



Special Issue Reprint

## **Physical and Mathematical Fluid Mechanics**

www.mdpi.com/books/reprint/3212

Edited by Markus Scholle

ISBN 978-3-03943-747-4 (Hardback) ISBN 978-3-03943-748-1 (PDF)



Fluid mechanics has emerged as a basic concept for nearly every field of technology. Despite a well-developed mathematical theory and available commercial software codes, the computation of solutions of the governing equations of motion is still challenging, especially due to the nonlinearity involved, and there are still open questions regarding the underlying physics of fluid flow, especially with respect to the continuum hypothesis and thermodynamic local equilibrium. The aim of this book is to reference recent advances in the field of fluid mechanics, both in terms of developing sophisticated mathematical methods for finding solutions to the equations of motion, on the one hand, and presenting novel approaches to the physical modeling, on the other hand. A wide range of topics is addressed, including general topics like formulations of the equations of motion in terms of conventional and potential fields; variational formulations, both deterministic and statistic, and their application to channel flows; vortex dynamics; flows through porous media; and also acoustic waves through porous media



Order Your Print Copy You can order print copies at www.mdpi.com/books/reprint/3212

# MDPINBOOKS Publishing Open Access Books & Series

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.



ᆔ

#### 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.

MDPI AG Grosspeteranlage 5 4052 Basel Switzerland Tel: +41 61 683 77 34 www.mdpi.com/books books@mdpi.com

