



Shaheed Rajguru College of Applied Sciences for Women
University of Delhi
Faculty Profile

Name	Dr. Pooja Sharma	
Designation	Assistant Professor	
Email	POOJA.SHARMA@RAJGURU.DU.AC.IN	
Degree	Institution	Year
PhD	Department of Physics & Astrophysics, University of Delhi	2019
M.Sc Physics	IIT Delhi	2011
B.Sc (H) Physics	Ramjas College, University of Delhi	2009
UGC-NET JRF	UGC	2010
Areas of Interest / Specialization		
• Computational and Mathematical Biology • Bioinformatics and Computational Genomics • Complex Systems and Network Science • Physics-Based Modeling of Biological Systems • Systems Biology and Disease Network Modeling • Theoretical and Computational Physics • Theoretical Quantum Mechanics		
Specialization in Computational Methods and Techniques		
• Mathematical and Dynamical Systems Modeling • Numerical and Statistical Modeling • Genome-Wide Association Studies (GWAS) • Genome-Wide Genetic Correlation Analysis • Linkage Disequilibrium Score Regression (LDSC) • Mendelian Randomization (MR) and Causal Inference • Polygenic Risk Score (PRS) Analysis • Genetic Network and Disease–Disease Network Analysis • Computational Genomics and Bioinformatics • Statistical Genetics and Quantitative Trait Analysis • Data-Driven Modeling of Complex Biological Systems • Scientific Computing and Computational Data Analysis		

Publications Profile

Modeling the cost and benefit of proteome regulation in a growing bacterial cell.

Pooja Sharma, Parth Pratim Pandey and Sanjay Jain,

Physical Biology 15 (2018), 046005.

Poster Presentations

1. Presented Poster titled "Understanding bacterial growth laws from simple dynamical models" at ICTP-ICTS Winter School on Quantitative Systems Biology, December 7-20, 2015, held at International Centre for Theoretical Sciences, Bangalore, India.
2. Presented Poster titled "Is it beneficial for a cell to regulate its proteome?: Cost and benefit in static and time-varying environments" at Workshop on Operations Research of Biological Systems, July 9-14, 2018, held at The Abdus Salam ICTP, Trieste, Italy.

Subjects Taught

- Quantum Mechanics
- Advanced Quantum Mechanics-I
- Advanced Quantum Mechanics-II
- Numerical Analysis
- Statistical Mechanics
- Advanced Mathematical Physics – I
- Advanced Mathematical Physics – II
- Digital Empowerment
- Physics of Devices and Communication
- Mathematical Physics
- Essentials of Python
- LaTeX Typesetting for Beginners

Served as co-convenor/ member of the following committees

1. College Co-Coordinator for NAAC Criteria 1
2. Held position of Co-Convenor of the College Society: Institution's Innovation Council (IIC)
3. Co-Convenor of Spic Macay
4. Member of the college Proctorial Board
5. Member of Eco-Club
6. Conduct of Departmental Student Council elections
7. Conduct of Departmental Proctorial Board activities
8. Departmental Mentor – Mentee activities

Awards and Distinctions

1. Supervised project student Ms. Mydhily M. Nair (IV Year Batch 2022-26) received the

Best Presentation Award (Undergraduate Category) at the *International Conference on Integrating Sciences and Social Sciences*, organized by **Mata Sundari College, University of Delhi**, on **21 April 2026**.

2. Supervised project student Ms. Riya (IV Year Batch 2022-26) presented her research work (**Undergraduate Category**) and was awarded **2nd Position** at the *International Conference on Integrating Sciences and Social Sciences*, organized by **Mata Sundari College, University of Delhi**, on **21 April 2026**
3. Completed a **Refresher Course** in “Big Data Analytics” and “Python: Essentials, Programming and Analytics.”
4. Completed a **Faculty Development Programme** on “Basic Skills in Experimental Physics.”
5. Served as Supervisor for two project students under Anveshan: 6-Week Summer Lab Internship Program, organized from June-July 2026 by the SHoDH Foundation, in collaboration with Ramjas College, Acharya Narendra Dev College, Shaheed Rajguru College of Applied Sciences for Women, and Swami Shraddhanand College, University of Delhi
6. Served as Supervisor for one project student under Anveshan: 6-Week Summer Lab Internship Program, organized from 5 June to 17 July 2025 by the SHoDH Foundation, in collaboration with Ramjas College, Acharya Narendra Dev College, Shaheed Rajguru College of Applied Sciences for Women, and Swami Shraddhanand College, University of Delhi
7. Awarded **Junior Research Fellowship (JRF)** and awarded **Senior Research Fellowship (SRF)** under **UGC-NET-JRF, December 2010** for doctoral research.\
8. First Rank, B.Sc. (Hons.) Physics: Awarded **First Position** at Ramjas College, University of Delhi.