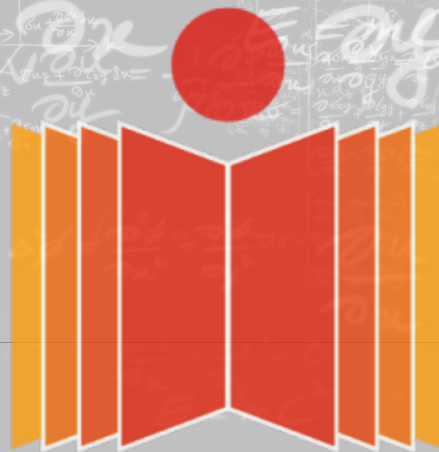


Date: July 25, 2024

Time: 09:00-18:30

Venue: LHC-03

# Applied Mathematics Day @ IIT Hyderabad



भारतीय प्रौद्योगिकी संस्थान हैदराबाद  
Indian Institute of Technology Hyderabad

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Organised by  
Department of Mathematics  
IIT Hyderabad



# Program



**09:00–09:15** Welcome

**09:15–09:45** Professor C. S. Sastry (Mathematics)

*“Nonconvex sparse solvers: Theory and applications”*

**09:45–10:15** Dr. Aditya Siripuram (Electrical Engineering)

*“Discrete Fourier Transform (DFT) computation for signals with structured support”*

**10:15–10:30** Pappu Kumar Mourya (Mathematics)

*“Darcy–Brinkman convection with thermal anisotropic in an inclined porous layer”*

**10:30–10:45** Sahil Islam (Physics)

*“Differential motility leads to intestinal organoid budding”*

**10:45–11:00** Pindi Haritha (Chemical Engineering)

*“Effect of functional anisotropy on local dynamics of functionalized polymer grafted nanoparticles”*

**11:00–11:30** Coffee Break

**11:30–12:00** Dr. Viswanath Chinthapenta (Mechanical And Aerospace Engineering)

*“TBA”*

**12:00–12:30** Dr. Anupam Gupta (Physics)

*“A mechanochemical framework for somitogenesis”*

**12:30–13:00** Dr. Arunabha Majumdar (Mathematics)

*“A method to adjust for the uncertainty of predicted expression in transcriptome-wide association study”*

**13:00–14:00** Lunch

**14:00–14:30** Dr. Anand Mohan (Chemical Engineering)

*“A new shear–thinning fluid model that approximates viscoplastic materials”*

**14:30–15:00** Dr. Suhail Rizvi (Biomedical Engineering)

*“From discrete to continuum: mathematical modeling of tissue polarity”*

**15:30–15:45** Soni Prajapati (Physics)

*“Effect of background flow on motility–induced phase separation”*

**15:45–16:00** Suranjita Ganguly (Biomedical Engineering)

*“Applied mathematics in imaging the source of brain activity from non–invasive electromagnetic sensing”*

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# Program



**15:30–16:00** Coffee Break

**16:00–16:30** Dr. Phanindra Jampana (Chemical Engineering)

*"Electrical Resistance Tomography (ERT) Inverse Algorithms : Application to Hydrocyclone Air Core Diameter Estimation"*

**16:30–17:00** Dr. N. R. Aravind (Computer Science and Engineering)

*"Randomness in algorithms"*

**17:00–17:30** Dr. P. N. Karthik (Artificial Intelligence)

*"TBA"*

**17:30–18:00** Dr. Anurag Tripathi (Physics)

*"TBA"*

**18:00–18:30** Coffee and Concluding Remarks

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