

Department of Chemical Engineering, IIT Hyderabad Scientific Seminar Series 2026



Date: 23-06-2026

Time: 12:00 PM (IST)

Speaker: Dr. Srivathsan Poyyapakkam Sundar

Affiliation: Postdoctoral Research fellow, University of North Dakota

Title: From Benchmarks to Hardware: Quantum Chemistry at the Edge of Utility

Venue: CHE-620

Abstract

Quantum computing's case for chemistry is only as strong as the molecules we test it on and too often those are chosen for convenience rather than difficulty. This talk asks what makes a molecule a genuinely decisive benchmark and follows that question from the choice of test systems, through what their failures teach us, into molecular excited states where our methods hold up against the limits of classical chemistry, and finally onto real quantum hardware.

Biography

Srivathsan, a native of Chennai, completed his Master of Science by Research in Chemical Engineering at the Indian Institute of Technology, Madras, before earning his doctorate at the University of Melbourne, where his work spanned quantum chemistry and reaction kinetics. He is currently a postdoctoral researcher at the University of North Dakota, USA, developing quantum algorithms for chemistry with an emphasis on ground- and excited-state modeling. This talk draws on the quantum computing research carried out during his postdoctoral tenure.