



PROF. SOUBHIK KUMAR BHAUMIK

Associate Professor

CONTACT

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EDUCATION

➤ **PhD**

IIT Kharagpur

➤ 2008-2013

➤ **MS (Chemical Engg)**

IISc Bangalore

2002 - 2004

➤ **BE (Chemical Engg)**

NIT Durgapur

1998 - 2002

RESEARCH AREAS

➤ **High Temperature Carbon Capture Technologies:** Sorbent Development & Reactor modelling

➤ **Computational Fluid**

Dynamics for Process

Intensification in Compact Heat Exchangers

➤ **Micro/Nanoscale Transport Phenomena** over Super-Hydrophobic surfaces

WORK EXPERIENCE

TEACHING

2014 - date

Department of Chemical Engineering,
IIT (ISM) Dhanbad

➤ **DESIGN ENGINEER**

2006- 2009;
2013- 2014

General Electric
(Global Research Center)
Bangalore

➤ **R&D ENGINEER**

2004 - 2006

R&D TVS Motor Company
Hosur, Tamil Nadu

PUBLICATIONS

➤ **Peer-reviewed Journal -** 30 (2 2 Q1+ 8 Q2)

➤ **International Conferences-** 12

➤ **Book Chapter-** 1

PHD SUPERVISION

➤ **PhD Awarded/Submitted** 7

➤ **PhD ongoing-** 1

PATENTS

- ◆ Liquid-Liquid-Liquid Extraction and Stripping in Multi-Helical Reactor (Filed) Inventors: N. Jada, S. Rao, S. K. Bhaumik (In collaboration with CSIR-IMMT BBSR) **Apl. No: 202311036960**
- ◆ A system of measuring thickness of flat and oblique film of polar liquid and nanofluids (Filed) Inventors: Pawan Singh, S. Singh, S. K. Bhaumik **Apl. No: 202311036960**

AWARDS

- ◆ **IChE Ambuja Award** received by Supervised M-Tech Students for M-Tech thesis Best Post Graduation Dissertation All India Chemical Engineering Congress (IChE) for consecutive years **2018 & 2019**
- ◆ **Global Award** Global Research Center, Niskayuna, New York, **General Electric (GE)** New York

PROJECTS

Title	Agency	Role	Amount (Lakh)	Year
Enhancing Thickener Throughput through Improved Feedwell Design	TATA STEEL	PI	40.7	2026-28 (Ongoing)
High-Temperature CO ₂ Capture using Novel Fly-Ashinfused Cao-MgO Sorbents in Pre & Post Combustion Processes:	DST SERB CRG CRG/2022/005049	PI	35.145	2023-26 (Ongoing)
Evaluation of an Evaporating nanofluid meniscus for improved performance of Heat Pipes	DST SERB CRG CRG/2021/004953	Co-PI PI- Prof. Pawan Singh Mech	33.74	2021-24
Structure and properties of nematic Liquid Crystal colloids in Confined Geometry; Theory, Computer Simulation and Experiment	DST SERB CRG CRG/2018/004435	Co-PI PI- Prof. Pankaj Mishra AGP	23.364	2019-22
High Ash Coal Gasification and Associated Upstream and Separation Downstream Processes (Coal to Chemicals, CTC)"	CIL	Co-PI	2100	2017-22
DST FIST	DST-FIST Project No. SR/FST/ET-I/2019/401	Co-PI		

LAB ORGANIZED

Facility	Equipments
➤ Advanced Flow Visualization at Macro & Micro Scales	High Speed Camera, Macro and Micro- Particle Image Velocimetry systems and Thermal Imaging Systems.
➤ Heat Transfer Lab	UG Lab, In house Designed Set up for Cross-flow heat Exchanger

EXAMINER/TALKS

Role	Description	Year
➤ External Examiner Department of Chemical Engineering , BIT Sindri	B-Tech Viva Evaluation Computer Aided Design	2018 & 2019
➤ Selection Panel CSIR-CIMFR, Dhanbad	Project Assistant Selection	2019
➤ External Examiner, Department of Chemical engg IIT Kharagpur	B-Tech Dual Degree, Thesis Evaluation	2018
➤ Speaker MMTTP Department of Mechanical Engg IIT ISM Dhanbad	CFD Case Studies in Engineering Design: Process Intensification in Compact Helical Geometries	2025
➤ Invited Talk Dept of Chemical Engg IIT Delhi	“ Electric Field Actuated Microflows ”	2014

TEACHING

- Transport Phenomena
- Computational Fluid Dynamics
- Interfacial Phenomena
- Mathematical Methods in Chemical Engineering
- Fundamentals of Multiphase Flow

ADMINISTRATIVE DUTIES

- Warden Amber Hostel (Aug 2022-2024)
- Departmental Post Graduate Committee (DPGC) Convener (2020-022) (2024--)
- Departmental DFSC Convener (2021-23)

CONFERENCE/WORKSHOP ORGANIZED

Topic	Convener	Funding Agency	Year
➤ Two-day Conference entitled Net-Zero Emission Technologies for Sustainable Development: Challenges and Opportunities (N0ET-26)	Convener	ANRF SSY/2025/002479	Feb-10-11 2026
➤ Three-day Workshop entitled Concepts of Interfacial Phenomena in Microscale Flows: Theory and Application	Convener	ANRF SSY/2024/001520	Dec-10-12 2024
➤ International Conference on “Net-Zero Emission Technologies for Sustainable Development: Challenges and Opportunities (N0ET - 2022)	Co-Convener	DSIR	Dec-12-13 2022
➤ Webinar Series on Expert Lecture on “Trends in Microfluidics and its Applications”	Webinar-Coordinator		Sept-13-14 2021
➤ Advances in Solid Fuel Processing & Conversion Technologies under TEQIP-II	Workshop- Co-Coordinator	TEQIP-II	Jan 29-30 2018

ACHIEVEMENTS

- **On site at GE Houston** for Project Planning of Coal Gasification.
- **Visiting Consultant** for GE, *Gobal Research Center, Bangalore*

S. S. Srinivas