

Order in glasses

Jorge Kurchan, PMMH ESPCI

A correlation length directly observable in a configuration, without knowing the dynamics or the history of the sample, diverges if the viscosity diverges in a glass. In order to differentiate different scenarios for the glass transition one may study different lengths, and their relative behavior. The Parisi parameter is in principle directly observable in an equilibrium glass, and an effective temperature may be tested in an out of equilibrium one, directly from a configuration.