

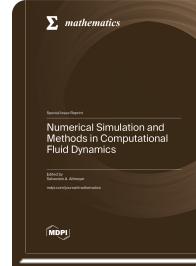
Special Issue Reprint

Numerical Simulation and Methods in Computational Fluid Dynamics

www.mdpi.com/books/reprint/12085

Edited by
Sebastian A. Altmeyer

ISBN 978-3-7258-6059-3 (Hardback)
ISBN 978-3-7258-6060-9 (PDF)



The present Reprint contains 8 articles accepted and published in the Special Issue "Numerical Simulation and Methods in Computational Fluid Dynamics" in the MDPI journal *Mathematics*, which cover a wide range of topics connected to the theory, numerical methods, and simulation techniques of complex fluid dynamic systems. These topics include, among others, magnetic field-induced Joule-heating thermal convection, a Tiwari and Das approach to buoyant convective thermal transport, as well as a computational and machine learning-based approach, and the use of an influence matrix method for accurate implementation of rotating magneto-hydrodynamics. Moreover, Newton's method using implicit Coriolis integration, transition modelling from shear-driven turbulence to convective turbulence, and convective heat transfer via uniformly accelerated and decelerated turbulent pipe flows are also explored.

It is hoped that the Reprint will be interesting and useful for those working in the area of computational fluid dynamics (CFD), complex systems, and numerics, as well as for those with a mathematical background who wish to become familiar with recent advances in CFD, which now plays a crucial role in almost all sectors of human life and activity.



Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/12085

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.