kernel-based Methods for Non-stationary Time-series Identification and Prediction <i>Leonid Lyubchik, Vladyslav Kolbasin</i>	40
ARES System - Integration of Analysis Methodologies <i>Roman Podraza, Mariusz Kalinowski</i>	47
The Application of Data Mining Methods to the Classification of Finished Products <i>Monika Piróg-Mazur, Galina Setlak, Wioletta Szajnar, Tomasz Kożak</i>	55
A Neural Networks Application in Decision Support System <i>Galina Setlak, Wioletta Szajnar, Leszek Kobyliński</i>	60

Knowledge Representation and Management

Organisation of Disabled Persons' Telework as Part of Process of Knowledge Management <i>Tatjana Bilevičienė, Eglė Bilevičiūtė</i>	65
Algebra Logic Approach to Persons' Thinking Mechanisms Formalization <i>Olga Kalinichenko</i>	72
The Development Support System "OntoIntegrator" for Linguistic Applications <i>Olga Nevzorova, Vladimir Nevzorov</i>	78
Thermals Map – Assist Flight System <i>Arkadiusz Rzucidło</i>	85

Industrial Control and Monitoring

Application of Genetic Algorithms to Vector Optimization of the Automatic Control Systems <i>Valery Severin</i>	89
Optimal Synthesis of Intelligent Control Systems of Atomic Power Station Using Genetic Algorithms <i>Seyed Mojtaba Jafari Henjani, Valery Severin</i>	97
Optimal Design of Intelligent Control Systems of Steam Turbine Using Genetic Algorithms <i>Khrystyna Fedyanyina, Ievgeniia Kucher, Valery Severin</i>	105

Intelligent Agents and Multi-Agent Systems

Agent Orientation as a Toolbox for Organizational Modeling and Performance Improvement <i>Jacek Jakiela, Bartosz Pomianek</i>	113
Agent Technologies for Web Mining from a Non-extensive Thermodynamics Perspective <i>Franciszek Grabowski, Marek Zarychta, Przemysław Hawro</i>	125
The Role of Multi-Agent Approach in Building Information Infrastructure for a Modern Company and Carrying out Management Tasks <i>Elena Serova</i>	130
Applying the Concepts of Multi-agent Approach to the Distributed Autonomous Explorations <i>Vadim Golebo, Alexey Botchkaryov</i>	136

Intelligent Manufacturing Systems

Design Concept of Intelligent Management Systems <i>Galina Setlak, Sławomir Pieczonka</i>	142
Intelligent System for Assembly Process Planning <i>Galina Setlak, Tomasz Kożak, Monika Piróg-Mazur, Wioletta Szajnar</i>	150
Robot Control via Dialogue <i>Arkady Yuschenko</i>	158

Business Intelligence Systems

Application of Discrete Optimization in Solving a Problem of Multi-item Capacitated Lot-sizing with Economic Objectives <i>Igor Kononenko, Igor Protasov</i>	164
Implementation of Data Warehouse SAP BW in the Production Company <i>Maria Kowal, Galina Setlak</i>	174
Information Models of Customers in CRM and e-CRM Systems <i>Justyna Stasieńko</i>	182
Оценка кредитных банковских рисков с использованием нечеткой логики <i>Юрий Зайченко</i>	190

Medical and Diagnostic Systems

Synthesis of Structured Models of Computer Systems in Medical Diagnosis <i>Anatoliy Povoroznyuk, Nataliya Bilous, Olga Kozina</i>	201
Artificial Intelligence Approach to Diabetes Diagnostics <i>Galina Setlak, Mariusz Dąbrowski, Wioletta Szajnar, Monika Piróg-Mazur, Tomasz Kożak</i>	209

Computer Engineering, Mechanical Engineering

Navigation Software of Automated Guided Vehicle <i>Magdalena Dobrzańska, Paweł Dobrzański</i>	215
The Automation of Parameters Identification Process for Profiles with Functional Properties <i>Wiesław Graboń</i>	222
Prediction of Stylus Tip Radius <i>Sławomir Górka, Paweł Pawlus</i>	228
Dynamic System Quality Providing Under Undetermined Disturbances. One-dimensional Case <i>Iryna Zbrutka</i>	233
<i>About ITA 2010: Joint International Scientific Events on Informatics</i>	238