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Titolo	A Practical Approach to Computational Fluid Dynamics Using OpenFOAM® // by Giovanni Caramia, Elia Distaso
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Descrizione fisica	1 online resource (XII, 282 p. 160 illus., 94 illus. in color.)
Disciplina	620.1064
Soggetti	Fluid mechanics Mathematics - Data processing Electric power production Electrochemistry Engineering Fluid Dynamics Computational Mathematics and Numerical Analysis Mechanical Power Engineering
Lingua di pubblicazione	Inglese
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Nota di contenuto	Preliminary concepts -- Governing Equations of Fluid Dynamics -- The Finite Volume Method -- Linear systems and their solution -- Pressure-Velocity Coupling -- OpenFOAM® -- Boundary Conditions -- Turbulence.
Sommario/riassunto	This book is designed for undergraduate and graduate engineering students who are encountering computational fluid dynamics for the first time in their study of fluid machines. The approach emphasizes a gradual and effective learning process, aiming to minimize the time required to attain a solid foundational understanding. Clarity of exposition is prioritized over strict mathematical rigor, with continuous reference to the physical significance of the mathematical formulas presented. This approach enables students to independently produce acceptable results for most case studies of general interest. The book provides a comprehensive collection of essential concepts needed for correctly configuring any computational fluid dynamics software. To enhance accessibility, it focuses on OpenFOAM, a free and open-source software renowned for its extensive community of developers and

users.
