TEMPLE UNIVERSITY Department of Mathematics

Applied Mathematics and Scientific Computing Seminar

Room 617 Wachman Hall

Wednesday April 11, 2007 at 4 p.m.

Fracture: a variational approach.

by Gilles Francfort Department of Mathematics Université Paris-Nord

The variational theory of brittle fracture, which has been developed in the past few years, is based on the time evolution of global minimizers of the energy functionals. In this talk I will briefly recall the main results, then concentrate on the issues brought about by global minimality and focus on possible alternatives. There, the theory is far from complete, especially in dimensions greater than one.