

Contents

Introduction	vii
 -Neural Network Symposium:	
B. Ashjaei and H. Soltanian-Zadeh	
<i>Adaptive Clustering Techniques for Segmentation of Magnetic Resonance Images</i>	1
B. Verma	
<i>A Neural Network for Detection of Boundary and Nipple Position in Digital Mammography</i>	5
H. Shahabazkia	
<i>Automatical Cadastral Map Recognition Using Invariant Simulated Neural Networks</i>	8
M. B. Menhaj	
<i>Binary Image Object Recognition Using Zernike Transformation and Neural Network</i>	14
H. R. Hamidi, M. Allamehzadeh, C. Lucas, and A. Abdi	
<i>Classification of Seismic Events Using the ELVQ Network</i>	19
M. B. Menhaj, S. Asgari, and H. Jahanian	
<i>Neural Networks for Contractive Map Learning</i>	22
M. Z. Abdullah, W. C. Ching, and B. L. Khoo	
<i>Neural Networks Speech Recognition System for the Malay Language</i>	27
H. C. Ribeiro and C. Szepesvari	
<i>Spatial Spreading of Action Values in Q-Learning</i>	32
M. R. Jamaati, M. Abedi, M. B. Menhaj, and S. M. Kouhsari	
<i>A Neural Network Approach for Fault Diagnosis in Industrial Power Networks Using Phase Currents</i>	37
S. M. Fakhraie, J. M. Xu, and K. C. Smith	

<i>Application of Analog Quadratic Neural Networks (AQNNs) to Function Approximation Problems</i>	43
M. B. Menhaj, M. Karrari, and K. Ebrahimi	
<i>Economic Load Dispatch with Considering Transmission Losses Using Kennedy Chua Lin Neural Network</i>	49
M. R. Aghamohammadi, J. Toyoda, and H. Saitoh	
<i>Sensitivity Characteristic of Neural Network as a Tool for Secure Generation Scheduling in Power System</i>	53
A. Carpintero, J. Castellanos, L. F. Mingo, and J. Rios	
<i>Short-Term Load Demand with a Mixed Neural Network System</i>	60
F. Rajaii Salmasi and M.B. Menhaj	
<i>State Estimation Using Hopfield Neural Network</i>	64
S. Delshadpour and C. Lucas	
<i>VLSI Implementation of Hopfield Network: A Trap Circuit</i>	69
A. M. Shahri and F. Naghd	
<i>Adaptive Neuro-Fuzzy Compliance Control with the Ability of Learning</i>	74
K. Saberi Haghghi, K. Nikzad, and M. Ghafory-Ashtiany	
<i>An Example of Parametric Nonlinear Structural Identification Using Neural Networks</i>	80
A. Khaki-Sedigh and A. S. Mootab	
<i>Decoupling of Multivariable Systems Using Inverse Neuro-Controllers</i>	85
E. Ronco, P. J. Gawthrop, and Yasmine Mather	
<i>Incremental Modular Controllers Network</i>	89
B. Moshiri and K. Lotfi	
<i>Robot Manipulator Trajectory Control Using Dynamic Neural Network</i>	95

-Fuzzy System Symposium

N. Sadati, R. Vossoghi, and A. Goodarzi	
<i>Fuzzy Control of Clutch Actuation Servomechanism</i>	
<i>for Automated Manual Transmission</i>	100
D. A. Linkens and A. A. Afzalian	
<i>A Neuro-Fuzzy Power System Stabiliser</i>	106
A. Arya, K. Badie, and E. Kabir	
<i>A Step Toward a Comprehensive Framework for</i>	
<i>Adaptive Fuzzy Modeling</i>	112
R. Shariat Yazdi, M. Abedi, M. B. Menhaj, and M. Karari	
<i>Fuzzy Logic for Load Frequency Control Problem</i>	117
M. R. Arvan and B. Moshiri	
<i>Optimal Fuzzy Controller design for an Anti-tank Missile</i>	123
S. M. T. Bathaei, A. Mahdimina, and M. Jafari Harandi	
<i>Position Control of D.C. Motors via Combined Integral</i>	
<i>Variable Structure and Fuzzy Logic Control (I.V.S.F.L.C)</i>	129
V. Tahani and F. Sheikholeslam	
<i>Stability Analysis of Fuzzy Feedback Control System</i>	135
B. Davvaz	
<i>Fuzzy and Anti Fuzzy Subhyper Groups</i>	140
H. R. Maleki, M. Tata, and M. Mashinchi	
<i>Fuzzy Number Linear Programming</i>	145
R. Ameri and M. M. Zahedi	
<i>Fuzzy Subhypermodules</i>	149
Sh. Salili and M. Mashinchi	
<i>On Similarity of Fuzzy Algebraic Structures</i>	155
B. N. Araabi and C. Lucas	
<i>On the Fuzzy Generalization of Dempster-Shafer Theory</i>	161
M. M. Zahedi, M. Talaie, and A. Hasankhani	

