

# Complexity Theory and the Management of Networks

Proceedings of the Workshop on Organisational Networks  
as Distributed Systems of Knowledge

University of Lecce, Italy 2001

editors

**Pierpaolo Andriani**  
*(University of Durham, UK)*

**Giuseppina Passiante**  
*(University of Lecce, Italy)*

**UNIVERSITÄT ST. GALLEN**  
HOCHSCHULE FÜR WIRTSCHAFTS-,  
RECHTS- UND SOZIALWISSENSCHAFTEN  
**BIBLIOTHEK**



---

Imperial College Press

## CONTENTS

Notes on the Contributors	vii
Preface	xiii
Structure of the Book	xv
Guide to Reading	xvii
 <b>Introduction</b>	
Complexity Theory and the Management of Networks <i>Pierpaolo Andriani and Giuseppina Passiante</i>	3
 <b>Part 1: Complexity Theory</b>	
A Framework for Understanding Complex Systems <i>Paul Cilliers</i>	23
BizSim: The World of Business — In a Box <i>John L. Casti</i>	28
 <b>Part 2: Management and Leadership in the Network Economy</b>	
“Simple Rules” for Improving Corporate IQ: Basic Lessons from Complexity Science <i>Bill McKelvey</i>	39
Exploring New Business Innovation Leadership Paradigms <i>Aldo Romano</i>	53
New Economy, Complexity and Management <i>Enzo Badalotti</i>	59
Complexity Science on Coevolving Business with Rapid Change <i>Susanne Kelly</i>	65
A Complexity and Darwinian Approach to Management with Failure Avoidance as the Key Tool <i>Ron Willis</i>	74
Treasury Operations in a Multi-National Oil Company: Dialogue on the Methodology of Using Natural Experiments in Complex Evolving Systems <i>Eve Mitleton-Kelly and Marcus Speh Birkenkrahe</i>	89
An Incubator of Business Innovation Leadership: The eBMS Experiment <i>Giuseppina Passiante</i>	102
The “Virtualness” Strategy of the e-Business Management School <i>Valerio Elia</i>	119

**Part 3: The Management of Networks**

Complexity in The Next Economy <i>Robin Wood</i>	139
A Post Industrial Network Organisation <i>Richard Hall</i>	149
Careers, Communities, and Complexity Theory <i>Michael B. Arthur, Robert J. DeFillippi and Valerie J. Lindsay</i>	155
Developing New Products by Community of Developers in the Wireless Industry <i>Chris Russell</i>	163