In Heinke, D., & Mavritsaki, E., Editors, (in press). Computational Modelling in Behavioural Neuroscience: Closing the gap between neurophysiology and behaviour. Psychology Press, London.

CONTENTS

1.Dynamical Information processing in the CA1 Microcircuit of the hippocampus.

BRUCE P. GRAHAM AND VASSILIS CUTSURIDIS

2. Why connectionist models need spikes. SIMON THORPE

3.Stochastic neuro-dynamical computation of brain functions. GUSTAVO DECO AND EDMUND ROLLS

4.Application of neural level model to human visual search: Modelling the whole system behaviour, neuropsychological break down and neural signal response.

GLYN W. HUMPHREYS, EIRINI MAVRITSAKI, HARRIET ALLEN, DIETMAR HEINKE AND GUSTAVO DECO

5. The selective attention for identification model (SAIM): A framework for closing the gap between behaviour and neurological level. DIETMAR HEINKE, EIRINI MAVRITSAKI, ANDREAS BACKHAUS AND MARTIN KREYLING

- **6.** Computational models in Neuroscience: From membrane to robots. KEVIN N. GURNEY
- 7. Some finger prints of V1 mechanisms in the bottom up saliency for visual selection.

LI ZHAOPING, KEITH A. MAY AND ANSGAR KOENE

8 Decision making and population decoding with strongly inhibitory neural field models.

THOMAS TRAPPENBERG

9. The importance of neurphysiological constraints for modelling the emergence of modularity.

JOHN BULLINARIA

10. Selective attention in linked, minimally cognitive agents. ROB WARD AND RONNIE WARD

11. Full solution for the storage of correlated memories in an autoassociative memory.

EMILIO KROPFF

12 A unified theory of exogenous and endogenous attentional control. MICHAEL C. MOZER AND MATTHEW H. WILDER

13.Free-energy, value and neuronal systems.KARL J. FRISTON, KLAAS E. STEPHAN and STEFAN KIEBEL

14 Architecture and representation requirements for seeing processes and affordances.

AARON SLOMAN

15 Computational modelling in behavioural neuroscience: Methodologies and Approaches-Minutes of discussions at the workshop in Birmingham, UK in May 2007

DIETMAR HEINKE