

1. Record Nr.	UNINA9910877151503321
Titolo	Non-linear finite element analysis of solids and structures // Rene. de Borst ... [et al.]
Pubbl/distr/stampa	Chichester, West Sussex, : Wiley, 2012
ISBN	1-283-64510-6 1-118-37599-8 1-118-37600-5 1-118-37601-3 1-118-37593-9
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (542 p.)
Collana	Wiley Series in Computational Mechanics
Classificazione	TEC006000
Altri autori (Persone)	BorstRene de
Disciplina	620.1 624.171
Soggetti	Finite element method - Data processing Structural analysis (Engineering) - Data processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Non-linear Finite Element Analysis of Solids and Structures; Contents; Preface; Series Preface; Notation; About the Code; PART I: BASIC CONCEPTS AND SOLUTION TECHNIQUES; 1 Preliminaries; 1.1 A Simple Example of Non-linear Behaviour; 1.2 A Review of Concepts from Linear Algebra; 1.3 Vectors and Tensors; 1.4 Stress and Strain Tensors; 1.5 Elasticity; 1.6 The PyFEM Finite Element Library; References; 2 Non-linear Finite Element Analysis; 2.1 Equilibrium and Virtual Work; 2.2 Spatial Discretisation by Finite Elements; 2.3 PyFEM: Shape Function Utilities; 2.4 Incremental-iterative Analysis 2.5 Load versus Displacement Control 2.6 PyFEM: A Linear Finite Element Code with Displacement Control; References; 3 Geometrically Non-linear Analysis; 3.1 Truss Elements; 3.1.1 Total Lagrange Formulation; 3.1.2 Updated Lagrange Formulation; 3.1.3 Corotational Formulation; 3.2 PyFEM: The Shallow Truss Problem; 3.3 Stress and Deformation Measures in Continua; 3.4 Geometrically Non-linear Formulation of Continuum Elements; 3.4.1 Total and Updated Lagrange Formulations; 3.4.2 Corotational Formulation; 3.5 Linear Buckling

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7.4 Tangent Stiffness Operators

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## Sommario/riassunto

Built upon the two original books by Mike Crisfield and their own lecture notes, renowned scientist Rene de Borst and his team offer a thoroughly updated yet condensed edition that retains and builds upon the excellent reputation and appeal amongst students and engineers alike for which Crisfield's first edition is acclaimed. Together with numerous additions and updates, the new authors have retained the core content of the original publication, while bringing an improved focus on new developments and ideas. This edition offers the latest insights in non-linear finite element technolo

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