<i>Products of Fuzzy Ideals and Fuzzy Congruence Relations on a BCK-Algebra</i>	<i>167</i>
A. Vahidian and H. R. Tareghian	
<i>Dual Constrained Production Plan by Fuzzy Logic</i>	<i>172</i>
A. M. Lugansky and P. L. Orlov	
<i>Evolutionary Strategies of Computer-Assisted Timetabling</i>	<i>177</i>
M. Pourabdollah and M. M. Mirsalehi	
<i>Hand-Printed Persian Character Recognition Using a Fuzzy Neural Network</i>	<i>182</i>
K. Maghsoudlou and K. Badie	
<i>An Object-Oriented Approach to Real Time Service Creation for Supporting Intelligent Network Goals</i>	<i>187</i>
J. M. Arran, M. H. Saeedi, Ian Morrey, and B. Steele	
<i>Combining Parallelism and Concurrency for Efficient Knowledge Processing</i>	<i>192</i>

-Cognitive Sciences Symposium/General Topics

B. Hamidzadeh and A. Afshar	
<i>Dynamic Problem Solving in Presence of Deadlines</i>	<i>198</i>
M. A. Montazeri	
<i>Laser: An Intelligent Case-Based Reasoning Retrieval System</i>	<i>204</i>
C. Edward Turnock, A. Parry, M. H. Saeedi, M. Gibson, and D. Bell	
<i>Towards the Development of iCAKE</i>	<i>211</i>
M. G. Bennett	
<i>The Semantic Network Programming Environment</i>	<i>216</i>
Kinshuk and A. Patel	

<i>Intelligent Tutoring Tools: Redesigning ITS's for Adequate Knowledge Transfer Emphasis</i>	221
L. Vefghi and D. A. Linkens	
<i>Learning and Representation in Neural Models</i>	227
F. Sharifian	
<i>The System of Mental Representation of Lexical Meanings</i>	231
M. E. Aguilar-Vafaie	
<i>Transcultural Perspectives on Parents' and Teachers' Implicit Theories of Children's Creativity</i>	236
S. Bigdeli, A. Dehnad, and Z. Zohrevandi	
<i>Sex Differences in Language Presentation (Verbal Fluency)</i>	245
M. Sheikhan, M. Tebyani, and M. Lotfizad	
<i>Using Symbolic and Connectionist Approaches to Automatic Editing Persian Sentences Syntacticly</i>	250
K. Badie	
<i>Concept-Schematic Network: A Hybrid Knowledge Representation Scheme for Inference Purposes</i>	254
B. Khazaei and R. Osborn	
<i>Cognitive Factors in Changing Programming Paradigms</i>	258
K. Badie	
<i>Experience-Based Modelling: A Key Issue in Optimizing the Design Process</i>	264
S. Jacob	
<i>Interestingness as Guiding Criterion for Discovery in Mathematics</i>	268
Ch. Delara	
<i>An Intelligent Debugging Systems for Student Multiple Function Programs</i>	272

A. R. Shahan Behbahani	
<i>Blind Deconvolution as an Unsupervised Learning</i>	
<i>Algorithm for NMP Channels</i>	278
D. Zboril	
<i>Modelling Uncertainty in Intelligent Systems</i>	
<i>A statistical Approach</i>	284
B.S. Zhang, J.R. Leigh, N. Porter, D. Hill, W. Vanichsriratana, and D. Hill	
<i>Application of SOM and PCA Techniques to Analysis of Biochemical Data Sets</i>	290
M.H. Zand, R. Ahmadian, M. Amir Ahmadi, and F. Daneshvar	
<i>An Object Oriented Robot Programming Language (OORPL)</i>	295
M.H. Zand and M.R. Mohajerani	
<i>Design and Implementation of a Neuro-Fuzzy Controller for Robot Manipulators</i>	300