

Ayush Kumar Gupta

S/o Sh. Krishan Murari Gupta

Ph. D. student

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EDUCATIONAL QUALIFICATION

2022 - Present	Ph. D.	Indian Institute of Technology, Kanpur	9.5
2020 - 2022	M. Sc. (Physics)	Indian Institute of Technology, Kanpur	7.9/10
2017 - 2020	B. Sc.	University of Rajasthan	67%
2016	10+2	Board of secondary education Rajasthan	86%
2014	Matric	Board of secondary education Rajasthan	88.50%

RESEARCH EXPERIENCE

- **Research Project (Aug, 2022 - Dec, 2022): spin Hall nano oscillator** under the supervision of Prof. Rohit Medwal at IIT Kanpur.
- **Research Project (Jan, 2023 - May 2023): Width dependent properties of field free SHNOs** under the supervision of Prof. Rohit Medwal at IIT Kanpur.
- **Research Internship (Dec 2022 / May - June 2023):** Completed under the supervision of Dr. Joseph V Vas, The Ernst Ruska-Centre for Microscopy and Spectroscopy, Germany. Research work was titled **Magnetic vortex dynamics with pure spin current**.
- **M.Sc. Project (December, 2021 - May, 2022): Active dynamics in harmonic well and fluctuation theorem** under the supervision of Prof. Manas Khan at IIT Kanpur.
- **M.Sc. Project (Aug, 2021 - November, 2022): Simulation based investigation of Active Brownian particle in visco-elastic medium** under the supervision of Prof. Manas Khan at IIT Kanpur.

CONFERENCES/WORKSHOPS

- **SAKURA Science** Exchange program (December 2024) at Kyutech, Japan.
- Poster presentation at **International Conference on Functional Materials (ICFM) 2024** at IIT Kharagpur.
- **DST STUTI (Jan 2023): Workshop organised by Department of science and technology**

PUBLICATIONS

- **Ayush K Gupta**, Saurabh Manna, R.S. Rawat, Rohit Medwal. *"Interplay of anisotropy and demagnetization field in field free SHNOs"* (<https://doi.org/10.48550/arXiv.2307.12068>) (Submitted to PRB)
- Joseph V Vas, **Ayush K Gupta**, Aaron, John R Mohan, Y Fukuma, R Medwal, M Duchamp. *"Squirle trajectories of Magnetic vortex precession using Spin-Orbit Torque"* (Under preparation)

AWARDS AND HONOURS

- Shortlisted for SHE DST-INSPIRE fellowship.
- Gave a talk titled **Spintronic and spin texture devices for RF generation** at The Ernst Ruska-Centre for Microscopy and Spectroscopy, Germany.
- Awarded Prime Minister's Research Fellowship (PMRF).

NATIONAL LEVEL EXAMINATIONS QUALIFIED

- Qualified IIT-JAM- 2020 with All India Rank 94
- Qualified JEST- 2020 with All India Rank 227

TEACHING EXPERIENCE

- Teaching Assistant PHY 111A (Physics laboratory)(Oct 2022 - Feb 2023)
- Teaching Assistant PHY 111A (Physics laboratory)(March 2022 - June 2023)
- Teaching Assistant PHY 441A (Electronics laboratory)(July 2023 - November 2023)

TECHNICAL SKILLS

- **Programming languages:** Python, MATLAB, HTML
- **Tools & OS:** Mumax3, COMSOL Multiphysics, ORIGIN, Jupyter Notebook, Linux, Mathematica
- **IT Skills:** Latex, Shell scripting, HPC, Web development (built Group website home.iitk.ac.in/~rmedwal)

OTHER ACHIEVEMENTS

- Amongst top 1% student in senior secondary examination of Board of Secondary Education Rajasthan.
- Secured **First Position in** Quiz competition in 2016 organized by Saini shiksha prabandha samiti

DECLARATION

I hereby declare that the information given above is complete and correct to the best of my knowledge.

Place:- Kanpur

Dated:- 5-December-2022

Ayush Kumar Gupta