

Chandan Bose | MS, PhD, MRAeS, FHEA

Assistant Professor of Aerospace Engineering, The University of Birmingham

Head of the Bio-Inspired Fluid-Structure Interaction Laboratory, Aerospace Engineering

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Area of Expertise

Fluid-Structure Interaction, Bioinspired Engineering, Unsteady Aerodynamics, Nonlinear Aeroelasticity, Flapping Flight, Turbulent Flows, Flow Energy Harvesting, Data-Driven Reduced Order Modelling.

Academic Appointments

School of Met & Mat, College of EPS, University of Birmingham **August 2023 - Present**
Assistant Professor of Aerospace Engineering *Birmingham, UK*

Research, Teaching, Administration

Indian Institute of Technology Bombay **August 2025 - Present**
Visiting Assistant Professor *Mumbai, India*

Research and Education

School of Engineering, University of Edinburgh **September 2022 - February 2023**
University Teacher (Adjunct Lecturer) - 0.6FTE *Edinburgh, UK*

Lecturer and Course Organiser for the course - Fluid Mechanics 4 (Mechanical)

<http://www.drps.ed.ac.uk/22-23/dpt/cxmece10004.htm>

School of Engineering, University of Edinburgh **September 2021 - July 2023**
Post-Doctoral Research Associate *Edinburgh, UK*

Project: Dandidrone - A Dandelion-Inspired Drone for Swarm Sensing (funded by ERC).

<https://voilab.eng.ed.ac.uk/dandidrone>

Advisor: Prof. Ignazio Maria Viola.

Dept. of Aerospace and Mechanical Engineering, University of Liège **January, 2020 - September, 2021**
Wallonie Bruxelles International Excellence Post-Doctoral Fellow *Liège, Belgium*

Advisor: Prof. Grigorios Dimitriadis.

Dept. of Applied Mechanics, Indian Institute of Technology Madras **September, 2019 - December, 2019**
Project Officer *Chennai, India*

Advisors: Prof. Sunetra Sarkar & Prof. Sayan Gupta.

Dept. of Applied Mechanics, Indian Institute of Technology Madras **July, 2014 - September, 2019**
Graduate Research Scholar *Chennai, India*

Leadership and Administrative Responsibilities

EPSRC, UKRI **March 2026 - Present**
EPSRC Peer Review College Member *Birmingham, UK*

Institute of Data and AI **June 2025 - Present**
Fellow and Theme Lead, Uni. of Birmingham *Birmingham, UK*

Centre for Optimisation, Simulation and Data Driven Modelling **September 2024 - Present**
Deputy Director and Fluid Mechanics Lead, Uni. of Birmingham *Birmingham, UK*

Birmingham Environment for Academic Research (BEAR), Uni. of Birmingham **January 2024 - Present**
Chair of Birmingham Fluid Dynamics and OpenFOAM Special Interest Groups *Birmingham, UK*

Midlands Fluid Mechanics Group **January 2024 - Present**
Co-Lead, University of Birmingham *Birmingham, UK*

School of Met & Mat, University of Birmingham **September 2023 - Present**
Deputy School Impact Lead, EDI Committee Member *Birmingham, UK*

FOSSEE Project, IIT Bombay <https://cfd.fossee.in/team>

Co-PI and Advisor of CFD with OpenFOAM

March 2022 - Present

Bombay, India

University of Edinburgh

Coordinator of the Edinburgh Fluid Dynamics Group, <https://www.efdg.ed.ac.uk/>

January 2022 - July 2023

Edinburgh, UK

University of Edinburgh

Member of Academic Senate

August 2022 - July 2023

Edinburgh, UK

<https://www.ed.ac.uk/academic-services/committees/senate>

Professional Qualifications

Institute for Academic Development, The University of Edinburgh

Post Graduate Certification Programme in Academic Practice (PgCert)

2024

Edinburgh, UK

Indian Institute of Technology Madras

M.S. & Ph.D., Department of Applied Mechanics

2019

Chennai, T.N., India

Thesis: Dynamical Analysis of Unsteady Flow Phenomena around Flapping Wings

Overall GPA: **9.57/10** (10/10, based on 10 best courses required for 30 credits)

Achievements:

- **Institute Research Award, IIT Madras.**
- **V. Ramamurthy Best Thesis Award in Applied Mechanics Department, IIT Madras.**
- **Innovative Thesis Project Award, Indian National Academy of Engineering.**

Jadavpur University

B.E., Department of Civil Engineering

2013

Kolkata, W.B., India

Final Year Project: Design of Civil Structures Subjected to Wind and Earthquake Loads.

Overall GPA: **9.01/10**

Achievement: First Class Honors, University Gold Medalist.

Fellowships

Chargé de Recherches - FNRS Post-Doctoral Fellowship by F.N.R.S., Belgium

Project: Numerical and Experimental Investigation of Three-Dimensional Dynamic Stall at Low to Moderate Reynolds Numbers: Prediction and Control.

Funding Value: €100,000, Duration: 3 years (Awarded in June 2021).

Role: Principal-Investigator.

Promoter (s): Prof. Grigorios Dimitriadis and Prof. Vincent Terrapon, Dept. of Aerospace and Mechanical Engineering, University of Liege, Belgium.

Wallonie Bruxelles International Excellence Post-Doctoral Fellowship by Wallonie Bruxelles International, Belgium

Project: Numerical and Experimental Investigation of the Non-Linear Fluid-Structure Interaction Dynamics of Flapping Wings in Turbulent Flows.

Funding Value: €52,000, Duration: 2 years (2020 - 2021).

Role: Principal-Investigator.

Promoter: Prof. Grigorios Dimitriadis, Dept. of Aerospace and Mechanical Engineering, University of Liege, Belgium.

Project Funding and Grantsmanship

The Scheme for Promotion of Academic and Research Collaboration (SPARC) with IIT Kharagpur by Govt. of India

Project: Simulating Nature in Exa-Scale: GPU-Accelerated Fluid-Structure Interaction Modelling of Bio-Inspired Drone Swarms.

Funding Value: £76k, Duration: 2 years (2026 - 2028).

Role: Principal-Investigator.

Co-investigator: Dr. Somnath Roy, IIT Kharagpur, India.

Going Global - Springboard Programme with Max Plank Institute, Germany by British Council

Project: Investigating Collective Flight & Swimming For Bio-Inspired Robotics.

Funding Value: £7k, Duration: 1 year (Jan 2026 - Dec 2026).

Role: Principal-Investigator.

Institute of Data and AI Pump Priming Collision Grant by University of Birmingham

Project: DeepSight: Data-Driven Early Detection of Glaucoma and Virtual Surgery Modelling.

Funding Value: £16k, Duration: 6 months (January 2026 - July 2026).

Role: Principal-Investigator.

Access To HPC Grant by Engineering and Physical Sciences Research Council, UK

Project: Wave propagation and impulse enhancement in squid-inspired flexible nozzles subjected to rotary wake.

