

Dr. Pooja Gautam

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RESEARCH INTERESTS

Control Theory, Differential Equations, Fractional Differential Equations, Controllability of Semilinear Systems, Fractional-Order Dynamical Systems, Stochastic and Impulsive Control Systems.

ACADEMIC QUALIFICATIONS

Qualification	Institution / University	Specialization	Result	Year
Ph.D.	Dr. A.P.J. Abdul Kalam Technical University, Lucknow	Mathematics	—	2025
M.Sc.	NIT Durgapur, West Bengal	Mathematics	6.61 CGPA	2019
B.Sc. (Hons.)	Miranda House, University of Delhi	Mathematics	69.30%	2017
Class XII	M.N.J. Inter College, Tirwa, Kan- nauj	P.C.M	93.80%	2014
Class X	M.N.J. Inter College, Tirwa, Kan- nauj	Sciences	90.20%	2012

Ph.D. Thesis: A Study on Controllability Results of Semilinear Control Differential Equations

PROFESSIONAL EXPERIENCE

- Currently working as Assistant Professor of Mathematics (Contractual) at Harcourt Butler Technical University (HBTU), Kanpur, since 06 August 2026.
- Assistant Professor of Mathematics**, Shri Ramswaroop Memorial University (SRMU), Lucknow, from 20 August 2024 to 05 August 2026. Taught UG and PG Mathematics courses, including Engineering Mathematics to B.Tech. students, along with tutorials, examinations, evaluation, and other academic activities.

AWARDS, FELLOWSHIPS & ACADEMIC ACHIEVEMENTS

- DST-INSPIRE Fellowship**, 2014–2019.
- Homi Bhabha Research-cum-Teaching Fellowship**, September 2020–August 2023.
- IIT JAM**, 2017.
- Best Resident Award**, Miranda House Hostel, University of Delhi.
- Summer Project Certificate**, D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi.
- Participant**, IWM Workshop, IIT Kanpur, 12–13 December 2025.
- Five-Day Faculty Development Programme (FDP)**, Shri Ramswaroop Memorial University (SRMU), Lucknow.

CERTIFICATIONS & WORKSHOPS

- Attended workshop on *Real vs Complex Analysis* from Miranda House College, University of Delhi.
- Certificate of Participation from VIT (Vellore Institute of Technology) for a two-day online workshop on $\LaTeX$.

- Certificate in *Advanced Research Methodology* from TLC, Ramanujan College, University of Delhi.

NPTEL Courses Completed

- **Dynamical System and Control** – IIT Roorkee
- **Numerical Linear Algebra** – IIT Roorkee
- **Transform Calculus and its Applications in Differential Equations** – IIT Kharagpur
- **Mathematical Methods and its Applications** – IIT Roorkee
- **Introduction to Methods of Applied Mathematics** – IIT Madras

TECHNOLOGICAL SKILLS

Microsoft Word, Excel, L^AT_EX, Beamer Overleaf, MATLAB, C Language, PowerPoint (Mac and PC).

PUBLICATIONS

1. Gautam, P., Shukla, A., and Patel, R., “Results on impulsive semilinear differential equations with control functions.” *Mathematical Methods in the Applied Sciences*, Wiley. DOI: [10.1002/mma.8363](https://doi.org/10.1002/mma.8363). (IF: 3.001).
2. Gautam, P., Shukla, A., “Stochastic controllability of semilinear fractional control Systems.” *Chaos, Solitons & Fractals*, Elsevier. DOI: [10.1016/j.chaos.2023.113858](https://doi.org/10.1016/j.chaos.2023.113858). (IF: 9.922).
3. Gautam, P., Shukla, A., “Stochastic controllability of partially observed semilinear fractional control systems.” *The Journal of Analysis*, Springer Nature Singapore. DOI: [10.1007/s41478-024-00774-9](https://doi.org/10.1007/s41478-024-00774-9).
4. Gautam, P., Shukla, A., “Existence and approximate controllability of Volterra-Fredholm integrodifferential third order dispersion equation.” *Bulletin des Sciences Mathématiques*, Elsevier. DOI: [10.1016/j.bulsci.2024.103394](https://doi.org/10.1016/j.bulsci.2024.103394).

Communicated Papers

1. Gautam, P., Shukla, A., “An analysis on the existence of mild solution and approximate controllability for semilinear thermoelastic system.” Submitted to *Mathematical Methods in the Applied Sciences*.

INTERNATIONAL CONFERENCES

1. **Title:** Stochastic controllability of semilinear fractional control systems with monotonic nonlinearity. Organized by Department of Mathematics, IIT Roorkee, 1–3 July 2022.
2. **Title:** Stochastic controllability of semilinear fractional control systems. Organized by Department of Mathematics, Rajkiya Engineering College, Kannauj, 22–23 October 2021.
3. **Title:** Stochastic controllability of semilinear differential equations. Organized by Department of Mathematics, IIT Mandi, Himachal Pradesh, 15–17 June 2023.

LINGUISTIC PROFICIENCY

English, Hindi

DECLARATION

The above information is correct to the best of my knowledge.

Dr. Pooja Gautam