

Call For

PhD



Materials Science & Metallurgical Engineering  
(MSME) Department

ADMISSIONS

JULY 2026



# Department of Materials Science & Metallurgical Engineering (MSME)

@ Indian Institute of Technology Hyderabad

The MSME department was established in 2010, with a strong cohort of faculty, postdoctoral researchers, staff, and students the department is well-equipped to offer diverse academic programs and be at the forefront of cutting-edge research.

Materials Characterization

Materials for Energy & Environment

Computational Materials Science

**RESEARCH  
AREAS**

Materials Processing & Alloy Design

Bio-inspired and Soft Materials

Functional Materials and Devices

Extractive/Sustainable Metallurgy

# Facilities @ MSME

## Material Synthesis & Processing

Glove-box | Sputtering | Muffle and tube furnaces | Hot press | Freeze drier | Robotic welding | Bio-safety cabinet | Salt-bath furnace | Autoclave Ovens | Incubator shaker | E-beam deposition | High Temperature Vacuum Furnace | Pulse Laser Deposition | Planetary Ball mill | Cold-Isostatic Press | Spin and Dip coater | Arc-melting furnace | Glass vacuum sealing | Rolling mill | Infra-red heating furnace | Vacuum induction melting furnace | Uniaxial Compaction Press | Electrochemical Workstation | Gas-solid reactor | Water models | Leaching reactors

