

MONDAY

# COLLOQUIUM

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## Interfaces: Demons or Angels?

T N Narayanan (TIFR, Hyderabad)

10 Mar 2025 (Monday) | 16:00 Hrs (Tea / Coffee 15:45 Hrs) | Venue: TIFRH Auditorium

*“God made the bulk; the surface was invented by the devil”*: Can we make such surfaces and interfaces tunable and useful? With this motto, for the last 10 years, the laboratory has been involved in the development and understanding of different interfaces of nanoscale structures. These include solid-solid interfaces of different kinds to solid-liquid interfaces. The initial part of the talk will be discussing some such solid-solid interfaces, say graphene-MoS<sub>2</sub>, and their attributes and tunabilities. It has been found that interfacing two nanostructures can lead to the formation of artificial solids with tunable properties having applications ranging from optoelectronics to catalysis. In the second part, the importance of solid-liquid interfaces, particularly in the context of catalysis, will be discussed. This discussion will be covering our efforts in understanding the role of electrolyte structure in tuning the thermodynamics and kinetics of reactions.