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| 1. Record Nr. | UNINA9910822518203321 |
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| Titolo | Micromechanics of fracture and damage // Luc Dormieux, Djimedo Kondo |
| Pubbl/distr/stampa | London, England ; ; Hoboken, New Jersey : , : iSTE : , : Wiley, , 2016 ©2016 |
| ISBN | 1-119-29218-2 1-119-29217-4 |
| Descrizione fisica | 1 online resource (251 p.) |
| Collana | Mechanical Engineering and Solid Mechanics Series |
| Disciplina | 620.1186 |
| Soggetti | Micromechanics Fracture mechanics |
| 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 | 2.2. Green's function in two-dimensional conditions 2.3. Green's function in three-dimensional conditions; 2.4. Eshelby's problems in linear microelasticity; 2.5. Hill tensor for the elliptic inclusion; 2.6. Hill's tensor for the spheroidal inclusion; 2.7. Appendix; 2.8. Appendix: derivation of the ij; 3 Two-dimensional Griffith Crack; 3.1. Stress singularity at crack tip; 3.2. Solution to mode I problem; 3.3. Solution to mode II problem; 3.4. Appendix: Abel's integral equation; 3.5. Appendix: Neuber-Papkovitch displacement potentials; 4 The Elliptic Crack Model in Plane Strains 4.1. The infinite plane with elliptic hole 4.2. Infinite plane with elliptic hole: the anisotropic case; 4.3. Eshelby approach; 5 Griffith Crack in 3D; 5.1. Griffith circular (penny-shaped) crack in mode I; 5.2. Griffith circular (penny-shaped) crack under shear loading; 6 Ellipsoidal Crack Model: the Eshelby Approach; 6.1. Mode I; 6.2. Mode II; 7 Energy Release Rate and Conditions for Crack Propagation; 7.1. Driving force of crack propagation; 7.2. Stress intensity factor and energy release rate; PART 2: Homogenization of Microcracked Materials; 8 Fundamentals of Continuum Micromechanics 8.1. Scale separation 8.2. Inhomogeneity model for cracks; 8.3. General results on homogenization with Griffith cracks; 9 Homogenization of Materials Containing Griffith Cracks; 9.1. Dilute estimates in isotropic |

conditions; 9.2. A refined strain-based scheme; 9.3. Homogenization in plane strain conditions for anisotropic materials; 10 Eshelby-based Estimates of Strain Concentration and Stiffness; 10.1. Dilute estimate of the strain concentration tensor: general features; 10.2. The particular case of opened cracks; 10.3. Dilute estimates of the effective stiffness for opened cracks
10.4. Dilute estimates of the effective stiffness for closed cracks
10.5. Mori-Tanaka estimate of the effective stiffness; 11 Stress-based Estimates of Stress Concentration and Compliance; 11.1. Dilute estimate of the stress concentration tensor; 11.2. Dilute estimates of the effective compliance for opened cracks; 11.3. Dilute estimate of the effective compliance for closed cracks; 11.4. Mori-Tanaka estimates of effective compliance; 11.5. Appendix: algebra for transverse isotropy and applications; 12 Bounds; 12.1. The energy definition of the homogenized stiffness
12.2. Hashin-Shtrikman's bound
