

The failure of materials is a complex and complicated process exhibiting broad phenomenology. The fracture of heterogeneous media under slow external loading displays intermittency and scale invariance in both dynamical and morphological quantities. In [Pontuale et al., EPL **101**, 16005 \(2013\)](#)

we have shown that the intermittent and self-similar fluctuations displayed by a slow crack during the propagation in a heterogeneous medium can be quantitatively described by an extension of a classical statistical model for fracture. The model yields the correct dynamical and morphological scaling, and allows to demonstrate that the scale invariance originates from the presence of a non-equilibrium, reversible, critical transition which, in the presence of dissipation, gives rise to self-organized critical behaviour.