

Seminar

Mpemba effect: An anomalous relaxation phenomena

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The Mpemba effect is a counter-intuitive relaxation phenomenon where a hotter system relaxes to equilibrium faster than a cooler system, when both systems are quenched to the same low temperature. The effect was first shown for freezing of water. However, the effect is more general and can be studied in the context of relaxation dynamics of even systems far from equilibrium, an example being driven granular systems. In this talk, I will describe the Mpemba effect in simple models of driven granular gases and trapped colloidal particles. Additionally, I will discuss the difficulties in defining the Mpemba effect and outline possible mechanisms behind it.

Thursday, Sep 14th 2023

4:00 PM (Tea / Coffee 3.45 PM)

Auditorium, TIFR-H