

ICTS MONTHLY COLLOQUIUM

# Connections between microscopic and macroscopic laws

It is common to describe physical systems using two different approaches – the microscopic one based on writing equations of motion for the constituent atoms (Newton's equations for the classical system) and the macroscopic one based on hydrodynamic equations for coarse-grained observables. Restricting mostly to the case of one-dimensions, I will discuss the connections between these two approaches. In particular, the talk will focus on macroscopic laws such as Fourier's law of heat conduction, fluctuating hydrodynamics and the Navier Stokes equations.

**ABHISHEK DHAR**

completed his PhD from TIFR in 1998, working with Deepak Dhar in the area of self organized criticality. After postdocs at the IISc and UC Santa Cruz, he joined the Raman Research Institute as a faculty member in 2001 and moved to the ICTS in 2012. His interests are in the applications of non-equilibrium statistical physics and in understanding foundational issues in statistical mechanics and quantum mechanics.

3:30 pm,  
20 December 2021

ONLINE COLLOQUIUM

Zoom link - <https://bit.ly/ictsMCdec21>

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