Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad – 500 046

Webinar

Origin of Anomalous Dynamical Heterogeneity in Active Glasses

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Active glass refers to densely disordered systems in which particles are influenced by both thermal and active forces. These types of model active systems have provided valuable insights into the dynamical behaviour of various biological systems, such as epithelial cell monolayers, bacteria, and ant colonies, as well as synthetic self-propelled Janus particles and rods in vibrating disks. A key characteristic of these glassy systems is the presence of Dynamic Heterogeneity (DH), which can be measured through four-point dynamic susceptibility. In the context of active glass, this DH exhibits anomalous behaviour that is not observed in passive glass. In this discussion, I will explore the origins of the anomalous nature of Dynamic Heterogeneity in active glass and how it is related to the unusual Memin-Wagner-Hohenberg (MWH) fluctuations present in the system, even in a three-dimensional systems.

Thursday, Aug 21st 2025

16:00 Hrs