

CURRICULUM VITAE

PRAVIN SHARMA

Ph.D. Candidate

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Education

2021 – Present	PhD in Lasers and Optics , Department of Applied Science, William & Mary, VA, USA PhD proposal: Laser induced nucleation and manipulation of Spin textures in 2D-Magnet Van-Der-Waals Heterostructures Advisor: Prof. Gunter Luepke
2016 – 2019	M.Sc. Physics , Department of Physics, Savitribai Phule Pune University, Pune, India Thesis topic: Study of SnO ₂ coated Au Nanocrystals with varying core size. Advisor: Prof. Shailaja Mahamuni
2010 - 2013	B. Sc Physics , Amrit Campus, Tribhuvan University Lainchaur, Kathmandu, Nepal

Research Interest

Ultrafast Magnetization Dynamics, Spintronics, Ultrafast Spectroscopy, 2D magnetic materials, Magnetization Switching techniques, Advanced Materials Characterization, Lasers.

Teaching Experience

2021 – 2023	Graduate Teaching Assistant , Department of Physics, William & Mary, VA, USA <ul style="list-style-type: none">• Courses:<ul style="list-style-type: none">- Physics 101H (honors class), Physics 102H (honors class).- Physics 101L and 102L (Lab Assistant).• Responsibilities:<ul style="list-style-type: none">- Assist Professors with conducting and monitoring classroom activities.- Grade assignments, essays, and exams for undergraduate students.- Help students with one-on-one with questions regarding course content and take problem sessions in class.
2019 – 2021	Senior Science Teacher , Texas International School, Kathmandu, Nepal <ul style="list-style-type: none">• Conducted science exhibition at high school level regularly.

	<ul style="list-style-type: none"> • Taught AP level Physics courses to high school students which includes Mechanics, Thermodynamics, Optics, Sound, Electromagnetism, Modern Physics, and Waves.
2014 – 2016	Science Teacher , Texas International School, Kathmandu, Nepal. <ul style="list-style-type: none"> • Conducted active participation of students in several workshops and exhibitions.
2013 – 2014	Mathematics Tutor , The Spangle Boarding High School, Kathmandu, Nepal <ul style="list-style-type: none"> • Had provided students better ways to intake mathematics conceptually.
Research Experience	
2022 – Present	Research Assistant , Department of Applied Science, William & Mary, VA, USA <ul style="list-style-type: none"> • Use micromagnetic and atomistic modeling to understand the magnetization dynamics of different magnetic materials. • Guide undergraduate students about the experiment and lab policies. • Work collaboratively within the university and with outside institutions and universities also. • Develop the setup for high-vacuum condensed matter physics research. • Maintenance of the femtosecond lasers and their components.
2018 – 2019	MSc Project , Department of Physics, SPPU, Pune, India <ul style="list-style-type: none"> • Successfully synthesized core-shells of Gold (Au) Nanocrystals with and without coating of Tin oxide (SnO₂). • Usage of different characterization techniques during the MSc project.
2015 – 2021	Research Associate , Brainycube Research Organization Chabahil, Kathmandu Roles: <ul style="list-style-type: none"> • Research Design, Practical demonstration of projects, guiding students in projects leading them in representing in National and International Events. • Had lead Nepal Team in 5th Asia Pacific Conference for Young Scientists (APCYS) and won 2 silver and 6 bronze medals. • Conducted workshop regarding the future aspects of research and its necessity in country.

Experimental Skills

- Magneto-optical Kerr Effect (MOKE)
- UV-Vis Spectrometer
- X-Ray Diffraction
- Raman Spectrometer
- Scanning Electron Microscope
- Field Emission Scanning Electron Microscope
- Origin software
- LaTeX
- Python
- MATLAB
- MS Office (Excel, Word, PowerPoint)

Workshops and Conferences

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| March 2024 | - 2024 Graduate & Honors Research Symposium, “Atomistic Investigation of Ultrafast Demagnetization of Permalloy Films with Varying Laser Fluence”, William & Mary, VA, USA |
| February 2018 | - 24 th Raman Memorial Conference, “Unraveling Physics of Advanced Materials”, Department of Physics, SPPU, Pune, India |
| December 2018 | - “3 rd International Conference on Advances in Materials Science”, Raje Ramrao Mahavidyalaya, Jath, Sangli, India |

References

Prof. Gunter Luepke, Ph.D.

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