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	ISBN	3-030-74656-9
	Edizione	[1st ed. 2022.]
	Descrizione fisica	1 online resource (XV, 201 p. 101 illus., 2 illus. in color.)
	Disciplina	532.05
	Soggetti	Fluid dynamics
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Includes index.
	Nota di contenuto	Compressibility of Fluids -- Compressible and Incompressible Flows -- Laminar and turbulent ows -- Basic Concepts in Incompressible Flows -- Eulerian and Lagrangian formulations -- The Incompressible Navier-Stokes Equations -- Forces acting on a uid element and the stress tensor -- Straining of a uid element and the strain rate tensor -- Solutions to the Incompressible Navier-Stokes Equations -- Boundary conditions -- Potential Flows -- Laminar Boundary Layer Theory -- Analytical Solutions to the Incompressible Navier-Stokes Equations -- Turbulent Flows -- Turbulent Internal Flows -- Turbulent External Flows -- Drag reduction in external ows.
	Sommario/riassunto	This highly informative and carefully presented book offers a comprehensive overview of the fundamentals of incompressible fluid flow. The textbook focuses on foundational topics to more complex subjects such as the derivation of Navier-Stokes equations, perturbation solutions, inviscid outer and inner solutions, turbulent flows, etc. The author has included end-of-chapter problems and worked examples to augment learning and self-testing. This book will be a useful reference for students in the area of mechanical and aerospace engineering.