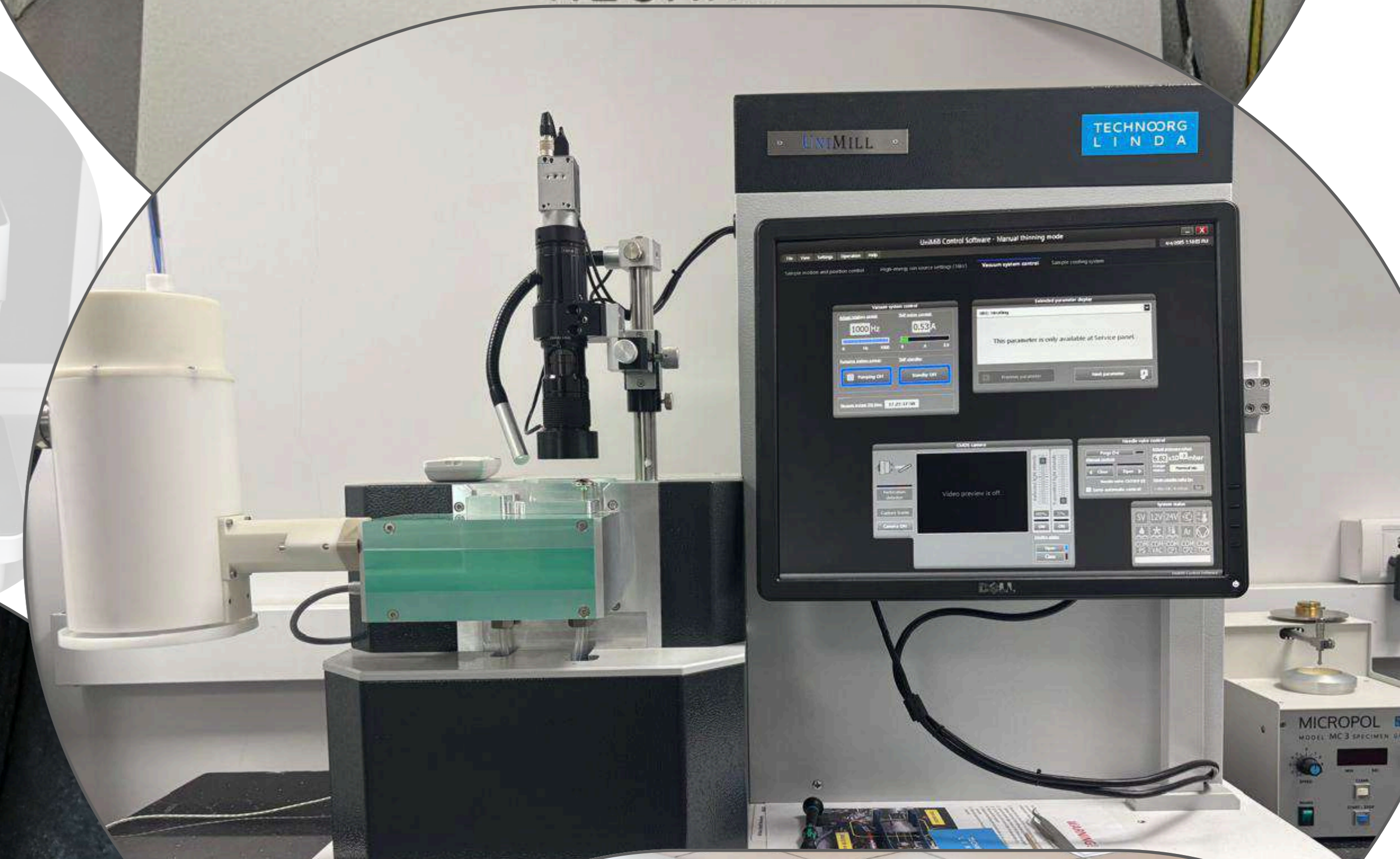
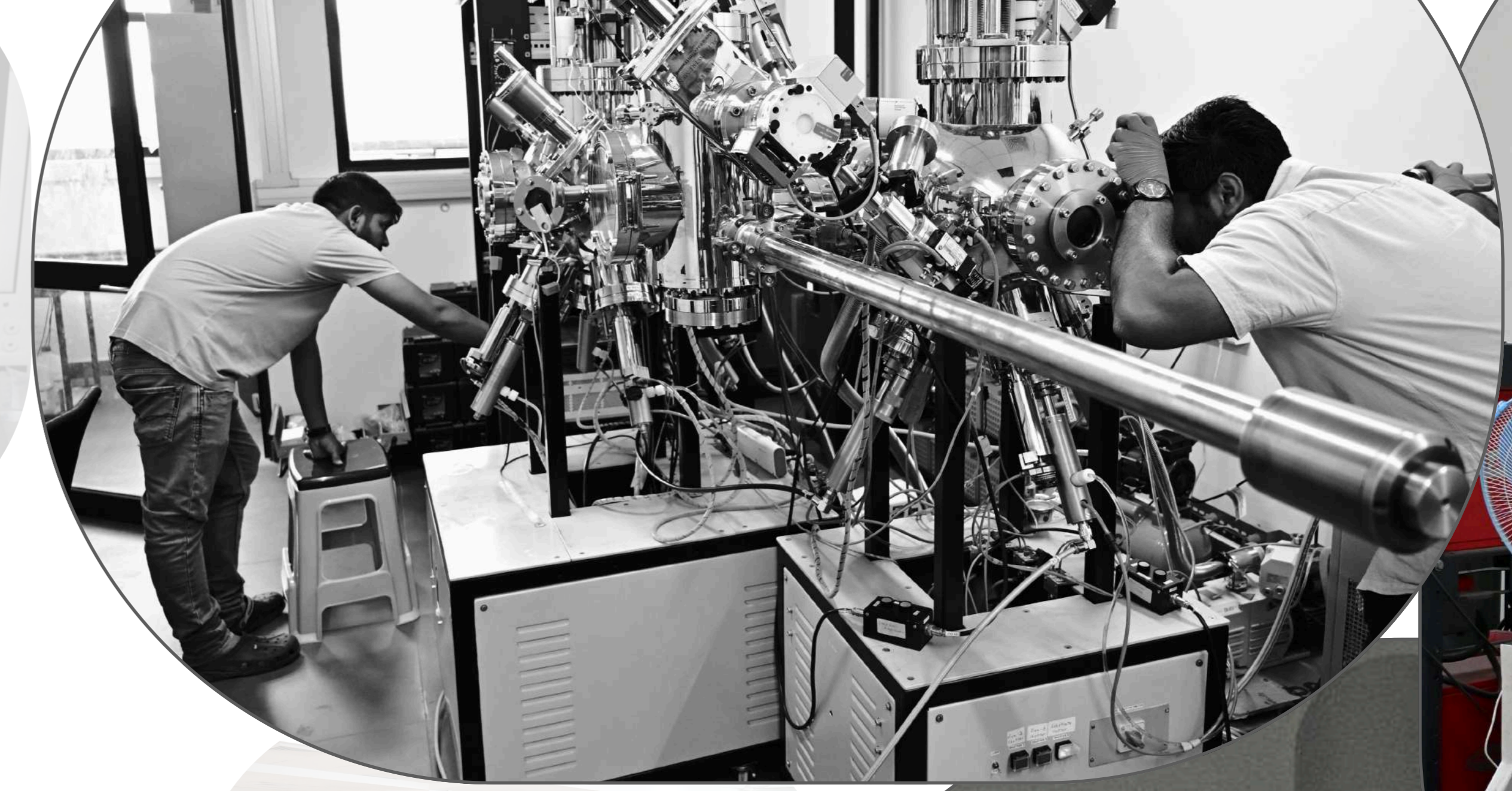
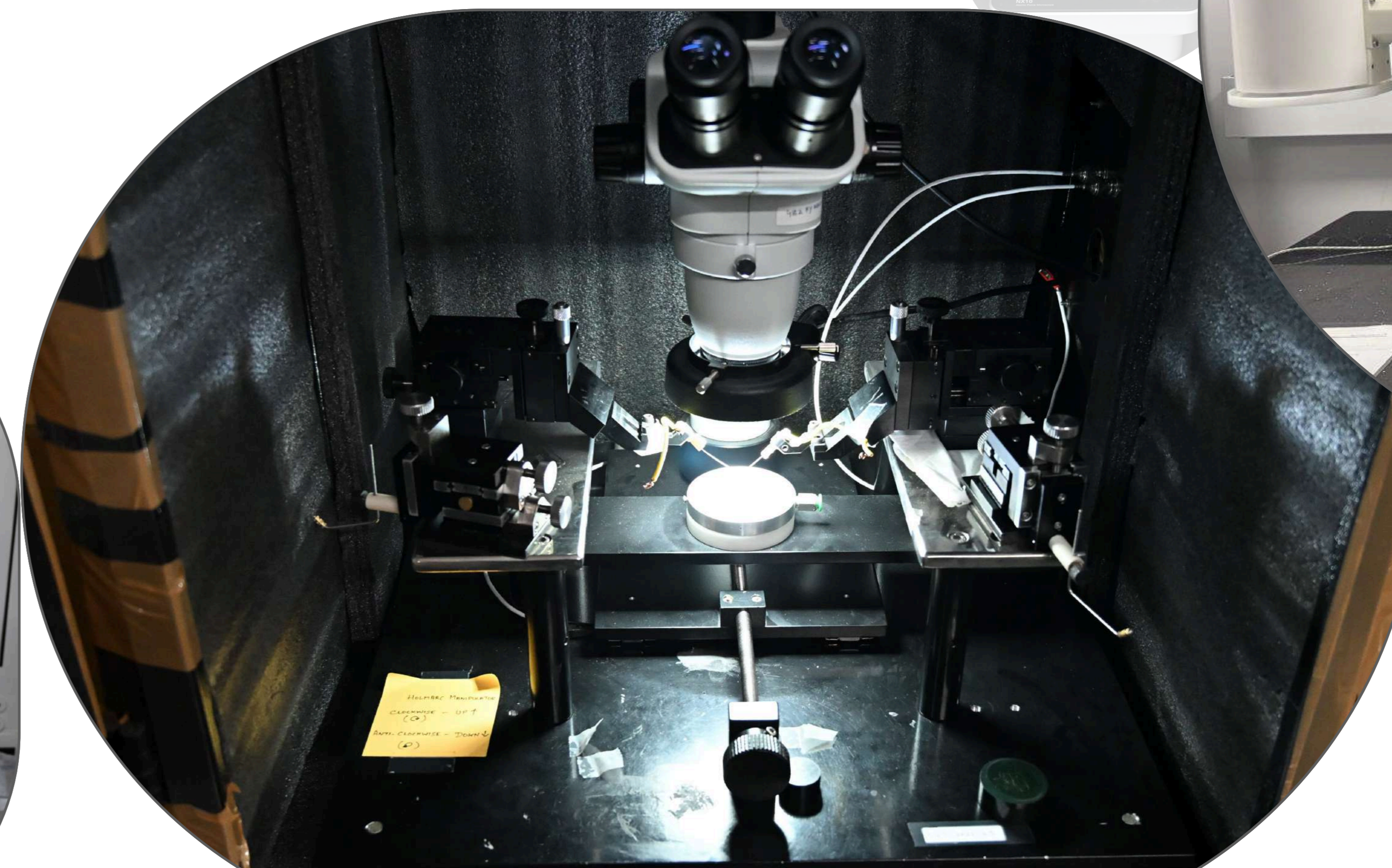
## Characterization

