MAR13-2012-020335

Abstract for an Invited Paper
for the MAR13 Meeting of
the American Physical Society

Theoretical and Computational Studies of Dynamical Heterogeneity and Growing Length Scales in Supercooled Liquids

DAVID REICHMAN, Columbia University

In this talk I review recent progress made by our group and collaborators in elucidating quantitative aspects connected to growing length and time scales in supercooled liquids. In particular, I focus on extraction of static length scales and the relationship between soft modes and dynamical heterogeneity. Connections to jamming are discussed. If time permits, I will discuss recent work on the mean-field theory of growing dynamical length scales in supercooled liquids with respect to critical fluctuations and the putative upper critical dimension.