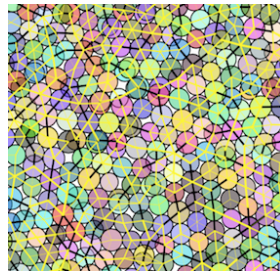


Disorder in Complex Systems



ID de Contribution: 28

Type: **Non spécifié**

Fracture and friction

mardi 14 juin 2022 14:00 (1 heure)

The first part of this lecture will be an introduction to the linear elastic fracture mechanics of brittle solids. In particular, we will focus on the emergence of a mechanical singularity and the dynamics of propagative ruptures. In the second part, we will see that frictional motion is a fracture process. Sliding between two solids occurs once the solid contacts are broken via the propagation of a brittle shear crack. We will show that fracture mechanics is a powerful tool to characterize the frictional properties of a solid interface, but not only. We will show that friction provides a versatile platform for studying fracture dynamics and mechanical singularities: propagation and arrest criteria, equation of motion.

Orateur: Prof. BAYART, Elsa (ENS de Lyon)