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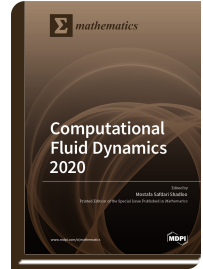
Computational Fluid Dynamics 2020

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This book presents a collection of works published in a recent Special Issue (SI) entitled “Computational Fluid Dynamics”. These works address the development and validation of existent numerical solvers for fluid flow problems and their related applications. They present complex nonlinear, non-Newtonian fluid flow problems that are (in some cases) coupled with heat transfer, phase change, nanofluidic, and magnetohydrodynamics (MHD) phenomena. The applications are wide and range from aerodynamic drag and pressure waves to geometrical blade modification on aerodynamics characteristics of high-pressure gas turbines, hydromagnetic flow arising in porous regions, optimal design of isothermal sloshing vessels to evaluation of (hybrid) nanofluid properties, their control using MHD, and their effect on different modes of heat transfer.

Recent advances in numerical, theoretical, and experimental methodologies, as well as new physics, new methodological developments, and their limitations are presented within the current book. Among others, in the presented works, special attention is paid to validating and improving the accuracy of the presented methodologies. This book brings together a collection of inter/multidisciplinary works on many engineering applications in a coherent manner.



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