



Wednesday Talk Series

Date: Wednesday, October 29, 2025

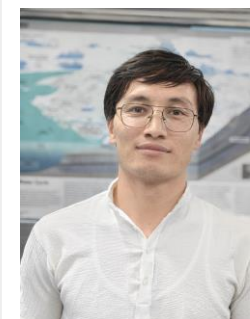
Time: 04:00 PM-5:00 PM

Venue: Mithal Hall, Department of Earth Sciences, IIT Roorkee



Geothermal Exploration in India: A Review of Current Approaches, Key Challenges, and the Way Forward

Speaker: Mohammad Taqi Daqiq



Abstract:

As India pursues its ambitious energy transition, geothermal presents a promising, clean, and stable resource. This talk provides a comprehensive review of the multi-disciplinary exploration approaches applied across India's geothermal provinces, from foundational geochemical mapping to advanced geophysical surveys. We will examine the current status of development, highlighting critical case studies such as the 20-kW operational pilot plant at Manuguru and the high-potential Puga Valley project, which also exemplifies the significant technical challenges. The presentation underscores the necessity of an integrated exploration strategy, blending geophysics, geology, and remote sensing, to overcome these hurdles. Finally, we will discuss a strategic way forward to de-risk projects and unlock India's vast, untapped geothermal potential.

Brief introduction: Mr. Mohammad Taqi Daqiq is an ICCR Fellow and a doctoral researcher at the Rock and Fluid Multiphysics Laboratory (RFML), Department of Earth Sciences, IIT Roorkee, where his work focuses on geothermal studies. He also earned his master's degree in Applied Geology from IIT Roorkee, following a bachelor's degree in Geology from Bamyar University, Afghanistan. His primary research interest lies in the integration of multiphysics for subsurface fluid exploration and characterization.