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Computational Fluid Dynamics (Hardback)

By Gautam Biswas, Somenath Mukherjee

Alpha Science International Ltd, United Kingdom, 2013. Hardback. Book Condition: New. 239 x 163 mm. Language: English . Brand New Book. COMPUTATIONAL FLUID DYNAMICS is an effort to cover a range of topics, - from elementary concepts for the uninitiated students to state-of-the-art algorithms useful for the practitioners. The contents begin with preliminaries, in which the basic principles and techniques of Finite Difference (FD), Finite Volume (FV) and Finite Element (FE) methods are described using detailed mathematical treatment. The methodologies are explained systematically using step-by-step hand calculations. These introductory chapters are followed by the state-of-the-art methods and algorithms, including, Semi Implicit Pressure Linked Equations (SIMPLE) and Marker and Cell (MAC) family of algorithms that are widely adopted in various commercial codes. These advanced chapters use general forms of governing equations, boundary conditions, and initial conditions encountered in CFD. Finally, the modeling of free surface flows has been covered as a special topic. Students and practitioners particularly in mechanical, aerospace, chemical, metallurgy and civil engineering - will benefit from this authoritative material. They will be able to apply numerical techniques to the solution of variety of fluid dynamics and heat transfer problems of industrial importance.



Reviews

Extensive guide! Its such a excellent read. This can be for anyone who statte that there was not a worth looking at. I am just effortlessly will get a satisfaction of looking at a written publication. -- Melvin Hettinger

This book will not be effortless to start on reading through but very exciting to learn. It is amongst the most remarkable book i have got go through. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- Dr. Easton Collier DVM