

1. Record Nr.	UNINA9911019244503321
Autore	Mohammadi S (Soheil)
Titolo	Extended finite element method for fracture analysis of structures // Soheil Mohammadi
Pubbl/distr/stampa	Malden, MA, : Blackwell Pub., c2008
ISBN	9786612379468 9781282379466 1282379461 9780470697795 0470697792 9780470697993 0470697997
Descrizione fisica	1 online resource (282 p.)
Classificazione	BAU 154f UF 3150
Disciplina	624.1/76
Soggetti	Fracture mechanics Finite element method
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	EXTENDED FINITE ELEMENT METHOD; Contents; 2.5 SOLUTION PROCEDURES FOR K AND G; Dedication; Preface; Nomenclature; Chapter 1 Introduction; 1.1 ANALYSIS OF STRUCTURES; 1.2 ANALYSIS OF DISCONTINUITIES; 1.3 FRACTURE MECHANICS; 1.4 CRACK MODELLING; 1.4.1 Local and non-local models; 1.4.2 Smearred crack model; 1.4.3 Discrete inter-element crack; 1.4.4 Discrete cracked element; 1.4.5 Singular elements; 1.4.6 Enriched elements; 1.5 ALTERNATIVE TECHNIQUES; 1.6 A REVIEW OF XFEM APPLICATIONS; 1.6.1 General aspects of XFEM; 1.6.2 Localisation and fracture; 1.6.3 Composites; 1.6.4 Contact; 1.6.5 Dynamics 1.6.6 Large deformation/shells 1.6.7 Multiscale; 1.6.8 Multiphase/solidification; 1.7 SCOPE OF THE BOOK; Chapter 2 Fracture Mechanics, a Review; 2.1 INTRODUCTION; 2.2 BASICS OF ELASTICITY; 2.2.1 Stress -strain relations; 2.2.2 Airy stress function; 2.2.3 Complex stress functions; 2.3 BASICS OF LEFM; 2.3.1 Fracture mechanics; 2.3.2

Circular hole; 2.3.3 Elliptical hole; 2.3.4 Westergaard analysis of a sharp crack; 2.4 STRESS INTENSITY FACTOR, K; 2.4.1 Definition of the stress intensity factor; 2.4.2 Examples of stress intensity factors for LEFM; 2.4.3 Griffith theories of strength and energy 2.4.4 Brittle material 2.4.5 Quasi-brittle material; 2.4.6 Crack stability; 2.4.7 Fixed grip versus fixed load; 2.4.8 Mixed mode crack propagation; 2.5.1 Displacement extrapolation/correlation method; 2.5.2 Mode I energy release rate; 2.5.3 Mode I stiffness derivative/virtual crack model; 2.5.4 Two virtual crack extensions for mixed mode cases; 2.5.5 Single virtual crack extension based on displacement decomposition; 2.5.6 Quarter point singular elements; 2.6 ELASTOPLASTIC FRACTURE MECHANICS (EPFM); 2.6.1 Plastic zone; 2.6.2 Crack tip opening displacements (CTOD); 2.6.3 J integral 2.6.4 Plastic crack tip fields 2.6.5 Generalisation of J; 2.7 NUMERICAL METHODS BASED ON THE J INTEGRAL; 2.7.1 Nodal solution; 2.7.2 General finite element solution; 2.7.3 Equivalent domain integral (EDI) method; 2.7.4 Interaction integral method; Chapter 3 Extended Finite Element Method for Isotropic Problems; 3.1 INTRODUCTION; 3.2 A REVIEW OF XFEM DEVELOPMENT; 3.3 BASICS OF FEM; 3.3.1 Isoparametric finite elements, a short review; 3.3.2 Finite element solutions for fracture mechanics; 3.4 PARTITION OF UNITY; 3.5 ENRICHMENT; 3.5.1 Intrinsic enrichment; 3.5.2 Extrinsic enrichment 3.5.3 Partition of unity finite element method 3.5.4 Generalised finite element method; 3.5.5 Extended finite element method; 3.5.6 Hp-clouds enrichment; 3.5.7 Generalisation of the PU enrichment; 3.5.8 Transition from standard to enriched approximation; 3.6 ISOTROPIC XFEM; 3.6.1 Basic XFEM approximation; 3.6.2 Signed distance function; 3.6.3 Modelling strong discontinuous fields; 3.6.4 Modelling weak discontinuous fields; 3.6.5 Plastic enrichment; 3.6.6 Selection of nodes for discontinuity enrichment; 3.6.7 Modelling the crack; 3.7 DISCRETIZATION AND INTEGRATION; 3.7.1 Governing equation 3.7.2 XFEM discretization

Sommario/riassunto

This important textbook provides an introduction to the concepts of the newly developed extended finite element method (XFEM) for fracture analysis of structures, as well as for other related engineering applications. One of the main advantages of the method is that it avoids any need for remeshing or geometric crack modelling in numerical simulation, while generating discontinuous fields along a crack and around its tip. The second major advantage of the method is that by a small increase in number of degrees of freedom, far more accurate solutions can be obtained. The method has recen

2. Record Nr.	UNINA9910255187303321
Autore	Gerapetritis George
Titolo	Affirmative Action Policies and Judicial Review Worldwide // by George Gerapetritis
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-22395-X
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (270 p.)
Collana	Ius Gentium: Comparative Perspectives on Law and Justice, , 1534-6781 ; ; 47
Disciplina	340
Soggetti	Conflict of laws Social structure Equality Human rights Constitutional law Private International Law, International & Foreign Law, Comparative Law Social Structure, Social Inequality Human Rights Constitutional Law
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	Foreword -- Preface -- 1. Introduction -- 2. The Moral Question: Interacting with Traditional Values -- 3. The Sociological Question: Goals and Legitimacy -- 4. The Policy Question: Diverse Worldwide Practices -- 5. The Legal Question: Method and Intensity of Judicial Review -- 6. Conclusion -- Index (per country) -- Index (per material).
Sommario/riassunto	This book discusses affirmative action or positive discrimination, defined as measures awarding privileges to certain groups that have historically suffered discrimination or have been underrepresented in specific social sectors. The book's underlying rationale is that one cannot place at the same starting point people who have been treated differently in the past because in this way one merely perpetuates a state of difference and, in turn, social gaps are exaggerated and social cohesion is endangered. Starting out with an introduction on the

meaning and typology of affirmative action policies, the book goes on to emphasise the interaction of affirmative action with traditional values of liberal state, such as equality, meritocracy, democracy, justice, liberalism and socialism. It reveals the affirmative action goals from a legal and sociological point of view, examining the remedial, cultural, societal, pedagogical and economy purposes of such action. After applying an institutional narrative of the implementation of affirmative action worldwide, the book explains the jurisprudence on the issue through syntheses and antitheses of structural and material variables, such as the institutional recognition of the policies, the domains of their implementation and their beneficiaries. The book eventually makes an analytical impact assessment following the implementation of affirmative action plans and the judicial response, especially in relation to the conventional human rights doctrine, by establishing a liaison between affirmative action and social and group rights.. The book applies a multi-disciplinary and comparative methodology in order to assess the ethical standing of affirmative action policies, the public interests involved and their effectiveness towards actual equality. In the light of the above analysis, the monograph explains the arguments considering affirmative action as a theology for substantive equality and the arguments treating this policy as anathema for liberalism. A universal discussion currently at its peak.
