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Chris Larsen* (cjlarsen@wpi.edu). *Quasistatic evolution in brittle fracture based on a type of strict local energy minimization.*

Motivated by difficulties in studying quasi-static evolution in brittle fracture based on local minimization, we recently introduced the idea of ε -stability, a condition (almost) equivalent to strict local minimality, which is maintained when taking limits involving some nonsmooth energies. This talk will describe the main difficulties in the fracture problem and the method to overcome them. (Received September 26, 2006)