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978-0-521-87303-1 - Information Processing by Neuronal Populations
Edited by Christian Holscher and Matthias Munk
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Information Processing by Neuronal Populations

Models and concepts of brain function have always been guided and limited by the available techniques and data. This book brings together a multitude of data from different backgrounds. It addresses questions such as: How do different brain areas interact in the process of channeling information? How do neuronal populations encode the information? How are networks formed and separated or associated with other networks? The authors present data at the single-cell level both *in vitro* and *in vivo* and at the neuronal population level *in vivo* comparing field potentials (EEGs) in different brain areas, and also present data from spike recordings from identified neuronal populations during the performance of different tasks. Written for academic researchers and graduate students, the book strives to cover the range of single-cell activity analysis to the observation of network activity, and finally to brain area activity and cognitive processes of the brain.

CHRISTIAN HÖLSCHER is an Assistant Professor at the University of Ulster in Northern Ireland. He has published widely in international journals on topics of memory formation, synaptic plasticity, neurodegeneration, and information processing in neuronal populations. He was the editor of *Neuronal Mechanism of Memory Formation* in 2001 which investigated processes of synaptic plasticity that might underlie memory formation.

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This book is dedicated to the memory of Professor Werner Jürgen Schmidt who tragically and unexpectedly died on 16 April 2007. He will not be forgotten.

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