

Bidhan Chandra, Ph.D.

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in LinkedIn Profile

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Employment History

- 2022 – current **Assistant Professor**, Chemical Engineering, IIT(ISM) Dhanbad
- 2020 – 2022 **Assistant Professor**, Chemical Engineering, IISER Bhopal
- 2019 – 2020 **Post Doctoral Researcher**, Delft University of Technology, Netherlands

Education

- 2013 – 2020 **Ph.D., IIT Kanpur**, Chemical Engineering
Thesis title: *Instability in the flow of polymer solutions*
- 2009 – 2013 **B.Tech, NIT Durgapur**, Chemical Engineering

Research Publications

Journal Articles

- 1 M. Pisuwala, A. Maurya, and B. Chandra, "Onset of purely elastic instability and elastic turbulence in the torsional flow of polymer solutions: Influence of gap thickness," *Physics of fluids*, vol. 37, 2025.
- 2 W. Hogendoorn, B. Chandra, and C. Poelma, "Universal scaling for the onset of turbulence in particle-laden flows," *Physical Review Fluids (Letters)*, vol. 7, 2022.
- 3 W. Hogendoorn, B. Chandra, and C. Poelma, "Suspension dynamics in transitional pipe flow," *Physical Review Fluids*, vol. 6, 2021.
- 4 W. Hogendoorn, B. Chandra, and C. Poelma, "Universal scaling for the onset of turbulence in particle-laden flows," *arXiv preprint arXiv:2104.14883*, 2021.
- 5 B. Chandra, V. Shankar, and D. Das, "Early transition, relaminarization, and drag reduction in the flow of polymer solutions through microtubes," *Journal of Fluid Mechanics*, vol. 885, 2020.
- 6 B. Chandra, R. Mangal, D. Das, and V. Shankar, "Instability driven by shear thinning and elasticity in the flow of concentrated polymer solutions through microtubes," *Physical Review Fluids*, vol. 4, 2019.
- 7 B. Chandra, V. Shankar, and D. Das, "Onset of transition in the flow of polymer solutions through deformable tubes," *Physics of Fluids*, vol. 31, 2019.
- 8 B. Chandra, V. Shankar, and D. Das, "Onset of transition in the flow of polymer solutions through microtubes," *Journal of Fluid Mechanics*, vol. 844, 2018.

Conference Proceedings

- 1 B. Chandra and V. Shankar, "Laminar-turbulent transition in polymer solutions through micro-tubes," in *Bulletin of the American Physical Society*, 2019.
- 2 B. Chandra and V. Shankar, "Elastic and shear thinning instabilities for the flow of polymer solutions through microtubes," in *APS Division of Fluid Dynamics Meeting Abstracts*, Atlanta, USA, 2018, H34. 008.

Skills

Languages	📖 Hindi and English
Software	📖 Java, C++, Fortran, MATLAB, LaTeX, Origin

Sponsored Projects

2022-25	📖 SERB CRG (Co-PI) , Rs 46 Lakh Capillary Suspension:Role of particle shape on strength and stability
2022-24	📖 SERB Start Up Research grant, Rs 33 Lakhs , Elastic and Shear-thinning instability in the flow of polymer solutions
2022-25	📖 IIT(ISM) Dhanbad Faculty Research Scheme, Rs 15 Lakh Laminar-turbulent transition in polymer flows

Courses Taught

2020-21 Winter	📖 Process Design and Economics
	📖 Engineering Drawing and Design
2021-22 Monsoon	📖 Process Dynamics and Control
2021-22 Winter	📖 Process Design and Economics
	📖 Engineering Drawing and Design
2022-23 Monsoon	📖 Process Design and Economics
	📖 Catalytic Processes and Reactors
2022-23 Winter	📖 Advanced Mass Transfer
2023-24 Monsoon	📖 Heat Transfer
2023-24 Winter	📖 Principles of Mass Transfer
2024-25 Monsoon	📖 Heat Transfer
2024-25 Winter	📖 Principles of Mass Transfer