FIB | SPM | Viscometer | Cold FEG-TEM | FEG- SEM with EBSD | Creep Testing | Hardness Tester | Wear (Pin-on-disk) | Nanoindenter | Ion-milling, PIPS | Optical Microscopes Powder & thin film XRD | DTA, DSC, TGA, | Raman spectrometer | Dilatometer | Electrochemical analyser | Surface area and porosity analyser | UV visible spectrophotometer | Universal testing machine (MTS, Instron) | Slag rheology

## Computational

NSM supercomputing | Nvidia-A100 GPU cluster

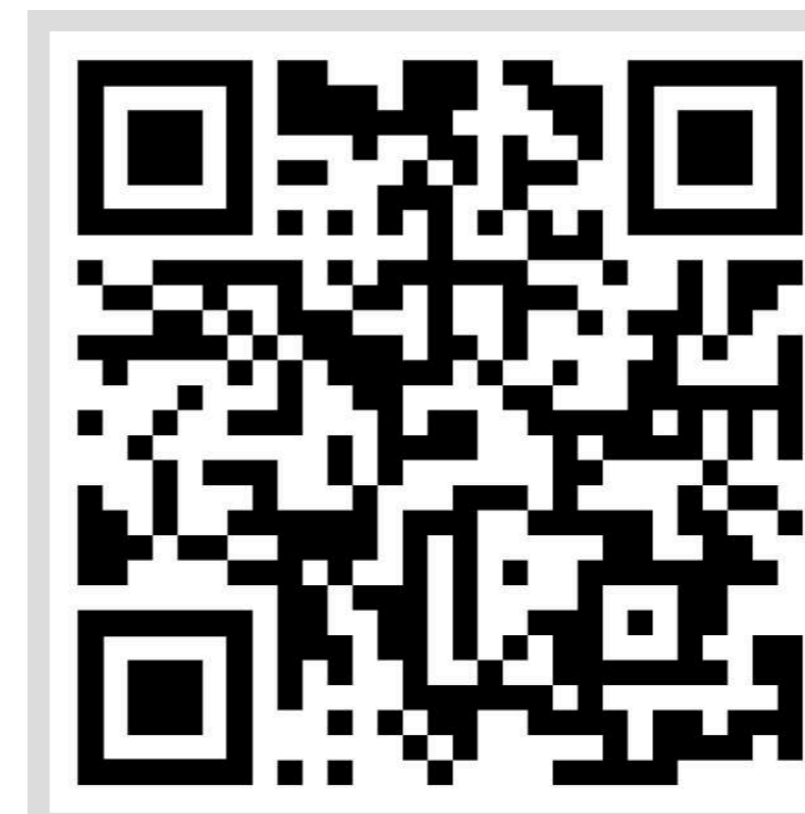
**Software Packages:** Thermocalc | DICTRA  
TC-Prisma | MicroSim | VASP | QE | LAMMPS  
Crystal maker | Moose | FactSage



# PhD Admission Program

The Doctor of Philosophy (Ph. D.) program is for enthusiastic students, who are willing to take up challenging research problems in various areas of Materials Science and Metallurgical Engineering. New ideas, inventions and innovations are most welcome.

