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Nota di contenuto	1. Introductory Chapter: A Brief History of and Introduction to Computational Fluid Dynamics -- 2. Turbulence Models Commonly Used in CFD -- 3. A New Forced Convection Heat Transfer Correlation for 2D Enclosures -- 4. Computational Approaches in Industrial Centrifugal Pumps -- 5. A CFD Porous Materials Model to Test Soil Enriched with Nanostructured Zeolite Using ANSYS-Fluent(™) -- 6. External Flow Separation -- 7. The Phenomenon of Friction Resistance Due to Streamwise Heterogeneous Roughness with Modified Wall-Function RANSE -- 8. CFD Combustion Simulations and Experiments on the Blended Biodiesel Two-Phase Engine Flows -- 9. Comparison of CFD and FSI Simulations of Blood Flow in Stenotic Coronary Arteries -- 10. The Influence of a Diamagnetic Copper Induced Field on Ion Flow and the Bernoulli Effect in Biological Systems -- 11. Analysis of Geometric Parameters of the Nozzle Orifice on Cavitating Flow and Entropy Production in a Diesel Injector -- 12. Effects of Mass-Loading on Performance of the Cyclone Separators.
Sommario/riassunto	This book provides well-balanced coverage of computational fluid dynamics analysis for thermal and flow characteristics of various thermal and flow systems. It presents the latest research work to provide insight into modern thermal engineering applications. It also discusses enhanced heat transfer and flow characteristics.