



WITPRESS *...for scientists by scientists*

New Book Title

MANAGING COMPLEXITY

**George Rzevski
& Petr Skobelev**

*The first book to comprehensively define
complexity and show how it can be
tuned and managed*

www.witpress.com

MANAGING COMPLEXITY

Description

This is the first book to describe large-scale complex adaptive systems and their application to practical business problems so as to yield excellent returns on investment. Various case studies are included: real-time scheduling of 2,000 taxis in London; 10% of world capacity of seagoing tankers transporting crude oil around the globe; adaptive cargo delivery to the International Space Station; semantic processing of scientific abstracts; dynamic patterns discovery from large quantity of data; real-time management of global supply chains; adaptive management of design modifications of large aircraft wings.

The book provides an insight into the connection between digital technology and the ever-increasing complexity of contemporary social and economic environments. It describes in some detail a powerful method of managing complexity. In addition, to back up the applications presented, it gives a concise outline of the fundamental concepts, principles and methods of Complexity Science.

The book contains an extensive description of the fundamentals of multi-agent technology, which has been developed by the authors and used in the design of complex adaptive software and complex adaptive business processes.

Audience

Managing Complexity is suitable for business executives, administrators, politicians, IT professionals, engineers, scientists, and students who are determined to prosper under conditions of rapidly increasing complexity of the Internet-based global market or need help in adjusting their mindsets to the reality of the relentlessly increasing complexity of The Information Society.

It may also be helpful to general readers who are perplexed by the complexity of the environment in which we live.

This topic has applications in all business areas, and therefore is of interest globally.

Contents

PART 1: Fundamentals

- 1 What is complexity?
- 2 A method for managing complexity
- 3 Multi-agent technology
- 4 Emergent intelligence

PART 2: Commercial applications

- 5 Adaptive scheduling of seagoing tankers
- 6 Adaptive scheduling of taxis
- 7 Adaptive scheduling of car rentals
- 8 Adaptive scheduling of road transport
- 9 Adaptive data mining
- 10 Adaptive semantic processing
- 11 Adaptive detection of clashes caused by design changes
- 12 Adaptive scheduling of supply networks
- 13 Adaptive scheduling of services for the international space station
- 14 Adaptive scheduling of a fleet of satellites
- 15 Adaptive scheduling of high-speed railways
- 16 Adaptive scheduling of manufacturing
- 17 Adaptive management of service teams
- 18 Adaptive project management

PART 3: A roadmap into the future

- 19 A vision and ideas

Book Details

Authors: G. Rzevski, *The Open University, UK*
P. Skobelev, *Samara State Aerospace University, Russia*

ISBN: 978-1-84564-936-4

eISBN: 978-1-84564-937-1

Pages: 216

Published: 2014

Price: US\$118.00

ORDER FORM

PLEASE SEND ME THE FOLLOWING:

Please add Postage and Packing Per Book:
US = US\$11 Canada = US\$12 Mexico = US\$16

Qty	Title	ISBN	P&P	Total Inc. P&P
	Managing Complexity	978-1-84564-936-4		
Grand Total:				

* E-Mail and Telephone number are required

Please write clearly in **BLOCK CAPITALS**

METHOD OF PAYMENT:

I am enclosing a check made Payable to WIT Press

Name:

or

I wish to pay by:

Mastercard Visa

Organization:

American Express

Card No:

Address:

CVV/CVC Number:

(last 3 digit No. on signature strip)

ZIP Code:

Expiration Date:

Country:

* Tel:

Signature:

* E-Mail:

Date:

I would like to receive information on related new WIT Press titles.

Tick here if you do not wish to receive further information from WIT Press.

PLEASE RETURN YOUR ORDER TO: **Linda Ouellette,**
Customer Service Manager,
WIT Press,
25 Bridge Street, Billerica
MA 01821, USA

Tel: 978 667-5841

Fax: 978 667-7582

E-mail: salesUSA@witpress.com

www.witpress.com