**Ph. D. Admissions to the department take place before the beginning of the autumn and spring semesters.**



Click on the QR/Scan to apply for a Ph. D. position  
in the MSME department at IIT Hyderabad



# Eligibility criteria

## Regular PhD

- Candidates with Master's (ME/MTech (or equivalent)) with first class, or
- MSc or equivalent in any science discipline with first class and a valid GATE score, or
- Qualified one of the national exams: INSPIRE, Joint CSIR-UGC NET with JRF, DBT JRF, or
- External PhD: Working professionals from industry, research laboratory and others
- External Direct PhD: Relevant experience with NOC required

## Direct PhD

BTech students from CFIs with a CGPA of 8.0 or more are eligible to apply (no GATE required)

BE / BTech or equivalent in any discipline with first class and a valid GATE score

## Special PhD

PhD Applications are invited from the meritorious students who have got a CGPA of 9.0 and above in their BTech/BE/BS/MSc from IITs, IISc and IISERs for admission to Direct PhD (High CGPA) program at IITH with high-value Institute Fellowships. (Higher stipend (80k/month) than MoE funding for 4 years)

## SELECTION PROCESS

- Only shortlisted candidates will be invited for the selection process via email.
- The selection process includes a written test and interview at IITH (Physical mode only)
- Shortlisted candidates will be notified of the dates for the written test and interview. Check the website for further updates.
- Meeting the eligibility criteria does not guarantee shortlisting.

Details on proposed PhD research areas and available sponsored PhD positions can be found at:



Potential Research Topics



The department reserves the right to set a different criterion which can be equal to or above the eligible criteria for shortlisting the candidates.

