

Suraj Chandra Joshi

Personal Information

Date of Birth: 01/07/2003

Nationality: Indian

School of Physics

University of Hyderabad

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Github <https://github.com/SURAJ-JOSHI-472>

Education

1. Master of Science in Physics (2023-2025)

Specialization in Condensed Matter Physics

School of Physics, University of Hyderabad, Hyderabad, Telangana, 500046

CGPA: 9.23/10

2. Bachelor of Science in Physics as Honours (2020-2023)

Shivaji College, Delhi University, New Delhi, 110027

CGPA: 9.24/10

3. Higher Secondary Education (2018-2020)

J.N.V. Champawat, Uttarakhand, 262524

Percentage 95%

4. Secondary Education (2017-2018)

J.N.V. Champawat, Uttarakhand, 262524

Percentage 84.2%

Research Area of Interest

- My research interests lie in experimental Condensed Matter Physics, with a particular focus on magnetism, spintronics, and their applications in next-generation memory devices.

Technical Skills

• Experimental and Analysis: -

VNA based Frequency Domain and Field Domain FMR analysis for measurements of magnetic properties of thin films.

• Soft Skills: -

Micromagnetic Simulations using OOMMF, Python, Scilab, Fortran 90, LATEX, Origin, Microsoft Word, PowerPoint, Excel.

Research Experience

• (2024-2025) Master's Project, University of Hyderabad

Brief Description of the work: - Since June 2024, I have been working on the development of VNA FMR to measure the magnetic properties of thin films. Using VNA we can measure g-factor, Gilbert damping parameter, In-Homogeneous broadening, Effective magnetization, Anisotropy and many more static and dynamic parameters. These measurements are highly beneficial in selecting suitable materials for spintronics applications. Additionally, I am conducting OOMMF simulations to study FMR excitations in thin films and spin valves. I can simulated field and frequency swept FMR with the angular variation of magnetic field. The simulation results will aid in understanding key concepts and making predictions for future experiments.

Presentations: - https://drive.google.com/drive/folders/1cfVosAmC4dbzae9eD8rTIK_9aHh7RXkh?usp=sharing

Supervisor: - Prof. K.C. James Raju

Additional Course

- Value Added Certificate Course on Differential Equations with Scientific Applications, Shivaji College (2021-2022)

Achievements

- Selected for Central Sector Scheme of Scholarships for College and University Students (2020-2025)
- Secured highest aggregate scores in B.Sc. (H) Physics (2nd yr) in the academic year (2022-2023)
- Qualified GATE Physics Feb-2025 (Rank 1450)