

1. Record Nr.	UNISALENTO991003224089707536
Autore	Farrashkhalvat, M.
Titolo	Basic structured grid generation with an introduction to unstructured grid generation [e-book] / M. Farrashkhalvat and J.P. Miles
Pubbl/distr/stampa	Oxford : Butterworth Heinemann, 2003
ISBN	9780750650588 0750650583
Descrizione fisica	x, 231 p. : ill. ; 25 cm
Altri autori (Persone)	Miles, J. P.
Disciplina	620.0015194
Soggetti	Engineering mathematics Numerical grid generation (Numerical analysis) Electronic books.
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index
Nota di contenuto	Mathematical preliminaries - vector and tensor analysis; Classical differential geometry of space-curves; Differential geometry of surfaces in E3; Structured grid generation - algebraic methods; Differential models for grid generation; Variational methods and adaptive grid generation; Moving grids and time-dependent co-ordinate systems; Unstructured grid generation; Bibliography; Index
Sommario/riassunto	Finite element, finite volume and finite difference methods use grids to solve the numerous differential equations that arise in the modelling of physical systems in engineering. Structured grid generation forms an integral part of the solution of these procedures. Basic Structured Grid Generation provides the necessary mathematical foundation required for the successful generation of boundary-conforming grids and will be an important resource for postgraduate and practising engineers. The treatment of structured grid generation starts with basic geometry and tensor analysis before moving on to identify the variety of approaches that can be employed in the generation of structured grids. The book then introduces unstructured grid generation by explaining the basics of Delaunay triangulation and advancing front techniques. A companion website fully supports this book by providing numerical codes in FORTRAN 77/90 for both structured and unstructured grid generation

which will help the reader to develop their understanding and make progress in grid generation. * A practical, straightforward approach to this complex subject for engineers and students. * A key technique for modelling physical systems. * Companion website provides free access to grid generation codes