# Our Collaborators

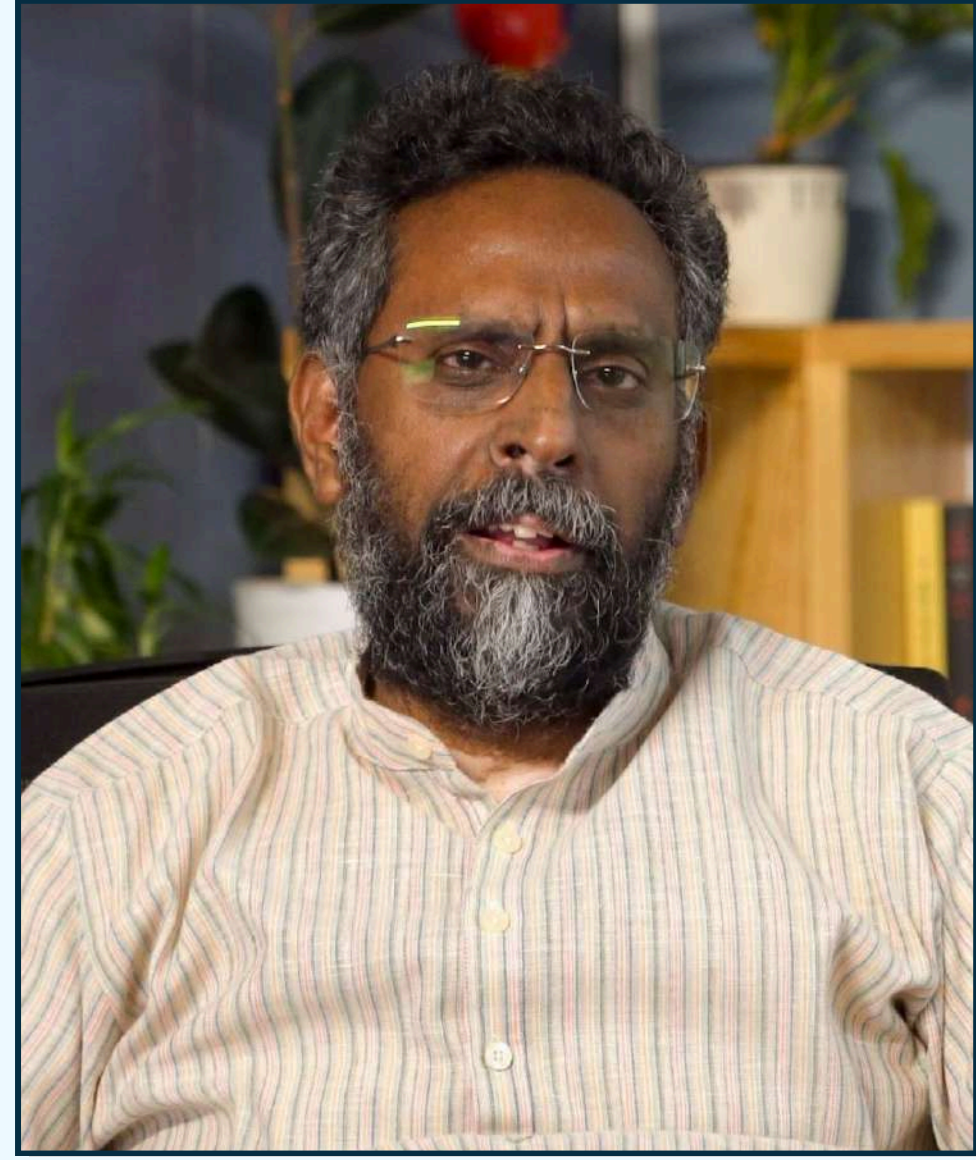
## INSTITUTIONAL



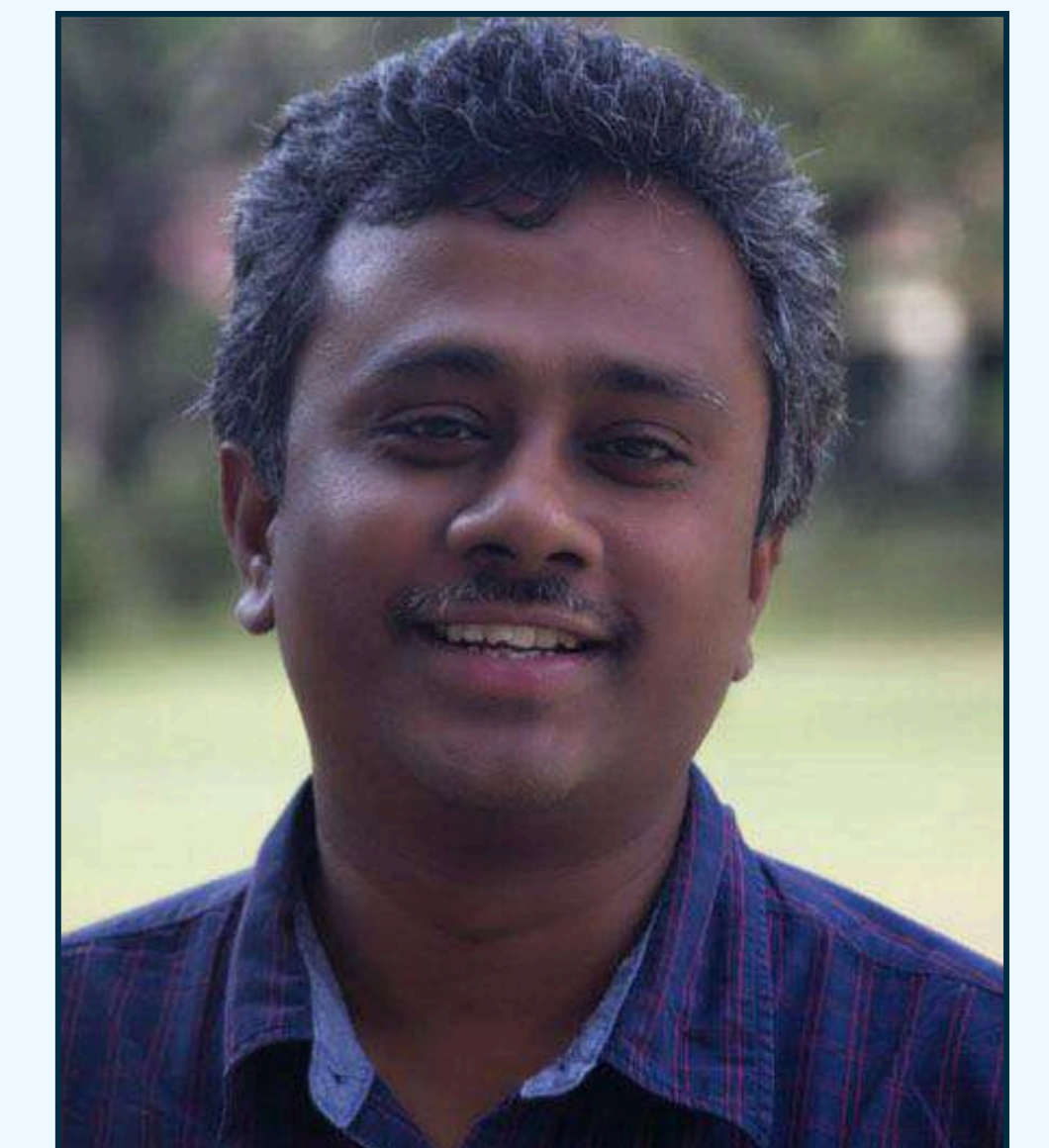
## INDUSTRIAL



# Faculty Members



**Professor  
B. S. Murty**



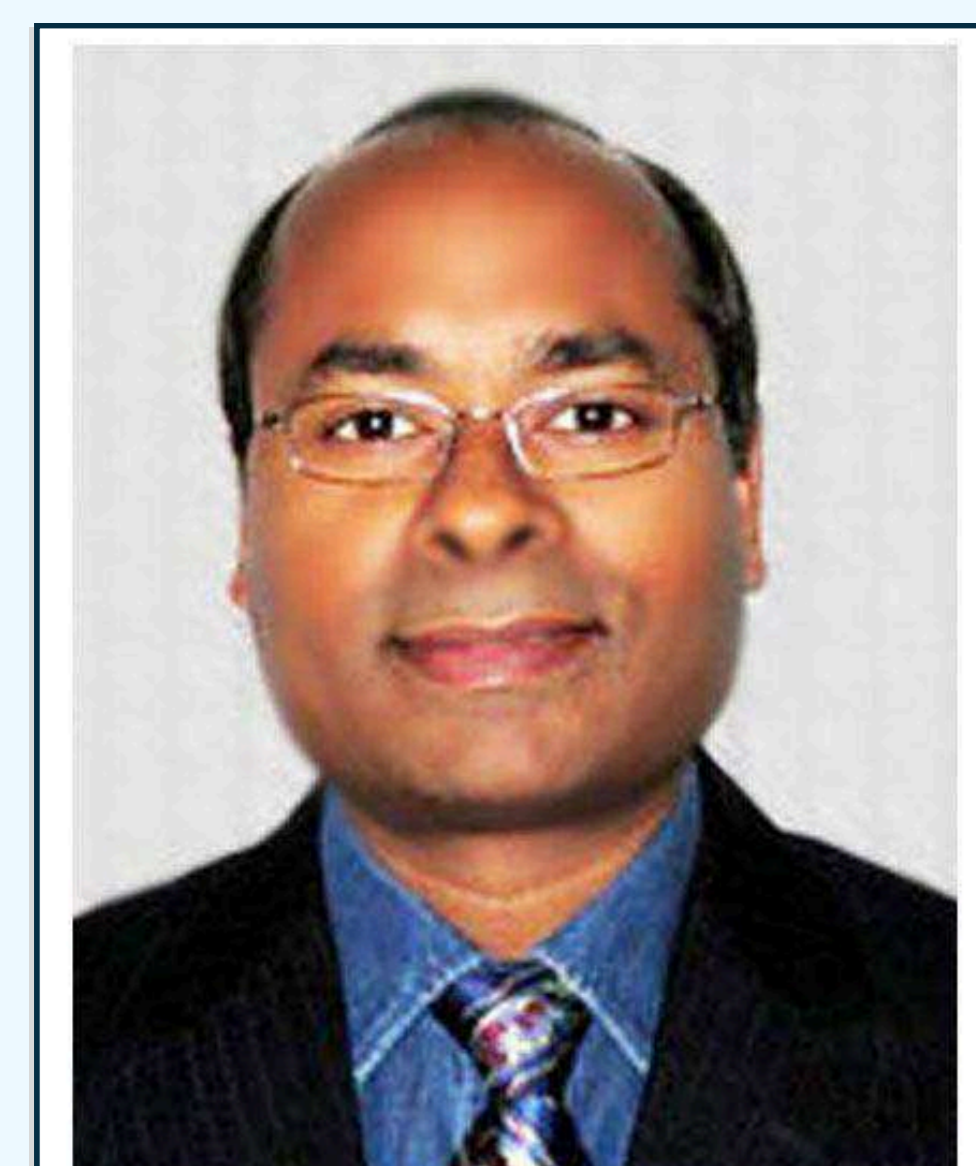
**Professor  
Ranjith Ramadurai**



**Professor  
Suhash R. Dey**



**Professor  
G. D. Janaki Ram**



**Professor  
Bharat B. Panigrahi**



