

Contents

Graphs of Grammars – Derivations as Parallel Processes	1
<i>Benedek Nagy</i>	
MTTool Software Tool and Low Complexity Hardware for Mojette Transformation	15
<i>Péter Szoboszlai, József Vásárhelyi, Jan Turán, Péter Serfőző</i>	
Network Statistics in Function of Statistical Intrusion Detection	27
<i>Petar Čisar, Sanja Maravić Čisar</i>	
Congestion Forecast – A Societal Opportunity	37
<i>Roland L. Kovács, László Nádaï, Andrea Kovács-Tóth</i>	
3D-Based Internet Communication and Control	47
<i>Péter Korondi, Péter Baranyi, Hideki Hashimoto, Bjørn Solvang</i>	
Global, Camera-Based Localization and Prediction of Future Positions in Mobile Robot Navigation	61
<i>István Engedy, Gábor Horváth</i>	
New Principles and Adequate Robust Control Methods for Artificial Pancreas	75
<i>Levente Kovács, Zoltán Benyó, Adalbert Kovács, Balázs Benyó</i>	
Modern Control Solutions with Applications in Mechatronic Systems	87
<i>Claudia-Adina Dragoș, Stefan Preitl, Radu-Emil Precup, Marian Crețiu, János Fodor</i>	

Adaptive Tackling of the Swinging Problem for a 2 DOF Crane – Payload System	103
<i>József K. Tar, Imre J. Rudas, János F. Bitó, José A. Tenreiro Machado, Krzysztof R. Kozłowski</i>	
Robots as In-Betweeners	115
<i>Jana Horáková, Jozef Kelemen</i>	
Comparative Investigation of Various Evolutionary and Memetic Algorithms	129
<i>Krisztián Balázs, János Botzheim, László T. Kóczy</i>	
A Novel Approach to Solve Multiple Traveling Salesmen Problem by Genetic Algorithm	141
<i>András Király, János Abonyi</i>	
Some Examples of Computing the Possibilistic Correlation Coefficient from Joint Possibility Distributions	153
<i>Robert Fullér, József Mezei, Péter Várlaki</i>	
A Novel Bitmap-Based Algorithm for Frequent Itemsets Mining	171
<i>János Abonyi</i>	
Neural Networks Adaptation with NEAT-Like Approach	181
<i>Jaroslav Tuhářsky, Peter Sinčák</i>	
Incremental Rule Base Creation with Fuzzy Rule Interpolation-Based Q-Learning	191
<i>Dávid Vincze, Szilveszter Kovács</i>	
Protective Fuzzy Control of Hexapod Walking Robot Driver in Case of Walking and Dropping	205
<i>István Kecskés, Péter Odry</i>	
Survey on Five Fuzzy Inference-Based Student Evaluation Methods	219
<i>Zsolt Csaba Johanyák</i>	
Fuzzy Hand Posture Models in Man-Machine Communication	229
<i>András A. Tóth, Balázs Tusor, Annamária R. Várkonyi-Kóczy</i>	
Computational Qualitative Economics Computational Intelligence-Assisted Building, Writing and Running Virtual Economic Theories	247
<i>Ladislav Andrášik</i>	

A Spectral Projected Gradient Optimization for Binary Tomography	263
<i>Tibor Lukić, Anikó Lukity</i>	
Product Definition Using a New Knowledge Representation Method	273
<i>László Horváth, Imre J. Rudas</i>	
Incremental Encoder in Electrical Drives: Modeling and Simulation	287
<i>Ioan Iov Incze, Csaba Szabó, Mária Imecs</i>	
Real-Time Modeling of an Electro-hydraulic Servo System	301
<i>Attila Kővári</i>	
Mathematical Model of a Small Turbojet Engine MPM-20	313
<i>Ladislav Főző, Rudolf Andoga, Ladislav Madarász</i>	
Performance Prediction of Web-Based Software Systems	323
<i>Ágnes Bogárdi-Mészöly, András Rövid, Tihamér Levendovszky</i>	
Optimization in Fuzzy Flip-Flop Neural Networks	337
<i>Rita Lovassy, László T. Kóczy, László Gál</i>	
Author Index	349