

## Prof. Vinayak Eswaran

**Title of the Talk:** Challenges in computation of liquid-metal MHD flow and heat transfer under strong magnetic fields in complex geometries

**Prof Vinayak Eswaran** completed his B.Tech at IIT Kanpur in 1980, his PhD in 1985 in Stony Brook University. He joined IIT Kanpur in 1988, after a two-year post-doctoral stint at Cornell University, and a year at Stony Brook as Visiting Professor. He later joined IIT Hyderabad in 2010. He has worked on a wide variety of fluid flow and heat transfer computational problems, including Direct Numerical Simulations of Turbulence, Spectral Methods, Magneto-hydrodynamic Turbulence, Finite Volume methods, Thermal Radiation, Raleigh-Benard convection, Compact schemes, Compressible flows, etc. For the past 15 years, he and his students have been involved in developing



large general-purpose computer codes for fluid flow and heat transfer. They completed the Anupravaha structured-grid incompressible flow-solver in 2009, which is now being developed as an unstructured-grid solver at IIT Gauhati, with Prof Eswaran as a co-investigator. He and his students have also developed a unstructured compressible flow solver at IIT Hyderabad. Prof Eswaran is a member of the INAE.