



*symmetry*



*Special Issue Reprint*

## **Symmetry in Complex Systems**

[www.mdpi.com/books/reprint/2747](http://www.mdpi.com/books/reprint/2747)

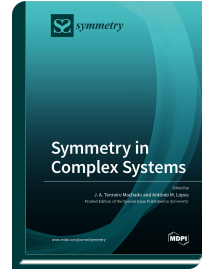
Edited by

J. A. Tenreiro Machado

António Lopes

ISBN 978-3-03936-894-5 (Hardback)

ISBN 978-3-03936-895-2 (PDF)



Complex systems with symmetry arise in many fields, at various length scales, including financial markets, social, transportation, telecommunication and power grid networks, world and country economies, ecosystems, molecular dynamics, immunology, living organisms, computational systems, and celestial and continuum mechanics. The emergence of new orders and structures in complex systems means symmetry breaking and transitions from unstable to stable states. Modeling complexity has attracted many researchers from different areas, dealing both with theoretical concepts and practical applications. This Special Issue fills the gap between the theory of symmetry-based dynamics and its application to model and analyze complex systems.



Order Your Print Copy

You can order print copies at

[www.mdpi.com/books/reprint/2747](http://www.mdpi.com/books/reprint/2747)

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



### **Open Access**

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



### **Author Focus**

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



### **High Quality & Rapid Publication**

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



### **High Visibility**

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



### **Print on Demand and Multiple Formats**

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.