Funding Value: £37k (9,830,400 CPUh on Cirrus), Duration: 1 year (2026 - 2027).

Role: Principal-Investigator.

COSIMO Network+ Seedcorn Grant by University of Birmingham

Project: DeepSight: Smarter Glaucoma Detection via Spatio-Temporal Deep Learning.

Funding Value: £6.5k, Duration: 6 months (September 2025 - March 2026).

Role: Principal-Investigator.

Baskerville HPC Grant by University of Birmingham

Project: GPU-Accelerated Solver Development for Simulating Butterfly Swarms.

Funding Value: £35k, Duration: 10 months (April 2025 - January 2026).

Role: Principal-Investigator.

International Exchange Grant with IIT Kharagpur, India by Royal Society

Project: Development of a Multi-GPU Fluid-Structure Interaction Solver for Simulating Bio-Inspired Flapping Flight.

Funding Value: £11k, Duration: 2 years (Dec 2024 - Nov 2026).

Role: Principal-Investigator.

Co-investigator: Dr. Somnath Roy, IIT Kharagpur, India.

Going Global - Springboard Programme with ESPCI Paris, CNRS, France by British Council

Project: Wave Energy Conversion through the Wave-Structure Interaction of Bioinspired Flexible Membranes.

Funding Value: £7k, Duration: 1 year (Jan 2025 - Dec 2025).

Role: Principal-Investigator.

Co-investigator: Prof. Ramiro Godoy-Diana, CNRS.

Impact Acceleration Account Funding by EPSRC

Project: Open-Source Code and Software Impact Pathways.

Funding Value: £6k, Duration: 6 months (Jan 2025 - June 2025).

Role: Principal-Investigator.

EuroMech Colloquium Funding by EuroMech Society

Project: Colloquium on Bio-Inspired Fluid-Structure Interaction.

Funding Value: €3k, Duration: 1 year (2024 - 2025).

Role: Principal-Investigator.

Co-investigator: Prof. Ramiro Godoy-Diana, CNRS.

UK-France Collaborative Seed Funding by French Embassy, UK

Project: Vortex-Dominated Flow Physics of Bio-Inspired Porous and Flexible Structures

Funding Value: £10k, Duration: 1 year (2023 - 2024).

Role: Principal-Investigator.

Co-investigator: Prof. Ramiro Godoy-Diana, CNRS.

Archer2 Pioneer Grant by Engineering and Physical Sciences Research Council, UK

Project: Investigation of Bio-Inspired Multi-Phase Fluid-Structure Interaction Problems.

Funding Value: £70k, Duration: 3 years (2023 - 2026).

Role: Principal-Investigator.

Access To HPC Grant by Engineering and Physical Sciences Research Council, UK

Project: Flight dynamics of free-falling three-dimensional porous bodies subjected to stochastic transverse gusts.

Funding Value: £30k, Duration: 1 year (2023 - 2024).

Role: Principal-Investigator.

Co-investigator: Dr. Ignazio Maria Viola, Reader, School of Engineering, University of Edinburgh.

Access To HPC Grant by Engineering and Physical Sciences Research Council, UK

Project: Fluid-Structure Interaction and wake dynamics of dandelion seed flight under gust.

Funding Value: £28k, Duration: 1 year (2022 - 2023).

Role: Principal-Investigator.

Co-investigator: Dr. Ignazio Maria Viola, Reader, School of Engineering, University of Edinburgh.

Awards & Honors

- **Delivered keynote lectures at the 11th and 12th International Conference on Fluid Mechanics & Fluid Power (FMFP-2024 and FMFP-2025)**, held in December 2024 and 2025, respectively, in India.
- **Awarded the 2025 CoSeC Fellowship** by the Science and Technology Facilities Council, UK.
- **Awarded the Best Simulation Image Prize (Saddal & Bose)** by ARCHER2, EPCC in 2025.
- **Shortlisted for HPCwire awards for best use of High Performance Computing using our supercomputer BlueBEAR and Tier 2 HPC system Baskerville** in 2025.
- **Awarded the Indian Overseas Prize by NRI Welfare Society** in July 2025.
- **Best Poster Award (Huang, Bose)** in the DisCoVor 2025 conference held at Montana, USA, in June 2025.
- **Best Poster Award (Huang, Bose)** in the Future Wind and Marine 2025 conference held at Edinburgh, Scotland, in February 2025.
- **Featured article by the Editor in Physics of Fluids: 'Wake-induced response of vibro-impacting systems'**, 2024.
- **Awarded the Best Early Career Simulation Image Prize** by ARCHER2, EPCC in 2024.
- **Awarded Fellowship of Higher Education Academy (FHEA)** by Advance HE, 2024.
- **Nominated for the O.C. Zienkiewicz Award for Young Scientists in Computational Engineering Sciences** by ECCOMAS, 2022.
- **FNRS Postdoctoral Fellowship, Belgium**, June 2021. [Web Link](#).
- **Wallonie Bruxelles International Excellence Postdoctoral Fellowship**, University of Liege, Belgium, 2020-2021.
- **Innovative Thesis Project Award at Doctoral Level, Indian National Academy of Engineering**, 2020, [Web Link](#).
- **V. Ramamurthy Best Thesis Award** in Applied Mechanics Department, IIT Madras, 2020, [Web Link](#).
- **Institute Research Award**, IIT Madras, 2019.
- **Outstanding Reviewer** recognition by International Journal of Non-Linear Mechanics, 2018.
- **Winner of the Cover of the OpenFOAM Journal** - 2021, 2022.
- **Reviewer of the Year 2020** in ASME Journal of Computational and Nonlinear Dynamics, 2021, [Web Link](#).
- **Innovative Research Project Grant (2018-19)** as PI from IC&SR, IIT Madras.
- **SERB International Travel Support Grant**, DST, India for attending IUTAM Symposium, 2018.
- **FGSA Travel Award for Excellence in Graduate Studies**, American Physical Society, 2018.
- **Editor's Pick in Physics of Fluids: 'Investigating chaotic wake dynamics past a flapping airfoil and the role of vortex interactions behind the chaotic transition'**, 2019.
- **Boeing Travel Grant** for attending AIAA Aviation Conference, 2017.
- **Excellent Poster Award**, European Physical Society in XVII IUPAP CCP, IITG, 2015.
- **Jadavpur University Gold Medal** for standing First in order of merit in B.E. Civil Final Examination, 2013.
- **Prof. Santimoy Niyogi Memorial Gold Medal**, Society of Civil Engineers, Jadavpur University, 2013.
- **Swapan Chandra Memorial Bronze Medal**, Jadavpur University, 2013.
- **Parthasarathi Ghosh Memorial Award**, Jadavpur University, 2013.
- **Sunit Kundu Memorial Gold Centered Silver Medal**, Jadavpur University, 2013.

