

*Book Review*

## **A review on the book, *Selforganizology: The Science of Self-Organization***

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### **Abstract**

The book, *Selforganizology: The Science of Self-Organization*, authored by WenJun Zhang and published by World Scientific, was briefly reviewed in present report.

**Keywords** selforganizology; self-organization; book; review.

#### **Selforganizology**

**URL:** <http://www.iaees.org/publications/journals/selforganizology/online-version.asp>

**RSS:** <http://www.iaees.org/publications/journals/selforganizology/rss.xml>

**E-mail:** [selforganizology@iaees.org](mailto:selforganizology@iaees.org)

**Editor-in-Chief:** WenJun Zhang

**Publisher:** International Academy of Ecology and Environmental Sciences

This invaluable book is the first of its kind on "selforganizology", the science of self-organization. It covers a wide range of topics, such as the theory, principle and methodology of selforganizology, agent-based modelling, intelligence basis, ant colony optimization, fish/particle swarm optimization, cellular automata, spatial diffusion models, evolutionary algorithms, self-adaptation and control systems, self-organizing neural networks, catastrophe theory and methods, and self-organization of biological communities, etc. Readers will have an in-depth and comprehensive understanding of selforganizology, with detailed background information provided for those who wish to delve deeper into the subject and explore research literature. This book is a valuable reference for research scientists, university teachers, graduate students and high-level undergraduates in the areas of computational science, artificial intelligence, applied mathematics, engineering science, social science and life sciences.

Major contents of the book include

- Organization and Organizational Theory
- Selforganizology: The Science of Self-organization
- Agent-based Modeling
- Intelligence Principles
- Catastrophe Theory and Methods
- Self-adaptation and Control Systems
- Cellular Automata and Spatial Diffusion Models
- Artificial Neural Networks

- Ant Colony Optimization
- Fish and Particle Swarm Optimization
- Synergy, Coevolution, and Evolutionary Algorithms
- Synergy: Correlation Analysis
- Community Succession and Assembly
- Mathematical Foundations

The readers of the book will be research scientists, university teachers, graduate students and high-level undergraduates in the areas of computational science, artificial intelligence, applied mathematics, engineering science, social science and life sciences.

### **Reference**

Zhang WJ. 2016. Selforganizology: The Science of Self-Organization. World Scientific, Singapore (<http://www.worldscientific.com/worldscibooks/10.1142/9685>)