



entropy



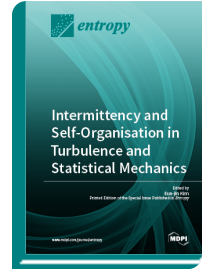
*Special Issue Reprint*

## Intermittency and Self-Organisation in Turbulence and Statistical Mechanics

[www.mdpi.com/books/reprint/1457](http://www.mdpi.com/books/reprint/1457)

Edited by  
Eun-jin Kim

ISBN 978-3-03921-108-1 (Softback)  
ISBN 978-3-03921-109-8 (PDF)



There is overwhelming evidence, from laboratory experiments, observations, and computational studies, that coherent structures can cause intermittent transport, dramatically enhancing transport. A proper description of this intermittent phenomenon, however, is extremely difficult, requiring a new non-perturbative theory, such as statistical description. Furthermore, multi-scale interactions are responsible for inevitably complex dynamics in strongly non-equilibrium systems, a proper understanding of which remains a main challenge in classical physics. As a remarkable consequence of multi-scale interaction, a quasi-equilibrium state (the so-called self-organisation) can however be maintained. This special issue aims to present different theories of statistical mechanics to understand this challenging multiscale problem in turbulence. The 14 contributions to this Special issue focus on the various aspects of intermittency, coherent structures, self-organisation, bifurcation and nonlocality. Given the ubiquity of turbulence, the contributions cover a broad range of systems covering laboratory fluids (channel flow, the Von Kármán flow), plasmas (magnetic fusion), laser cavity, wind turbine, air flow around a high-speed train, solar wind and industrial application.



Order Your Print Copy  
You can order print copies at  
[www.mdpi.com/books/reprint/1457](http://www.mdpi.com/books/reprint/1457)

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.