Publications

Journal Articles

- **J32.** Hibah Saddal, Lucky Jayswal, **Chandan Bose*** (2026): **Effects of plunging acceleration on the passive morphing of avian-inspired flexible foils**, Under review in [Journal of Fluid Mechanics](#), DOI: <https://doi.org/10.48550/arXiv.2603.27794> [Web Link](#).
- **J31.** Haimi Jha, Hibah Saddal, **Chandan Bose*** (2026): **A Sparse Nonlinear Dynamic Model for Vortex-Induced Vibrations**, Under review in [Journal of Fluids and Structures](#), DOI: <https://doi.org/10.48550/arXiv.2603.27840> [Web Link](#).
- **J30.** Paras Singh, Daehyun Choi, Saad Bhamla, **Chandan Bose*** (2026): **Elastic wave propagation governs impulse enhancement of pulsed jet through flexible nozzles**, Under review in [Journal of Fluid Mechanics](#).

- **J29.** Daehyun Choi, Paras Singh, Ian Bergerson, Minh Kim, Jieun Park, Halley J. Wallace, Kenny Zhang, Sandy Y. Hsieh, Aqua T. Asberry, Theodore A. Uyeno, William F. Gilly, Hyungmin Park, Daeshik Kang, **Chandan Bose**, Saad Bhamla (2026): **Squid-inspired superpropulsion**, Under review in [Science Robotics](#).
- **J28.** Debajyoti Kumar, Siddharth D Sharma, **Chandan Bose**, Somnath Roy (2026): **GPU optimized integration of immersed boundary method and overset mesh framework for moving boundary problems**, Under review in [Journal of Computational Physics](#).
- **J27.** Jawahar Sivabharathy Samuthira Pandi, Ahmet Gungor, **Chandan Bose**, Antonio Attili, Ignazio Maria Viola (2026): **Effect of Transverse Gust on Free-Falling Plates**, Under review in [Journal of Fluid Mechanics](#).
- **J26.** Doudou Huang, **Chandan Bose**, Antonio Attili, Ignazio Maria Viola (2026): **Wake Stability of Permeable Disks**, Accepted in [Journal of Fluid Mechanics](#).
- **J25.** **Chandan Bose***, Muhammed Najvan and Sachin Yashavant Shinde (2026): **Thickness-induced wake bifurcation behind a pitching airfoil**, Under review in [Physical Review Fluids](#).
- **J24.** Pankaj Rohilla, Johnathan N. O'Neil, Paras Singh, Victor M. Ortega-Jimenez, Daehyun Choi, **Chandan Bose***, Saad Bhamla* (2026): **Interfacial vortex recapture enhances thrust in tiny water skaters**, Under review in [Royal Society Interface](#), DOI: <https://doi.org/10.1101/2024.06.17.599397>. [Web Link](#).
- **J23.** **Chandan Bose**, Callum Bruce, Ignazio Maria Viola (2025): **Porous Plates at Incidence**, [Theoretical and Computational Fluid Dynamics](#), Vol 39, article number 19, DOI: <https://doi.org/10.1007/s00162-025-00740-6>. [Web Link](#).
- **J22.** Dheeraj Tripathi, **Chandan Bose**, Sirshendu Mondal, J Venkatramani (2024): **Effect of structural parameters on the synchronization characteristics in a stall-induced aeroelastic system**, 133, 104246, [Journal of Fluids and Structures](#), DOI: <https://doi.org/10.1016/j.jfluidstructs.2024.104246>. [Web Link](#) (**I.F.: 3.482**).
- **J21.** Rohit Chawla, Aasifa Rounak, **Chandan Bose**, Vikram Pakrashi (2024): **Wake-induced response of vibro-impacting systems**, 36, 127148, [Physics of Fluids](#), DOI: <https://doi.org/10.1063/5.0236147>. [Web Link](#) (**I.F.: 4.1**).
- **J20.** Alex Cavanagh, **Chandan Bose** & Kiran Ramesh (2024): **Effect of sweep angle on three-dimensional vortex dynamics over plunging wings**, [Physics of Fluids](#), 36, 117115, DOI: <https://doi.org/10.1063/5.0227012>. [Web Link](#) (**I.F.: 4.1**).
- **J19.** Junlei Wang, Shenfang Li, Daniil Yurchenko, **Chandan Bose***, Hongjun Zhu (2024): **Effect of a downstream control cylinder on the flow-induced vibration of an elastically-supported primary cylinder**, [Physics of Fluids](#), Volume 36(6), DOI: <https://doi.org/10.1063/5.0207136>. [Web Link](#) (**I.F.: 4.1**).
- **J18.** Chhote Lal Shah, Dipanjan Majumdar, **Chandan Bose**, Sunetra Sarkar (2024): **Controlling the chaotic wake of a flapping foil by tuning its chordwise flexibility**, [Journal of Fluid and Structures](#), Volume 127, 104134, DOI: <https://doi.org/10.1016/j.jfluidstructs.2024.104134>. [Web Link](#) (**I.F.: 3.482**).
- **J17.** Abraham T. Chirathalattu, Santhosh B, **Chandan Bose**, Rony Philip, Bipin Balaram (2023): **Passive Suppression of Vortex-Induced Vibrations Using a Nonlinear Energy Sink - Numerical and Analytical Perspective**, Accepted for publication in [Mechanical Systems and Signal Processing](#), Volume 182, 109556, DOI: <https://doi.org/10.1016/j.ymssp.2022.109556>. [Web Link](#) (**I.F.: 8.934**).
- **J16.** Chhote Lal Shah, Dipanjan Majumdar, **Chandan Bose**, Sunetra Sarkar (2022): **Chordwise flexible aft-tail suppresses jet-switching by reinstating wake periodicity in a flapping foil**, [Journal of Fluid Mechanics](#), Volume 946, A12, DOI: <https://doi.org/10.1017/jfm.2022.591>. [Web Link](#) (**I.F.: 4.245**).
- **J15.** Dheeraj Tripathi, R. Shreenivas, **Chandan Bose**, Sirshendu Mondal, J Venkatramani (2022): **Experimental Investigation on the Synchronization Characteristics of a Pitch-Plunge Aeroelastic System Exhibiting Stall Flutter**, [Chaos](#), 32, 073114, DOI: <https://doi.org/10.1063/5.0096213>. [Web Link](#) (**I.F.: 3.741**).
- **J14.** Dipanjan Majumdar, **Chandan Bose**, Sunetra Sarkar (2022): **Transition boundaries and an order-to-chaos map for the flow field past a flapping foil**, [Journal of Fluid Mechanics](#), 942, A40, 2022, DOI: <https://doi.org/10.1017/jfm.2022.385>. [Web Link](#) (**I.F.: 4.245**).
- **J13.** Sai Vishal Gali, Ashwad Raaj, **Chandan Bose**, Venkatramani Jagadish, Grigorios Dimitriadis (2022): **Numerical investigation of discontinuity-induced bifurcations in an aeroelastic system with coupled non-smooth nonlinearities**, [Nonlinear Dynamics](#), 108, 3025-3051, 2022, DOI: <https://link.springer.com/article/10.1007/s11071-022-07352-3>. [Web Link](#) (**I.F.: 5.741**).

