

# Contents

<i>George J. Klir</i>	
Foreword.....	VII
<i>Klaus Kornwachs, Konstantin Jacoby</i>	
Introduction: What's New About Information?.....	1

## Classical Information Theory

<i>Horst Völk</i>	
Meaning Outline of the Term Information.....	19
<i>Jan A. Freund</i>	
Information, Long-Range Correlations and Extended Memory of Symbol Sequences.....	41
<i>Hans Marko</i>	
Causal Information Theory .....	63

## Physical Aspects

<i>Hanns Ruder, Michael Soffel</i>	
Information Processing of Cosmic Signals.....	87
<i>Günter Mahler</i>	
Quantum Information .....	103
<i>Paul Ziesche</i>	
Information and Structure: The Concept of Correlation Entropy in Quantum-Many-Body Systems and a General Comment .....	119
<i>Jürgen Kurths, Andreas Voss, Peter Saparin, Annette Witt</i>	
Complexity Measures and their Applications.....	129

## Biology and Information

<i>Bernd-Olaf Küppers</i>	
The Context-Dependence of Biological Information.....	137

## System Theoretical Aspects

<i>Dieter Gernert</i>	
Pragmatic Information as a Unifying Concept .....	147
<i>Klaus Kornwachs</i>	
Pragmatic Information and System Surface.....	163

## **Philosophy of Science**

<i>Thomas Zoglauer</i>	
Can Information be Naturalized?.....	187
<i>John L. Casti</i>	
Simple and Complex Models in Science.....	209

## **Philosophical Issues**

<i>Harald Atmanspacher</i>	
Complexity, Meaning and the Cartesian Cut.....	229
<i>Herbert Hörz</i>	
Reflections on a Philosophical Notion of Information.....	245
<i>Rafael Capurro</i>	
On the Genealogy of Information.....	259

## **Conceptual Design**

<i>Norbert Fenzl, Peter Fleissner, Wolfgang Hofkirchner, Robert Jahn, Gottfried Stockinger</i>	
On the Genesis of Information Structures: A View that is neither Reductionistic nor Holistic.....	271

## **Linguistics**

<i>Burghard B. Rieger</i>	
Situation Semantics and Computational Linguistics: towards Informational Ecology. A Semiotic Perspective for Cognitive Information Processing Systems.....	285

## **Future Aspects**

<i>Helmut Volkmann</i>	
Cities of Knowledge - Metropolises of the Information Society.....	317

List of Authors .....	331
Index of Names .....	339
Subject Index.....	345