Neural Networks and Natural Intelligence

edited by
Stephen Grossberg

A Bradford Book
The MIT Press
Cambridge, Massachusetts
London, England

TABLE OF CONTENTS

List of Authors vii

Preface viii

Chapter 1 1
Cortical dynamics of three-dimensional form, color, and brightness perception, I: Monocular theory

Chapter 2 55
Cortical dynamics of three-dimensional form, color, and brightness perception, II: Binocular theory

Chapter 3 127
Neural dynamics of 1-D and 2-D brightness perception: A unified model of classical and recent phenomena

Chapter 4 195
Computer simulation of neural networks for perceptual psychology

Chapter 5 213
Competitive learning: From interactive activation to adaptive resonance

Chapter 6 251
A massively parallel architecture for a self-organizing neural pattern recognition machine

Chapter 7 317
Masking fields: A massively parallel neural architecture for learning, recognizing, and predicting multiple groupings of patterned data

Chapter 8 369
Neural dynamics of attention switching and temporal order information in short term memory

Chapter 9 405
Neural dynamics of attentionally-modulated Pavlovian conditioning: Blocking, inter-stimulus interval, and secondary reinforcement

Chapter 10 441
Neural dynamics of attentionally-modulated Pavlovian conditioning: Conditioned reinforcement, inhibition, and opponent processing

Chapter 11 517
Neural dynamics of decision making under risk: Affective balance and cognitive-emotional interactions

Chapter 12 553
Neural dynamics of planned arm movements: Emergent invariants and speed-accuracy properties during trajectory formation

Author Index 623

Subject Index 631