- **J12.** Dheeraj Tripathi, Sai Vishal, **Chandan Bose**, Venkatramani J. (2022): **Stall-induced fatigue damage in nonlinear aeroelastic systems under stochastic inflow: numerical and experimental analyses**, [International Journal of Non-Linear Mechanics](#), 142, 104003, 2022, DOI: <https://doi.org/10.1016/j.ijnonlinmec.2022.104003>. **Web Link (I.F.: 3.336)**.
- **J11.** Sai Vishal, Ashwad Raaj, **Chandan Bose**, Venkatramani J. (2021): **Routes to Synchronization in a pitch-plunge aeroelastic system with coupled structural and aerodynamic nonlinearities**, [International Journal of Non-Linear Mechanics](#), Volume 135, 103766, 2021. DOI: <https://doi.org/10.1016/j.ijnonlinmec.2021.103766>. **Web Link (I.F.: 3.336)**.
- **J10.** Junlei Wang, Shanghao Gu, Abdessattar Abdelkefi, **Chandan Bose *** (2021): **Enhancing Piezoelectric Energy Harvesting from the Flow-Induced Vibration of a Circular Cylinder Using Dual Splitters**, [Smart Materials and Structures](#), Volume 30, 05LT01, DOI: <https://doi.org/10.1088/1361-665X/abefb5>, **Web Link (I.F.: 4.131)**
- **J9.** **Chandan Bose**, Sayan Gupta, Sunetra Sarkar (2021): **Dynamic interlinking between near and far-field wakes behind a pitching-plunging airfoil**, [Journal of Fluid Mechanics](#), Volume 911, A31. DOI: <https://doi.org/10.1017/jfm.2020.1030>, **Web Link (I.F.: 4.245)**.
- **J8.** Dipanjan Majumdar, **Chandan Bose**, Sunetra Sarkar (2020): **Effect of gusty inflow on the jet-switching characteristics of a plunging foil**, [Physics of Fluids](#), Volume 32(11), 117105. DOI: <https://doi.org/10.1063/5.0024084>, **Web Link (I.F.: 4.980)**.
- **J7.** Dipanjan Majumdar, **Chandan Bose**, Sunetra Sarkar (2020): **Capturing the dynamical transitions in the flow-field of a flapping foil using Immersed Boundary Method**, [Journal of Fluids and Structures](#), Volume 95 Pages 102999. DOI: <https://doi.org/10.1016/j.jfluidstructs.2020.102999>, **Web Link (I.F.: 3.482)**.
- **J6.** **Chandan Bose**, Sayan Gupta, Sunetra Sarkar (2019): **Transition to chaos in the flow-induced vibration of a pitching-plunging airfoil at low Reynolds numbers : Ruelle-Takens-Newhouse scenario**, [International Journal of Non-Linear Mechanics](#), Volume 109, Pages 189 - 203. DOI: <https://doi.org/10.1016/j.ijnonlinmec.2018.11.012>, **Web Link (I.F.: 3.336)**.
- **J5.** **Chandan Bose**, Sunetra Sarkar (2018): **Investigating chaotic wake dynamics past a flapping airfoil and the role of vortex interactions behind the chaotic transition**, [Physics of Fluids](#), Volume 30, Issue 4, 047101. DOI: <https://doi.org/10.1063/1.5019442>, **Web Link (I.F.: 4.980)**.
- **J4.** **Chandan Bose**, Sayan Gupta, Sunetra Sarkar (2018): **Dynamical behaviour of unsteady flow-field of an elastically mounted flapping airfoil**, [AIAA Journal](#), Volume 56, Issue 5, Pages 2062-2069. DOI: <https://doi.org/10.2514/1.J056664>, **Web Link (I.F.: 2.127)**.
- **J3.** S Krishna Kumar, **Chandan Bose**, Shaikh Faruque Ali, Sunetra Sarkar, Sayan Gupta (2017): **Investigations on a vortex induced vibration based energy harvester**, [Applied Physics Letters](#), Volume 111, Issue 24, 243903. DOI: <https://doi.org/10.1063/1.5001863>, **Web Link (I.F.: 3.971)**.
- **J2.** **Chandan Bose**, Vikas Reddy, Sayan Gupta, Sunetra Sarkar (2017): **Transient and stable chaos in dipteran flight inspired flapping flight**, [Journal of Computational and Nonlinear Dynamics](#), Volume 13, Issue 2, 021014, DOI: <https://doi.org/10.1115/1.4038447>, **Web Link (I.F.: 2.085)**.
- **J1.** Sandeep Badrinath, **Chandan Bose**, Sunetra Sarkar (2017) : **Identifying the route to chaos in the flow past a flapping airfoil**, [European Journal of Mechanics/ B-Fluids](#), Volume 66, Pages 38-59, DOI: <https://doi.org/10.1016/j.euromechflu.2017.05.012>, **Web Link (I.F.: 2.598)**.

Book Chapters.....

- **B15.** Hibah Saddal, Lucky Jayswal, **Chandan Bose** (2026): **Gust Response of Bio-Inspired Morphing Wing Sections**, in book: **Proceedings of the Cambridge Unsteady Flow Symposium 2026**, accepted for publication.
- **B14.** Manu Aryal, Manabendra De, **Chandan Bose** (2026): **Aerodynamics of Bio-Inspired Vertical Axis Wind Turbine Rotors**, in book: **Advances in Fluid Mechanics and Fluid Power 2026**, accepted for publication.
- **B13.** Shreyas Shrestha, Tushar Chourushi, **Chandan Bose** (2026): **Comparison of Viscosity Models for the Simulation of Non-Newtonian Flow in Lid-Driven Cavity**, in book: **Advances in Fluid Mechanics and Fluid Power 2026**, accepted for publication.
- **B12.** Samim Khadka, S Harikrishnan, **Chandan Bose** (2026): **Wave-Structure Interaction of Tandem Floating Barges: An Overset Mesh Approach**, in book: **Advances in Fluid Mechanics and Fluid Power 2026**, accepted for publication.
- **B11.** Haimi Jha, Hibah Saddal, **Chandan Bose** (2026): **Efficacy of the Weak Formulation of Sparse Nonlinear Identification in Predicting Multi-Frequency Vortex-Induced Vibrations**, in book: **Advances in Fluid Mechanics and Fluid Power 2026**, accepted for publication.

