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Autore	Hutter Kolumban
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction -- Hydrostatics -- Hydrodynamics of Ideal Liquids -- Conservation of Angular Momentum – Vorticity -- An Almanac of Simple Flow Problems of Ideal Fluids -- Function-Theoretical Methods Applied to Plane Potential Flows -- Viscous Fluids -- Simple Two- and Three-Dimensional Flow Problems of the Navier-Stokes Equations -- Simple Solutions of Boundary Layer Equations -- Pipe Flows.
Sommario/riassunto	This first volume discusses fluid mechanical concepts and their applications to ideal and viscous processes. It describes the fundamental hydrostatics and hydrodynamics, and includes an almanac of flow problems for ideal fluids. The book presents numerous exact solutions of flows in simple configurations, each of which is constructed and graphically supported. It addresses ideal, potential, Newtonian and non-Newtonian fluids. Simple, yet precise solutions to

special flows are also constructed, namely Blasius boundary layer flows, matched asymptotics of the Navier-Stokes equations, global laws of steady and unsteady boundary layer flows and laminar and turbulent pipe flows. Moreover, the well-established logarithmic velocity profile is criticised.