1. Record Nr. UNINA9910719774303321 Computational Fluid Mechanics / / Peng Du and [three others], editors Titolo Basel, Switzerland:,: MDPI - Multidisciplinary Digital Publishing Pubbl/distr/stampa Institute, , 2023 3-0365-7170-1 **ISBN** Descrizione fisica 1 online resource (274 pages) Disciplina 620.106 Soggetti Fluid mechanics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references. Nota di bibliografia Sommario/riassunto Computational fluid dynamics, usually abbreviated as CFD, is a branch of fluid mechanics that uses numerical analysis and algorithms to solve and analyze problems that involve fluid flows. Computers are used to perform the calculations required to simulate the interaction of liquids and gases with surfaces defined by boundary conditions. All computational methods are acceptable (finite difference, finite volume, finite elements), as well as commercial codes such as Fluent. The numerical method will be considered as the mean to treat an unsolved fluid mechanics problem. Although in recent years thousands of papers have been published in the field of Fluid Mechanics, there are simple and fundamentals problems that have not been treated until now. Artificial cases with extraordinary boundary conditions and cases, which are not related to reality, will not be accepted. Unsolved problems from all fields are welcomed. The results must be accurate

and the review process will be very thorough.