- **B10.** Yabin Liu, **Chandan Bose**, Zhong-Nan Wang (2025): **Controlling Tip Leakage Flow with Permeable Tip Treatment**, in book: **Proceedings of the Cambridge Unsteady Flow Symposium 2024**, ISBN: 978-3-031-69035-8, Pages: 289-304, DOI: https://doi.org/10.1007/978-3-031-69035-8_18, **Web Link**.
- **B9.** Chhotelal Shah, Dipanjan Majumdar, Sunetra Sarkar, **Chandan Bose** (2022): **Wake dynamics of a flexible flapping filament at low Reynolds number**, in book: **Aerospace and Associated Technology**, ISBN: 9781003324539, Routledge, DOI: <https://doi.org/10.1201/9781003324539>, **Web Link**.
- **B8.** Rik Mondal, **Chandan Bose**, Sirshendu Mondal (2022): **Synchronization Study on Vortex-Induced Vibrations Using Wake Oscillator Model**, in book: **Advances in Nonlinear Dynamics**, Springer Nature, ISBN: 978-3-030-81162-4, Pages: 65–74, DOI: https://doi.org/10.1007/978-3-030-81162-4_6, **Web Link**.
- **B7.** Dheeraj Tripathi, Sai Vishal, **Chandan Bose**, J Venkatramani (2022): **Response Analysis of Coupled Non-Smooth Nonlinear Aeroelastic System Subjected to Stochastic Input Fluctuations**, in book: **Advances in Nonlinear Dynamics**, Springer Nature, ISBN: 978-3-030-81162-4, Pages: 877–886, DOI: https://doi.org/10.1007/978-3-030-81162-4_75, **Web Link**.
- **B6.** **Chandan Bose**, Sayan Gupta, Sunetra Sarkar (2021): **Transitional flow dynamics past a passively flapping airfoil in gusty flow**, in book: **Advances in Critical Flow Dynamics Involving Moving/Deformable Structures**, Springer Nature, ISBN: 978-3-030-55594-8, Pages: 135-148, DOI: https://doi.org/10.1007/978-3-030-55594-8_14, **Web Link**.
- **B5.** Dipanjan Majumdar, **Chandan Bose**, Sunetra Sarkar (2020): **Probing into the efficacy of discrete forcing Immersed Boundary Method in capturing the aperiodic transition in the wake of a flapping airfoil**, in book: **Recent Advances in Computational Mechanics and Simulations- Volume-II: Nano to Macro**, Springer Nature, ISBN: 978-981-15-8315-5, Pages: 271-281, DOI: https://doi.org/10.1007/978-981-15-8315-5_24, **Web Link**.
- **B4.** **Chandan Bose**, Rajanya Chatterjee, Sayan Gupta, Sunetra Sarkar (2020): **Investigating fluid-structure interaction behavior of a chord-wise flexible filament in the wake of a bluff body using partitioned strong coupling approach**, in book: **Recent Advances in Computational Mechanics and Simulations- Volume-II: Nano to Macro**, Springer Nature, ISBN: 978-981-15-8315-5, Pages: 453-463, DOI: https://doi.org/10.1007/978-981-15-8315-5_38, **Web Link**.
- **B3.** Dipanjan Majumdar, **Chandan Bose**, Purna Dhareshwar, Sunetra Sarkar (2020): **Fluid-body interactions in fish-like swimming**, in book: **Advanced Topics in Structural Vibrations, Lecture Notes in Mechanical Engineering**, Springer Nature, ISBN: 978-981-15-5862-7, Pages: 509-519, DOI: https://doi.org/10.1007/978-981-15-5862-7_41, **Web Link**.
- **B2.** **Chandan Bose**, Sayan Gupta, Sunetra Sarkar (2020): **Fluid-structure interaction dynamics of a flexible foil in low Reynolds number flows**, in book: **Recent Advances in Theoretical, Applied, Computational and Experimental Mechanics**, Eds. Singh B., Roy A., Maiti D., Springer Nature, ISBN: 978-981-15-1188-2, Pages: 449-459, DOI: https://doi.org/10.1007/978-981-15-1188-2_37, **Web Link**.
- **B1.** **Chandan Bose**, S. Krishna Kumar, Sayan Gupta, Sunetra Sarkar (2018): **Interaction of a flexible splitter plate with vortex shedding past a rigid circular cylinder**, in book: **Recent Advances in Structural Engineering Volume 2**, Eds. A. Rama Mohan Rao and K. Ramanjaneyulu, Springer Nature, ISBN: 978-981-13-0364-7, Pages: 841-852, DOI: https://doi.org/10.1007/978-981-13-0364-7_71, **Web Link**.

Scopus Indexed Proceedings.....

- **P8.** Marc L. Paturle, **Chandan Bose**, Ignazio M. Viola and Kiran Kumar Ramesh (2022): **Dynamic Detection of Flow Separation Using Integral Formulation of Unsteady Boundary Layer Equations**, **AIAA Aviation Forum 2022 Proceedings (AIAA 2022-4138)**, American Institute of Aeronautics and Astronautics, DOI: <https://doi.org/10.2514/6.2022-4138>, **Web Link**.
- **P7.** **Chandan Bose**, Vincent E. Terrapon, Grigorios Dimitriadis (2022): **Influence of Leading-Edge Protuberances on the Flow Physics of Stall**, **AIAA Meeting Paper (AIAA 2022-1969)**, DOI: <https://arc.aiaa.org/doi/abs/10.2514/6.2022-1969>, **Web Link**.
- **P6.** Dipanjan Majumdar, **Chandan Bose**, Sunetra Sarkar (2021): **Nonlinear Fluid-Elastic Behavior of a Flapping Wing With Low-Order Chord-Wise Flexibility**, **International Mechanical Engineering Congress and Exposition 2020 Proceedings (IMECE2020-23890)**, American Society of Mechanical Engineers, Vol. 84546, p. V07AT07A028, DOI: <https://doi.org/10.1115/IMECE2020-23890>, **Web Link**.
- **P5.** **Chandan Bose**, Sunetra Sarkar, Sayan Gupta (2018): **Stochastic bifurcation analysis of an elastically mounted flapping airfoil in an inviscid fluid**, **MATEC Web of Conferences**, 148, 08001, DOI: <https://doi.org/10.1051/mateconf/201814808001>, **Web Link**.

- **P4. Chandan Bose, Sunetra Sarkar (2017): Flow periodicity analysis past a flapping airfoil using proper orthogonal decomposition, AIAA Meeting Paper (AIAA 2017 - 3647) , DOI: <https://doi.org/10.2514/6.2017-3647>, Web Link.**
- **P3. Chandan Bose, Sayan Gupta & Sunetra Sarkar (2017): Quasi-periodic vortical signature of an elastically mounted flapping airfoil, AIAA Meeting Paper (AIAA 2017 - 3644), DOI: <https://doi.org/10.2514/6.2017-3644>, Web Link.**
- **P2. Chandan Bose, Sayan Gupta, Sunetra Sarkar. Dynamical stability analysis of a fluid structure interaction system using high fidelity Naviers-Stokes solver, Procedia Engineering, 144 (C), 883-890, DOI: <https://doi.org/10.1016/j.proeng.2016.05.107>, Web Link.**
- **P1. Chandan Bose, Sunetra Sarkar. Flexible flapping wings can exhibit quasi-periodic motion!, Journal of Physics Conference Series, 759(1):012082, DOI: <https://doi.org/10.1088/1742-6596/759/1/012082>, Web Link.**

Selected International Conference Presentations (2025).....

