

# Contents

<b>Chapter 1</b>	<b>On-Line Shape Recognition with Incremental Training Using a Neural Network with Binary Synaptic Weights.....</b>	<b>1</b>
	F. Ulgen, N. Akamatsu, and M. Fukumi (Japan)	
<b>Chapter 2</b>	<b>Neural Network Approaches to Shape from Shading.....</b>	<b>33</b>
	G.Q. Wei and G. Hirzinger (Germany)	
<b>Chapter 3</b>	<b>Neural Networks and Fuzzy Reasoning to Detect Aircraft in SAR Images .....</b>	<b>63</b>
	A. Filippidis, L.C. Jain, and N.M. Martin (Australia)	
<b>Chapter 4</b>	<b>The Self-Organizing Map in Industry Analysis .....</b>	<b>87</b>
	O. Simula, P. Vasara, J. Vesanto, and R.R. Helminen (Finland)	
<b>Chapter 5</b>	<b>A Self-Organizing Architecture for Invariant 3-D Object Learning and Recognition from Multiple 2-D Views .....</b>	<b>113</b>
	S. Grossberg and G. Bradski (U.S.A.)	

**Chapter 6 Industrial Applications of Hierarchical Neural Networks: Character Recognition and Fingerprint Classification ..... 159**

U. Halici, A. Erol, and G. Ongun  
(Turkey)

**Chapter 7 Neural Networks for Performance Optimization in Flexible Manufacturing Systems ..... 193**

S. Cavalieri  
(Italy)

**Chapter 8 Channel Assignment in Mobile Communication Networks - A Computational Intelligence Approach ..... 219**

G. Wang and N. Ansari  
(U.S.A.)

**Chapter 9 Application of Cellular Compact Neural Networks in Digital Communication..... 249**

B.J. Sheu, M.Y. Wang, and W.C. Young  
(U.S.A.)

**Chapter 10 Neural Networks for Process Scheduling in Communication Systems ..... 287**

S. Cavalieri and O. Mirabella  
(Italy)

**Index ..... 323**