Wang, H. X.; Wang, S. X.
Analysis of dynamic fracture with cohesive crack segment method. (English) Zbl 1153.74373

Summary: In the meshfree cohesive crack method, the discrete crack is modeled by a set of cohesive crack segments which can be arbitrarily oriented. Propagation of the crack is achieved by activation of crack surfaces at individual nodes, so no representation of the crack surface is needed. The crack is modeled by a local enrichment of the test and trial functions with sign function, so that discontinuities are along the direction of the crack. A set of cracking rules is developed to avoid spurious cracking.

MSC:
74R99 Fracture and damage

Keywords:
computational mechanics; applied mathematics; fracture mechanics; applied mechanics

Full Text: Link