

1. Record Nr.	UNISALENTO991003232429707536
Autore	Blazek, J.
Titolo	Computational fluid dynamics [e-book] : principles and applications / J. Blazek
Pubbl/distr/stampa	Amsterdam ; San Diego : Elsevier, 2005
ISBN	9780080445069 0080445063
Edizione	[2nd ed.]
Descrizione fisica	xx, 470 p. : ill. ; 25 cm. + 1 CD-ROM (4 3/4 in.)
Disciplina	532.05
Soggetti	Fluid dynamics - Data processing Fluid dynamics - Computer simulation Fluid dynamics - Mathematical models Fluides, Dynamique des - Informatique Electronic books.
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia
Note generali	Previous ed.: Amsterdam: Elsevier Science, 2001
Nota di bibliografia	Includes bibliographical references and index
Nota di contenuto	1. Introduction -- 2. Governing Equations -- 3. Principles of Solution of the Governing Equations -- 4. Structured Finite Volume Schemes -- 5. Unstructured Finite Volume Schemes -- 6. Temporal Discretisation -- 7. Turbulence Modelling -- 8. Boundary Conditions -- 9. Acceleration Techniques -- 10. Consistency, Accuracy and Stability -- 11. Principles of Grid Generation -- 12. Description of the Source Codes
Sommario/riassunto	Computational Fluid Dynamics (CFD) is an important design tool in engineering and also a substantial research tool in various physical sciences as well as in biology. The objective of this book is to provide university students with a solid foundation for understanding the numerical methods employed in today's CFD and to familiarise them with modern CFD codes by hands-on experience. It is also intended for engineers and scientists starting to work in the field of CFD or for those who apply CFD codes. Due to the detailed index, the text can serve as a reference handbook too. Each chapter includes an extensive bibliography, which provides an excellent basis for further studies. The accompanying CD-ROM contains the sources of 1-D and 2-D Euler and Navier-Stokes flow solvers (structured and unstructured) as well as of

grid generators. Provided are also tools for Von Neumann stability analysis of 1-D model equations. Finally, the CD-ROM includes the source code of a dedicated visualisation software with graphical user interface
