

CONTENTS

Preface	v
Embedded Cognition	1
Understanding Communicative Intentions Using Simulated Role-Reversal <i>M. Klein</i>	3
Affordances and Compatibility Effects: A Neural-Network Computational Model <i>D. Caligiore, A. M. Borghi, D. Parisi and G. Baldassarre</i>	15
Mirroring Maps and Actions Representation Through Embodied Interactions <i>A. Pitti, H. Alirezai and Y. Kuniyoshi</i>	27
Modeling Visual Affordances: The Selective Attention for Action Model (SAAM) <i>C. Böhme and D. Heinke</i>	39
Memory	51
STDP and Auto-Associative Network Function <i>D. Bush, A. Philippides, M. O'Shea and P. Husbands</i>	53
The Hippocampal System as the Manager of Neocortical Declarative Memory Resources <i>L. A. Coward</i>	67
The Role of Structural Plasticity and Synaptic Consolidation for Memory and Amnesia in a Model of Cortico-Hippocampal Interplay <i>A. Knoblauch</i>	79

Context and Semantic Working Memory in Schizophrenia: A Computational and Experimental Investigation <i>M. Usher, E. J. Davelaar, A. Bertelle and S. Seevarajah</i>	91
The Performance of Sparsely-Connected 2D Associative Memory Models with Non-Random Images <i>L. Calcraft, R. Adams and N. Davey</i>	103
Categorisation	115
Image Categorization and Retrieval <i>A. Wichert</i>	117
Towards a Competitive Learning Model of Mirror Effects in Yes/No Recognition Memory Tests <i>K. C. Dietz, H. Bowman and J. C. van Hooff</i>	129
Representation and Classification of Facial Expression in a Modular Computational Model <i>A. Shenoy, T. Gale, R. Frank and N. Davey</i>	141
Modelling the Transition from Perceptual to Conceptual Organization <i>G. Westermann and D. Mareschal</i>	153
Temporal Aspects of Cognition	165
Detection of Irregularities in Auditory Sequences: A Neural-Network Approach to Temporal Processing <i>J. Haß, S. Blaschke, T. Rammsayer and J. M. Herrmann</i>	167
Information Dynamics and the Perception of Temporal Structure <i>S. A. Abdallah and M. D. Plumbley</i>	179
Concepts and High-Level Cognition	191
Combining Self-Organizing and Bayesian Models of Concept Formation <i>T. Lindh-Knuutila, J. Raitio and T. Honkela</i>	193

Towards the Integration of Linguistic and Non-Linguistic Spatial Cognition: A Dynamic Field Theory Approach <i>J. Lipinski, J. P. Spencer and L. K. Samuelson</i>	205
Investigating Systematicity in the Linear RAAM Neural Network <i>I. Farkaš and M. Pokorný</i>	217
On the Psychology and Modelling of Self-Control <i>A. Cleanthous and C. Christodoulou</i>	229
Conflict-Monitoring and (Meta)Cognitive Control <i>E. J. Davelaar</i>	241
Representation Theory Meets Anatomy: Factor Learning in the Hippocampal Formation <i>A. Lőrincz and G. Szirtes</i>	253
What Use Are Computational Models of Cognitive Processes? <i>T. Stafford</i>	265
Language, Learning and Development	275
A Localist Neural Network Model for Early Child Language Acquisition from Motherese <i>A. Nyamapfene</i>	277
Syntactic Generalization in a Connectionist Model of Complex Sentence Production <i>H. Fitz and F. Chang</i>	289
A Connectionist Model of Reading for Italian <i>G. Pagliuca and P. Monaghan</i>	301
Simulating German Verb Inflection with a Constructivist Neural Network <i>N. Ruh and G. Westermann</i>	313
How Many Words do Infants Know, Really? <i>J. Mayor and K. Plunkett</i>	325

Modelling Sensory Integration and Embodied Cognition in a Model of Word Recognition <i>P. Monaghan and T. A. Nazir</i>	337
Competition as a Mechanism for Producing Sensitive Periods in Connectionist Models of Development <i>M. S. C. Thomas</i>	349
Neuroevolution of Auto-Teaching Architectures <i>E. Robinson and J. A. Bullinaria</i>	361
Sensory Processing and Attention	373
More is not Necessarily Better: Gabor Dimensional Reduction of Visual Inputs Yield Better Performance than Direct Pixel Coding for Neural Network Classifiers <i>M. Mermillod, D. Alleysson, S. C. Musca, M. Dubois, J. Barra, T. Atzeni, R. Palluel and C. Marendaz</i>	375
Neural Models of Prediction and Sustained Inattentional Blindness <i>A. F. Morse</i>	387
Decomposition of Neural Circuits of Human Attention Using a Model-Based Analysis: sSoTS Model Application to fMRI Data <i>E. Mavritsaki, H. Allen and G. Humphreys</i>	401
Author Index	415