

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Eshelby inclusions in granular matter: from simulations to experiments JRME CRASSOUS, AXELLE AMON, SEAN MCNAMARA, Universit Rennes 1 — We present a numerical implementation of an active inclusion in a granular material submitted to a biaxial test. We discuss the dependence of the response to this perturbation on two parameters: the intragranular friction coefficient on one hand, and the degree of the loading on the other hand. We compare the numerical results to theoretical predictions taking into account the change of volume of the inclusion as well as the anisotropy of the elastic matrix. We compare the results of this numerical study with experimental measurements of strain fluctuations into a granular material near failure.

Jrme Crassous
Universit Rennes 1

Date submitted: 09 Nov 2016

Electronic form version 1.4