

Internal Webinar

Deformation and response in systems of particles with strong two dimensional coupling

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Spatially confined flexible membranes deform by reorganizing their morphology to form hierarchical structures of great complexity. These deformations are structurally distinct from conventional dislocations in crystals. In this talk, I will discuss how a model system, where bond breaking is not allowed, responds to external forces. In the first part of the talk, I will show how wrinkles, pleats and ripplocations can form in an elastic membrane in the presence of an external strain. In the next part, I will discuss how these membranes respond to a single force dipole. I will then show that displacement correlations arising from random pinned forces and polydispersity in particle sizes are different.

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9:30 AM