

MONDAY

# COLLOQUIUM

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## Quantum Thermodynamics: An Open System Approach

Subhashish Banerjee (IIT Jodhpur)

04 May 2026 (Monday) | 16:00 Hrs (Tea / Coffee 15:45 Hrs) | Venue: TIFRH Auditorium

After motivating the need for a study of Open Quantum Systems, I will briefly illustrate the *Gorini-Kossakowski-Sudarshan-Lindblad* (GKLS) master equation. Non-Markovian phenomena occupy a bigger arena and will be discussed briefly.

The focus would be on Quantum Thermodynamics. I will discuss some well known characterizers of quantum thermodynamics. This will be followed by an application of the intersection of non-Markovian physics and Quantum Thermodynamics to a device, Quantum Battery. The talk concludes with a panoramic schematic of quantum thermal analogs of electric circuits in the steady state regime.