1. Record Nr. UNINA9910367750103321 Autore Rabczuk Timon Titolo Computational Methods for Fracture MDPI - Multidisciplinary Digital Publishing Institute, 2019 Pubbl/distr/stampa **ISBN** 3-03921-687-2 Descrizione fisica 1 electronic resource (404 p.) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto This book offers a collection of 17 scientific papers about the computational modeling of fracture. Some of the manuscripts propose new computational methods and/or how to improve existing cutting edge methods for fracture. These contributions can be classified into two categories: 1. Methods which treat the crack as strong discontinuity such as peridynamics, scaled boundary elements or specific versions of the smoothed finite element methods applied to fracture and 2. Continuous approaches to fracture based on, for instance, phase field models or continuum damage mechanics. On the other hand, the book also offers a wide range of applications where state-of-the-art techniques are employed to solve challenging engineering problems such as fractures in rock, glass, concrete. Also, larger systems such as fracture in subway stations due to fire, arch

dams, or concrete decks are studied.