- **P. Singh, D. Choi, H. Wallace, G. Samal, W. Gilly, S. Bhamla, and C. Bose. Optimising Jet Impulse by Tuning the Wave Propagation in Bio-Inspired Flexible Nozzles , APS DFD Conference, Houston, Texas, November 23-25, 2025.**
- **D. Choi, P. Singh, H. Wallace, G. Samal, W. Gilly, C. Bose, and S. Bhamla. Geometrical Effects of Free-End Nozzles on Wave Reflection in Self-Oscillating Flexible Nozzles, APS DFD Conference, Houston, Texas, November 23-25, 2025.**
- **Doudou Huang, C. Bose, Ignazio Maria Viola. On the wake stability of permeable disks, APS DFD Conference, Houston, Texas, November 23-25, 2025.**
- **Chandan Bose, Debajyoti Kumar, Siddharth Sharma, Somnath Roy. Fluttery flight of butterfly swarms, UK Fluids Conference, Liverpool, UK, 2-4 Sep 2025.**
- **Hibah Saddal, Lucky Jayswal, Chandan Bose. Gust Response Bioinspired Morphing Wings, UK Fluids Conference, Liverpool, UK, 2-4 Sep 2025.**
- **P. Singh, D. Choi, H. Wallace, G. Samal, W. Gilly, S. Bhamla, and C. Bose. Computational Modelling and Bayesian optimisation of squid-inspired flexible nozzles, UK Fluids Conference, Liverpool, UK, 2-4 Sep 2025.**
- **Hibah Saddal, Lucky Jayswal, Chandan Bose. Dynamical Behaviour and Gust Response of a Flapping Foil with Variable Flexibility, 2nd European Fluid Dynamics Conference (EFDC2), Dublin, Ireland, 26-29 August 2025.**
- **Hibah Saddal, Chandan Bose. Fluid-structure interaction of bio-inspired flexible flaps and morphing foils, EuroMech Symposium 654 on Bioinspired Fluid-Structure Interaction, Vienna, Austria, 9-11 July 2025.**
- **D. Choi, H. Wallace, G. Samal, P. Singh, W. Gilly, C. Bose, and S. Bhamla. Design optimisation of soft nozzle for rotary propulsors, EuroMech Symposium 654 on Bioinspired Fluid-Structure Interaction, Vienna, Austria, 9-11 July 2025.**
- **Hibah Saddal, Gatien Polly, Diane Komaroff, Benjamin Thiria, Ramiro Godoy-Diana, Chandan Bose. Wave-Structure Interaction of Submerged Flexible Plates, XI International Conference on Computational Methods in Marine Engineering (Marine 2025), Edinburgh, Scotland, 23-25 June 2025.**

Academic Service & Outreach

Editorial Experience.....

- **March 2025 - Present: Editorial Board Member in Scientific Reports, Springer-Nature.**
- **May 2024 - Present: Editorial Board Member in Journal of Computational Sciences, Elsevier.**
- **September 2024 - Present: Editor in OpenFOAM Journal (flagship journal of the OpenFOAM community).**
- **Oct 2024 - Present: Guest Associate Editor in International Journal of Wind Engineering and Industrial Aerodynamics, Elsevier.**
- **Jan 2024 - Present: Editorial Board Member for Aerodynamics and Flight Mechanics, Frontiers in Aerospace Engineering.**
- **Jan 2024 - August 2024: Guest Editor of Frontiers in Physics, Special Issue: Physics in Fluid-Structure-Sound Interactions and Control.**
- **March 2023 - August 2023: Guest Editor of Frontiers in Energy Research, Special Issue: Fluid-Structure Interaction and Energy Harvesting in Ocean Engineering.**

Journal Reviewer.....

Journal of Fluid Mechanics, Journal of Fluids and Structures, Physics of Fluids, Journal of Fluids Engineering, AIAA Journal, Aerospace Science and Technology, Nonlinear Dynamics, Mechanical Systems and Signal Processing, Nature Scientific Reports, Royal Society Proceedings B (Selected).

Proposal Review and Panel Membership.....

- 2025 - Present: Reviewed multiple EPSRC standard and new investigator award grant proposals.
- 2026: Served as a reviewer for the Software Sustainability Institute report.
- 2025: Served as a reviewer and panellist for STFC Research Software Maintenance Grant.
- 2025: Served as a reviewer and panellist for EPSRC Impact Acceleration Account Proposals.

Conference Organization.....

- June 2026: Scientific committee member of the 8th International Symposium on Computational Wind Engineering to be held in Canada, organised by Western University, <https://cwe2026.com/committees/>.
- January 2026: OpenFOAM Symposium 2026, held in IIT Bombay, India https://www.youtube.com/watch?v=An_hQIE4QNg.
- December 2025: Track Chair in the Heat And Mass Transfer Conference (IHMT-2025), held in IIT Jodhpur, India <https://events.iitj.ac.in/IHMT2025/home.php>.
- December 2025: Co-organiser of the special session on the Bio-Inspired Fluid-Structure Interaction in the International Conference on Theoretical Applied Computational and Experimental Mechanics (ICTACEM 2025), held in IIT Kharagpur, India <http://www.ae.iitkgp.ac.in/ictacem2025>.
- July 2025: Chair of the EuroMech Colloquium on Bio-Inspired Fluid-Structure Interaction, held in Vienna, Austria, <https://654.euromech.org/about/>.
- June 2025: Chair of the 3rd Midlands Fluid Mechanics Meeting 2025, held at the University of Birmingham, <https://midlands-fluids.github.io/mfmm2025.html>.
- June 2025: Organiser of the mini-symposium on Wave-Structure Interaction at the Marine2025 Conference, to be held Edinburgh, UK, <https://marine2025.cimne.com/event/area/6db9d4b9-1d90-11ef-9389-000c29ddfc0c>.
- September 2024: Organiser of the 1st Birmingham Fluids Day 2024, held at the University of Birmingham.
- September 2024: Co-organiser of the 2nd Midlands Fluid Mechanics Meeting 2024, held at the University of Leicester, <https://midlands-fluids.github.io/mfmm2024.html>.
- July 2024: Co-organiser of the 9th Bluff-Body Aerodynamics and Applications 2024 conference, held at the University of Birmingham, <https://uobevents.eventsair.com/bbaa-ix/> (successfully organised two mini-symposia on fluid-structure interaction and flow-induced energy harvesting).
- June 2024: Chair and organiser of the 1st UK-India OpenFOAM Symposium, held at IIT Kharagpur (300+ attendees).
- July 2023: Part of the organizing committee for the 18th OpenFOAM Workshop 2023, held at Genoa, Italy, <https://openfoamworkshop.org/>.
- January 2023 - December 2023: Co-organiser of the Intelligent and Bio-inspired Mechanics Seminar Series (online), <http://ibim-conference.com/>.
- July 2022: Part of the organising committee for the 17th OpenFOAM Workshop 2022, held at the University of Cambridge, UK.

