# Saranya Biswas

Email: biswas.saranya@gmail.com Phone: +91 7358458739 Website: https://saranyabiswas.github.io/

## Education

**IIT Madras** 2016-2024
*MS-PhD, Applied Mechanics*
CGPA: 9.13/10.0
Thesis: *Characterization of Noisy Dynamical Systems*
Supervisor: Prof. Sayan Gupta

**Jadavpur University** 2012-2016
*B.E. Mechanical Engineering*, First Class with Honours
CGPA: 8.90/10.0

## Experiences

**Visiting Assistant Professor**, Techno India University, Kolkata Aug 2025-Nov 2025

**Postdoctoral Research Fellow (Project Engineer)**, IIT Kanpur Apr 2024-Mar 2025
Worked with Prof. Anindya Chatterjee on nonlinear dynamics, impact modelling, and analytical mechanics.

## Publications (Selected)

### Journal Articles

- S. Biswas, A. Rounak, P. Perlikowski, S. Gupta, "Characterising stochastic fixed points and limit cycles for dynamical systems with additive noise", *Commun. Nonlinear Sci. Numer. Simulat.*, 101 (2021).
- S. Biswas, S. Gupta, "Localized differential stability of stochastic attractors", (Communicated, 2023).

### Manuscripts in Preparation

- S. Biswas, A. Chatterjee, "Short-time transverse impact response of a Hertzian body with a Rayleigh beam", 2025.
- S. Biswas, S. Gupta, "Relative global stability of stochastic attractors", 2024.
- S. Biswas, S. Gupta, "Identification of multiplicative-noise-induced intermittency using stochastic basin stability", 2024.

### Conferences

- S. Biswas, S. Gupta, "Basin stability and P-bifurcations in stochastic dynamical systems", PNLD 2023, IIT Madras.
- A. Rounak, S. Biswas, S. Gupta, "Tracking survivability of solutions", ICoEV 2020, Aberdeen.
- S. Biswas, A. Rounak, S. Gupta, "Stability of stochastic attractors", CNSD 2019, IIT Kanpur.

## Teaching

**Course Assistantships**
AM5600 Computational Methods in Mechanics (IITM)
AM5400 Experimental Stress Analysis Lab (IITM)
AM2540 Applied Mechanics Lab (IITM)
ME454 Numerical Solutions in Engineering Mechanics (IITK)
ME850 Basic Control Systems (IITK)

## Other Works

- Jointly preparing a postgraduate dynamics textbook manuscript (with Prof. A. Chatterjee, IIT Kanpur).
- Developed randomized question-paper generator for technical subjects (QP, v:2025, web link).

## Skills

MATLAB, Python, Mathematica, Octave, Inkscape, LaTeX, Blender, MS Office.

## Languages

English, Bengali, Hindi.