

ICTS Statistical Physics Journal Club Seminar

Title : Onset of fluidization in yield stress materials: Insights from microscopic simulations and elastoplastic models

Speaker : Suman Dutta (ICTS-TIFR, Bengaluru)

Date : Thursday, 25th March 2021

Time : 03:00 pm (IST)

Abstract : Yield stress materials are ubiquitous in our daily life. When impacted by the imposition of stress, they yield beyond a critical threshold. We take such solids of different preparation history to study the mechanical response under applied deformation, implemented via molecular dynamics simulations. We analyze the microscopic dynamics and investigate the onset of flow and the persistence of spatial heterogeneity at different imposed stresses. We address how increasing spatial fluctuations lead to macro-scale flow. We also formulate a mesoscale elastoplastic description using coarse-grained microscopic inputs.

Venue : Please click on the link to join the seminar

<https://zoom.us/j/92392815620?pwd=Wi9TRHk1c09oZmVSNkM4Q3ViY2tmZz09>

Meeting ID: 923 9281 5620

Passcode: 138862