Invited Talks.....

- January 2026: Department of Aerospace Engineering, MIT-ADT University, Pune, India.
- December 2025: Fluid Mechanics and Fluid Power Conference, Nirma University, India (Keynote Talk).
- May 2025: Faculty of Natural, Mathematical & Engineering Sciences, Department of Engineering, King's College London, UK.
- February 2025: Laboratoire Physique et mécanique des milieux Hétérogènes (PMMH) - CNRS - ESPCI Université PSL/Sorbonne Université/Université de Paris, France.
- December 2024: Fluid Mechanics and Fluid Power Conference, Aligarh Muslim University, India (Keynote Talk).
- November 2024: BIRD lab at the University of California, Davis, USA, <https://engineering.ucdavis.edu/events/seminar-aerodynamics-and-fluid-structure-interaction-small-flyers-chandan-bose>.

- **November 2024:** Animal Flight Lab Seminar at the Integrative Biology department at University of California Berkeley, USA.
- **August 2024:** International Simulation Olympiad Paanduv Applications, India (Keynote Talk), <https://www.paanduvapplications.com/international-simulation-olympiad>.
- **July 2024:** Department of Aerospace Engineering, University of Bristol, UK.
- **December 2023:** Department of Mechanical Engineering, IIT Kharagpur, India.
- **November 2023:** University of Warwick Fluid Mechanics Seminar Series, UK.
- **May 2023:** University of Glasgow Aerospace Seminar Series, UK.
- **March 2023:** Intelligent and Bio-inspired Mechanics Seminar Series, <http://ibim-conference.com/> (online).
- **February 2022:** Department of Mechanical Engineering, IIT Bombay, India.
- **February 2022:** Department of Mechanical Engineering, Shiv Nadar University, India.
- **July 2022:** Institute for Energy Systems Seminar Series, School of Engineering, University of Edinburgh, UK.
- **February 2021:** Fluids Meeting, Department of Aerospace and Mechanical Engineering, University of Liège, Belgium.
- **January 2021:** Indian National Academy of Engineering Webinar Series (Online).
- **October 2020:** Interdisciplinary Seminar on Biocomotion, Universität Rostock, Germany and Aix-Marseille Université, France (Online).
- **August 2020:** Mechanics Lecture Series, The Mechanics Discussions Forum (Online).
- **January 2020:** Mechanical Engineering Department, Jadavpur University, Kolkata, India.
- **March 2019:** AMSA Lecture Series, Applied Mechanics Student Association, IIT Madras, Chennai, India.
- **September 2018:** Dept. of Mechanical Engineering, National Institute of Engineering, Mysuru, India.
- **February 2018:** Open Seminar Series, Dept. of Physics, IIT Madras, Chennai, India.

Workshops

- January 2026: Organised and served as a resource person in an in-person **'Advanced OpenFOAM workshop'** (student strength 25+) under the FOSSEE (Free/Libre and Open Source Software for Education) project at Indian Institute of Technology Bombay, funded by the Ministry of Education, Govt. of India.
- November 2025: Organised a one-week **'Online Industry Readiness Workshop on Computational Fluid Dynamics (CFD)'** (student strength 300+) under the FOSSEE (Free/Libre and Open Source Software for Education) project at Indian Institute of Technology Bombay, funded by the Ministry of Education, Govt. of India.
- October 2025: Organised and delivered a training on Open-Source Codes for High-Performance Computing (OpenFOAM) as part of the UKACM-GACM Autumn School 2025. Web link: [Open-SourceCodesforHigh-PerformanceComputing](https://open-source-codes-for-high-performance-computing.org/).
- February 2024: Served as a resource person in a six-day **'Tackling CFD and Heat Transfer Problems using OpenFOAM'** workshop (student strength 125+) organised by the FOSSEE (Free/Libre and Open Source Software for Education) team, Indian Institute of Technology Bombay, India.
- July 2022: Served as a resource person in the **OpenFOAM Training Session, OpenFOAM Workshop 2022**, University of Cambridge, UK.
- August 2021: Served as a resource person in the **Networks and Dynamical Systems Workshop**, Complex Systems and Dynamics, IIT Madras, India (Online).
- February 2021: Served as a resource person in a three-day **'Computational Fluid Dynamics using OpenFOAM'** workshop (student strength 125+) organised by the FOSSEE (Free/Libre and Open Source Software for Education) team, Indian Institute of Technology Bombay, India.
- December 2020: Served as a resource person in the **High-Performance Computing (HPC) Workshop on Computational Fluid Dynamics (CFD)** powered by National Supercomputing Mission (NSM), IIT Madras, India (Online).
- September 2018: Successfully conducted and served as a resource person in a two-day **'Introduction to CFD using OpenFOAM'** workshop (student strength 15) in the Dept. of Mechanical Engineering, National Institute of Engineering, Mysuru, India.

Technical Committee Membership.....

- **OpenFOAM Technical Committee for Documentation and Tutorials**, January 2021 - Present, **Web Link**.
- **AIAA Focussed Discussion Group - Massively Separated Flows**, November 2022 - Present .

Professional Membership.....

- Member, **Royal Aeronautical Society (RAeS)**, 2025 - Present.
- Early Career Member (ID. 61274227), **The American Physical Society (APS)**, 2021 - Present.
- Young Professional Member (ID. 762678), **The American Institute of Aeronautics and Astronautics (AIAA)**, 2021 - 2024.
- Early Career Member (ID. 102203454), **The American Society of Mechanical Engineers (ASME)**, 2021 - 2022.
- Student Member, **Indian National Academy of Engineering**, 2021 - 2025.

Teaching Experience

University of Birmingham

Assistant Professor of Aerospace Engineering

- **Lecturer and Module Lead of Advanced Aerodynamic and Aeroelastic Analysis (optional module - under development)**
- **Lecturer and Module Lead of Aerodynamics and Propulsion (2026-2027)**
- **Lecturer of Aerodynamics - Airframe Design and Flight Dynamics (2025-2026; 2024-2025; 2023-2024)**
- **Advisor of Aerospace Group Project (2025-2026) - SkyAid: Fixed-Wing UAV Design for Sustainable Agriculture and Medical Logistics.**
- **Advisor of Undergraduate Research Projects: 2025-2026 (9 projects); 2024-2025 (9 projects); 2023-2024 (5 projects).**
- **Examiner of Aerospace Group Projects (2024-2025)**

University of Edinburgh

University Teacher in Mechanical Engineering

- **Lecturer and Course Organiser - MECE10004: Fluid Mechanics (Mechanical) 4 (Sem 1, 2022-2023)**
- **Instructor - PGEE11186: IDCORE Offshore Engineering course (Sem 1, 2022-23 & 2021-22)**
- **Teaching Assistant - SCEE09004: Partial Differential Equations 3 course (Sem 1, 2021-2022)**

