

Students' Annual Seminar

An Elasto-Plastic approach for the glassy dynamics in active systems

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How activity influences glassy dynamics is critical for numerous biological processes, including morphogenesis, wound healing, cytoplasmic transport in cells, and the growth dynamics of dense bacterial colonies. However, the mechanism controlling the glassy dynamics in these systems remains elusive. We have devised a two-dimensional mesoscopic model to study the glassy dynamics within active systems. In this model, relaxation occurs through local plasticity and long-range elasticity. We demonstrate that the model reproduces the key features associated with active glassy dynamics. In this talk, I will discuss this model, its generic features, and some of its nontrivial predictions.

Wednesday, Apr 17th 2024

17:00 Hrs (Tea / Coffee 16:45 Hrs)

Seminar Hall, TIFR-H