**Professor  
Mudrika Khandelwal**

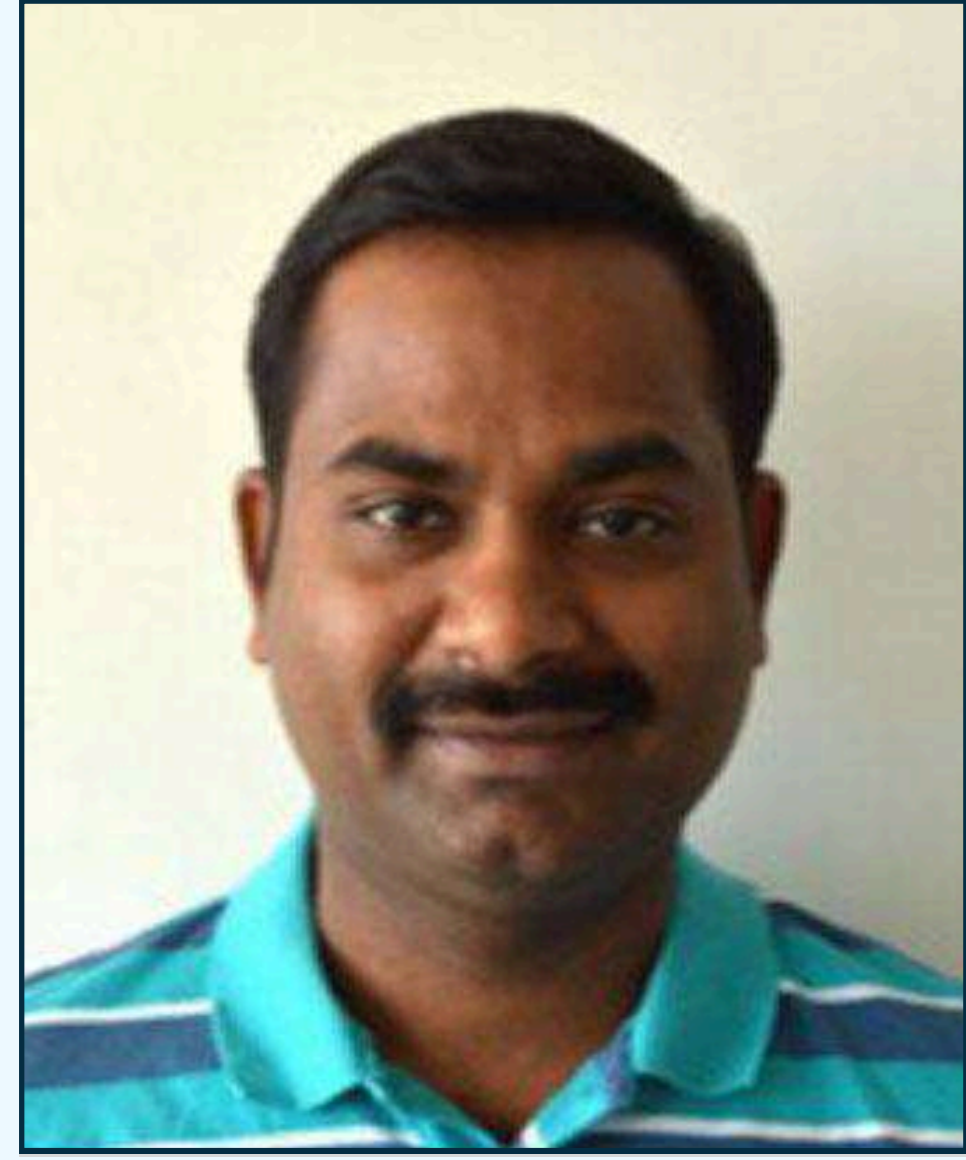


**Professor  
Pinaki P. Bhattacharjee**

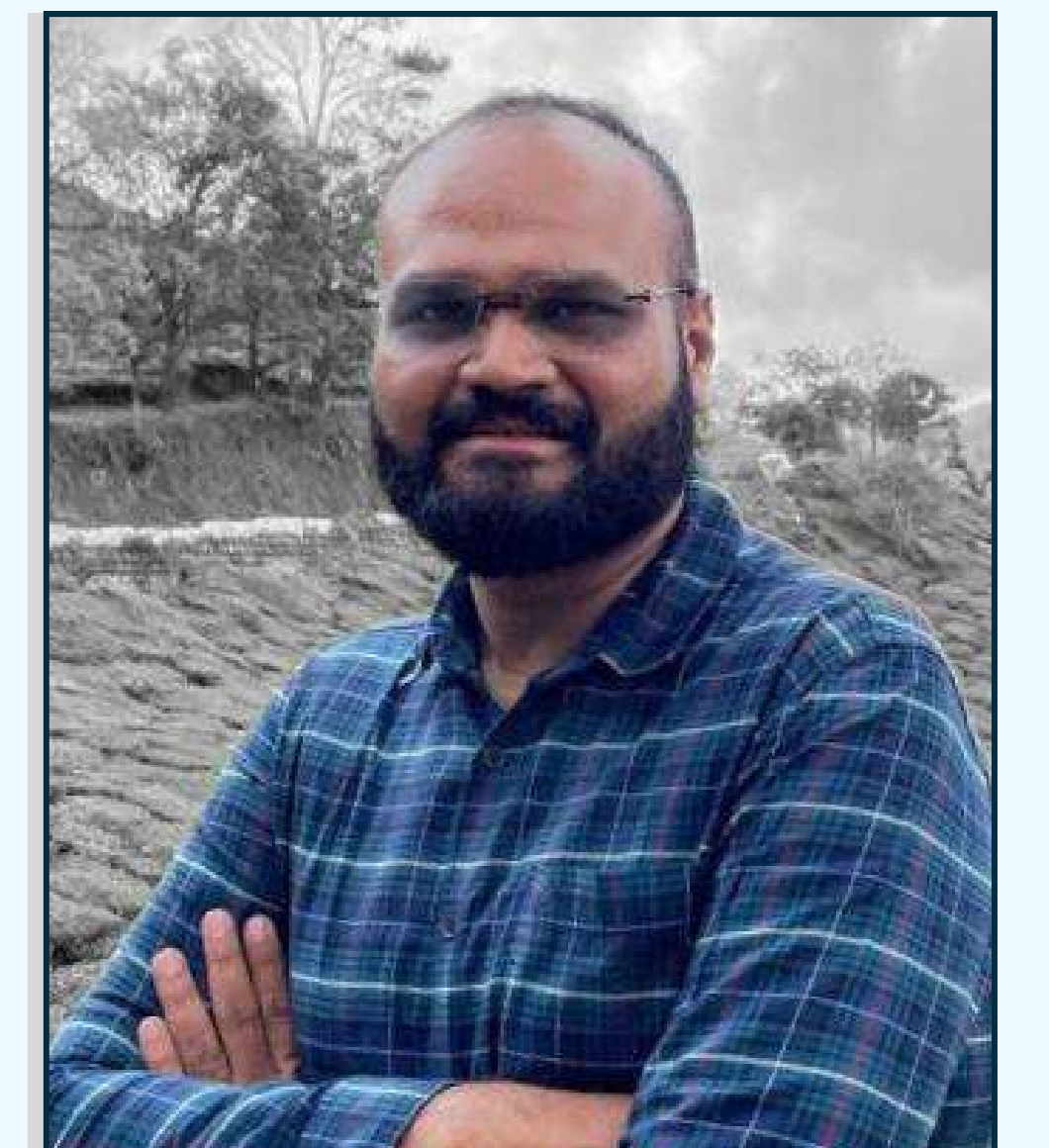


**Professor  
Saswata Bhattacharyya**

# Faculty Members



**Professor**  
**Atul S. Deshpande**



**Associate Professor**  
**Sai Rama K. Malladi**



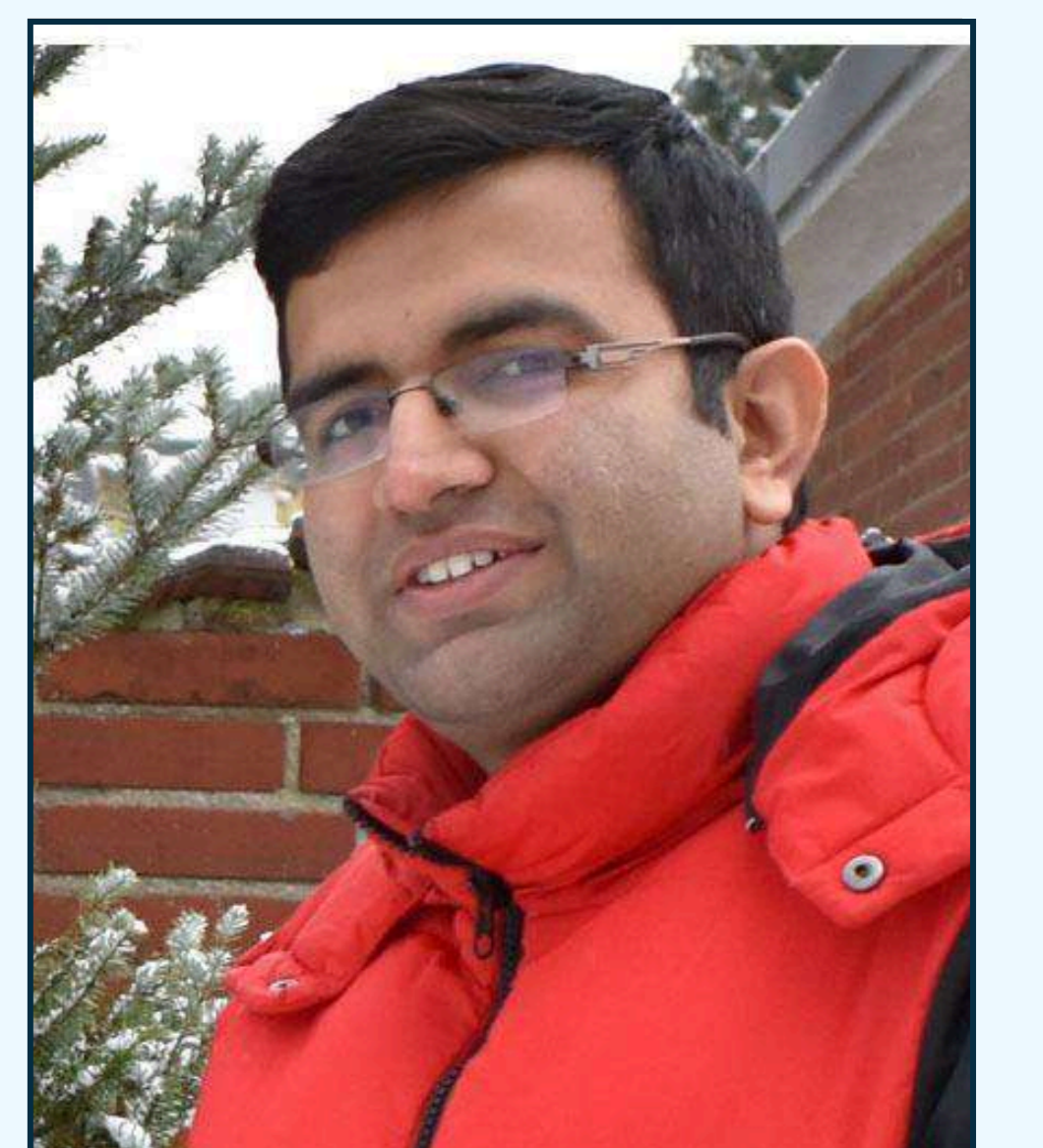
**Associate Professor**  
**Rajesh Korla**



**Associate Professor**  
**Subhradeep Chatterjee**



**Associate Professor**  
**Shourya Dutta Gupta**



**Associate Professor**  
**Mayur Vaidya**



**Associate Professor**  
**Chandrasekhar Murapaka**



**Assistant Professor**  
**Deepu J. Babu**

# Faculty Members



**Assistant Professor  
Hemam Rachna Devi**



**Assistant Professor  
Ashok Kamaraj**



**Assistant Professor  
Anuj Goyal**



**Assistant Professor  
Suresh K. Garlapati**



**Assistant Professor  
Suresh Perumal**



**Assistant Professor  
Amit Barnawal**



**Assistant Professor  
Rama Srinivas Varanasi**



# MSSME

JULY 2026

Designed By  
Astha Agrahari & Nishika Verma