Curriculum Vitae

Darish Jeswin Dhas Sam
Udine, Italy
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Date of birth: 30 April, 1993

Work experience

May 2023 - present
Postdoctoral Researcher
Department of Engineering and Architecture
University of Udine, Udine, Italy

January 2023 - April 2023
Postdoctoral Researcher
Fluid Mechanics Division
Department of Applied Mechanics
Indian Institute of Technology Madras (IITM), Chennai, India

June 2016 - December 2016
Lecturer
Department of Mechanical Engineering
Bannari Amman Institute of Technology (BITS), Tamilnadu, India

Education

2016 - 2022
PhD
Advisor: Prof. Anubhab Roy
Fluid Mechanics Division
Department of Applied Mechanics
Indian Institute of Technology Madras (IITM), Chennai, India

2014 - 2016
Masters of Engineering (Engineering Design)
Department of Mechanical Engineering
Government College of Technology (GCT), Coimbatore, India

2010 - 2014
Bachelor of Engineering
Department of Mechanical Engineering
Loyola Institute of Technology and Science, Tamilnadu, India

Publications

1. D. J. Dhas and A. Roy. (2022). Stability of gravity-driven particle-laden flows - Roles of shear-induced migration and normal stresses. *J. Fluid Mech*, **938**, A29.

2. D. J. Dhas and A. Roy. (2022). Wavy regime of a colloidal falling film. *Phys. Rev. Fluids*, **7(6)**, 064307.

3. S. Shuai*, D. J. Dhas*, A. Roy and M. H. Kasbaoui. (2022). Instability of a dusty vortex. *J. Fluid Mech*, **948**, A56. *Equal contribution.

4. D. J. Dhas, A. Roy and S. Toppaladoddi. (2023). Films over phase-changing planes. *J. Fluid Mech*, **977**, A34.

5. D. J. Dhas and C. Marchioli. (2025). Orientational dynamics of long flexible fibers in wall-bounded turbulence. *J. Fluids Eng.*, 147(7).

Talks

1. Heavy flexible fibers in turbulent channel flows, *77th Annual Meeting of the Division of Fluid Dynamics*, 24 to 26 November 2024, Salt Lake City, Utah, USA.

2. Curved fibers in wall-bounded turbulence, 1^{st} *European Fluid Dynamics Conference (EFDC1)*, 16 to 20 September 2024, RWTH Aachen University, Aachen, Germany.

3. Flexible fibers in wall-bounded turbulence, *XXVI Congresso AIMETA*, 2 to 6 September 2024, University of Naples Federico II, Naples, Italy.

4. Slender flexible fibers in turbulent channel flows, *DLES 14 - Direct and Large Eddy Simulation*, 10 to 12 April 2024, Friedrich-Alexander-Universität, Erlangen-Nürnberg, Germany.

5. Instability of a dusty vortex, *14th European Fluid Mechanics Conference (EFMC14)*, 13 to 16 September 2022, Athens, Greece.

6. Nonlinear waves in particle-laden free surface flows, *IUTAM Symposium: From Stokesian suspension dynamics to particulate flows in turbulence*, 29 August to 2 September 2022, IMFT, Toulouse, France.

7. Instabilities in sediment-laden free surface flows, *Ocean Sciences Meeting 2022*, 28 February to 4 March 2022, Virtual, Hawaii.

8. Falling films over phase-changing planes, *APS March Meeting 2021*, 15 to 19 March 2021, Virtual, Central Daylight Time, USA.

9. Stability of a particle-laden vortex, *Complex Fluids 2020*, 10 to 12 December 2020, Virtual, Indian Institute of Technology Bombay.

10. Wavy regime of a colloidal falling film, *73rd Annual Meeting of the APS Division of Fluid Dynamics*, 22 to 24 November 2020, Virtual, CT (Chicago time).

11. Stability of a particle-laden film falling down an incline, *IUTAM Symposium in Computational Modelling of Instabilities and Turbulence in Separated Two-Phase Flows*, 10 to 12 June 2019, University of Dublin, Ireland.

12. Dynamics of particle-laden thin films: The role of hydrodynamic diffusion, *Fluid Mechanics and Fluid Power (FMFP)*, 10 to 12 December 2018, Indian Institute of Technology Bombay.

Advanced Schools

1. Drops, Jets and Films, CISM, Udine, Italy, 2024.
2. Macromechanics of geophysical flow, CISM, Udine, Italy, 2023.
3. Machine Learning for Fluid Mechanics, CISM, Udine, Italy, 2023.
4. Liquid Interfaces, Drops and Sprays, CISM, Udine, Italy, 2023.
5. Interfacial Flows – The Power and Beauty of Asymptotic Methods, CISM, Udine, Italy, 2023.
6. High Performance Computing, Indian Institute of Science, Bangalore, India, 2019.
7. Computational Methods in Fluid Mechanics, Indian Institute of Technology Bombay, India, 2018.
8. Stochastic thermodynamics, Active and Driven systems, International Centre for Theoretical Sciences, Bangalore, India, 2017.

Teaching experience

- Perturbation methods in science, Scuola Superiore dell'Università degli Studi di Udine, Italy
- Mechanical Vibrations, BITS, India
- Engineering Graphics, BITS, India

I have also conducted tutorials, prepared and graded assignments for:

- Engineering Mechanics, IITM, Chennai
- Microhydrodynamics, IITM, Chennai
- Analytical Methods in Engineering Mechanics, IITM, Chennai
- Thermal Engineering and Fluid Mechanics, GCT, Coimbatore
- Engineering Graphics, GCT, Coimbatore