



ICTS Synopsis Seminar

Title : Thermalization and hydrodynamics in integrable systems

Speaker : Saurav Pandey (ICTS-TIFR, Bengaluru)

Date : Friday, 22 November 2024

Time : 3:00 PM (IST)

Abstract : Thermalization refers to the process in which observables evolve with time and eventually attain constant values defined by an equilibrium ensemble. The microscopic understanding of thermalization is an active area of research. In one of our papers Boltzmann entropy, we studied the time evolution of the Boltzmann entropy of a microstate during the non-equilibrium free expansion of a one-dimensional quantum ideal gas. We examined two choices of macrovariables and found that the corresponding entropies grow and eventually saturate. One could also study thermalization from a hydrodynamic perspective. In another paper Harmonic chain GHD, we studied the Generalized Hydrodynamics (GHD) and approach to a Generalized Gibbs equilibrium (GGE) for a classical harmonic chain. We calculated the conserved densities and the corresponding currents starting from a domain-wall initial condition and found good agreement with exact numerics.

Venue : Emmy Noether Seminar Room

Zoom link: <https://icts-res-in.zoom.us/j/91324776203?pwd=cAHadVac1EzeU6CSTnFnyqrWygQiXw.1>

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