University of Liège

Assisted in conducting tutorial classes and Mentored two groups of master degree students for their course projects

- **Aeroelasticity and Experimental Aerodynamics**, Instructor: Prof. Grigorios Dimitriadis (Fall 2020)
- **Turbulent Flows**, Instructor: Prof. Vincent Terrapon (Fall 2020)

Indian Institute of Technology Madras

Assisted in conducting computational tutorial classes, experimental laboratory classes, formulating assignments and grading exam papers

- **AM5117: Analytical Methods in Engineering Mechanics**, Instructor: Prof. Sayan Gupta (Jul-Nov, 2015)
- **AM1100: Engineering Mechanics**, Instructor: Prof. Sayan Gupta (Jan-May, 2016; Jan-May 2018)
- **AM2540: Applied Mechanics Lab**, Instructor: Dr. Shaikh Faruque Ali (Jul-Nov, 2016)
- **AM5340: Stochastic Processes in Structural Mechanics**, Instructor: Prof. Sayan Gupta (Jan-May, 2017)
- **AM5600: Computational Methods in Mechanics**, Instructor: Prof. Sayan Gupta (Jul-Nov, 2017)
- **AM5810: Computational Lab**, Instructor: Prof. Sayan Gupta (Jul-Nov, 2017), Dr. Ilaksh Adlakha (Jul-Nov, 2018)

Student Supervision

Ph.D. Students.....

- **Primary advisor: Mr. Yukesh Karki (Sept 2025 -), Ph.D. Scholar, Aerospace Engineering, University of Birmingham, Ph.D. Thesis: Fluid-Structure Interaction and Gust Response of Flexible Flapping Wings, funded by EPSRC DLA.**

- **Primary advisor: Mr. Arjun Shergil** (Sept 2025 -), Ph.D. Scholar, Aerospace Engineering, University of Birmingham, **Ph.D. Thesis: Development of a GPU-Accelerated Flow Solver for Simulating Bio-Inspired Flapping Flight, funded by University of Birmingham.**
- **Primary advisor: Ms. Hibah Saddal** (Oct 2024 - present), Ph.D. Scholar, Aerospace Engineering, University of Birmingham, **Ph.D. Thesis: Modelling and simulation of fluid-structure interaction problems with variable flexibility, funded by EPSRC DLA - <https://gtr.ukri.org/projects?ref=studentship-2945177>.**
- **Co-advisor: Ms. Doudou Huang** (2022 - present), Ph.D. Scholar, School of Engineering, The University of Edinburgh, co-supervising with Prof. Ignazio Maria Viola, **PhD Thesis: Aerodynamics of free-falling porous bodies, funded by EPSRC CDT on Wind and Marine Energy Systems.**
- **Co-advisor: Mr. Alex Cavanagh** (2021 - 2025), Ph.D. Scholar, Aerospace Engineering, The University of Glasgow, co-supervised with Dr. Kiran Ramesh, **PhD Thesis: Leading-edge vortex dynamics of swept wings, funded by University of Glasgow. Post Ph.D.: CFD Aerodynamics Engineer in Dynamique. <https://www.linkedin.com/in/alex-cavanagh/>.**
- **Co-advisor: Mr. Dheeraj Tripathi** (2020 - 2024), Ph.D. Scholar, Dept. of Mechanical Engineering, Shiv Nadar University, India, co-supervised with Dr. Venkatramani J., **PhD Thesis: Investigations into Stall Flutter Problems Subjected to Stochastic Inflows, funded by Shiv Nadar University. Post Ph.D.: Postdoctoral researcher at the American University of Sharjah, UAE. <https://www.linkedin.com/in/dheeraj-tripathi-798542253/>.**

Master's Students.....

- **Primary advisor: Ms. Lois Martin, Ms. Taran Jandu, Mr. Ayush Das, Mr. Derin Castaban, Mr. Daniel Butler, Mr. Rio Osman** (2026), M.Eng. Students, Aerospace Engineering, School of Metallurgy and Materials, University of Birmingham. **M.Eng. Group Project: SkyAid: Fixed-Wing UAV Design for Sustainable Agriculture and Medical Logistics.**
- **Co-advisor: Mr. Aman Shukla** (2026), M.Tech. Thesis, Department of Mechanical Engineering, IIT Kharagpur, India, co-supervised with Prof. Somnath Roy. **M.Tech. Thesis: CFD Simulation of Butterfly-Mimetic Flyers.**
- **Primary advisor: Ms. Hibah Saddal** (2024), M.Sc. Thesis, School of Mathematics, University of Birmingham, **M.Sc. Thesis: Mathematical Modelling of Vortex-Induced Vibrations.**
- **Co-advisor: Mr. Callum Bruce** (2021 - 2022), M.Res. Scholar, School of Engineering, The University of Edinburgh, co-supervised with Prof. Ignazio Maria Viola, **MRes Thesis: Aerodynamics of porous flat plates.**
- **Co-advisor: Mr. Saiyed Shahrukh Khan** (2021 - 2022), M.Tech. Student, Dept. of Mechanical Engineering, IIT Roper, India, co-supervised with Dr. Devranjan Samanta, **M.Tech. Thesis: Drop impact dynamics on hydrophobic and hydrophilic surfaces.**
- **Co-advisor: Mr. Loic Martin**, Master's Student (2020 - 2021), Department of Aerospace and Mechanical Engineering, University of Liege, Belgium, co-supervised with Dr. Thomas Andrianne. **Master's Thesis: Flow dynamics of tandem rough cylinders.**
- **Co-advisor: Mr. Vignesh S. P.** (2020 - 2021), M.Tech. Student, Dept. of Energy Engineering, College of Engineering Guindy, Anna University, India, co-supervised with Prof. R. Velraj. **M.Tech. Thesis: Aerodynamics Investigation of Whale-Inspired Wind Turbine Blades.**
- **Co-advisor: Mr. Abraham Thomas Chirathalattu** (2020 - 2021), M.Tech Student, Mechanical Engineering, Amrita School of Engineering, Coimbatore, India, co-supervised with Dr. Santhosh Balakrishnan and Dr. Bipin Balam. **M.Tech. Thesis: Suppressing the Instability due to Fluid-Structure Interactions using a Nonlinear Energy Sink.**
- **Co-advisor: Mr. Muhammad Najvan**, M.Tech. Student (2020 - 2021), Mechanical Engineering, IIT Kanpur, India, co-supervised with Dr. Sachin Shinde. **M.Tech. Thesis: Effect of thickness on the wake dynamics of flapping foils.**
- **Co-advisor: Mr. Brijesh K. Suman**, M.Tech. Student (2020 - 2021), Mechanical Engineering, IIT Kanpur, India, co-supervised with Dr. Sachin Shinde. **M.Tech. Thesis: Wake deflection and jet switching behind tandem airfoils.**