

1. Record Nr.	UNINA9910789212703321
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Titolo	Computational Methods for Fluid Dynamics [[electronic resource] /] / by Joel H. Ferziger, Milovan Peric
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1996
ISBN	3-642-97651-4
Edizione	[1st ed. 1996.]
Descrizione fisica	1 online resource (XIV, 364 p.)
Soggetti	Mechanics Mechanics, Applied Physics Theoretical and Applied Mechanics Mathematical Methods in Physics Numerical and Computational Physics, Simulation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
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Sommario/riassunto

The book offers an overview of the techniques used to solve problems
 in fluid mechanics on computers and describes in detail those most
 often used in practice. Included are advanced techniques in
 computational fluid dynamics, like direct and large-eddy simulation of
 turbulence, multigrid methods, parallel computing, moving grids,
 structured, block-structured and unstructured boundary-fitted grids,
 free surface flows. The book shows common roots and basic principles
 for many apparently different methods. The issues of numerical
 accuracy, estimation and reduction of numerical errors are dealt with in
 detail, with many examples. The book also contains a great deal of
 practical advice for code developers and users. The book is designed to
 be equally useful to beginners and experts. All computer codes can be
 accessed from the publisher's server <ftp.springer.de> on the internet.