

# Garima Garima

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## EDUCATION

- **PhD: Department of Electrical Engineering, Linköping University** Sweden  
A joint approach for Point Cloud Transmission & Point Cloud Registration  
**Supervisors:** Per-Erik Forssén, Khac-Hoang Ngo  
Funded by Wallenberg AI, Autonomous Systems and Software Program (WASP)
- **EMJMD PSRS- Intelligent Vision & Biometrics**  
Erasmus Mundus Joint Master Degree: Photonics for Security Reliability and Safety (PSRS)  
Grade: A
- **Institut des systemes intelligents et de robotique (ISIR), Sorbonne University** France  
Semester 4: Master Thesis March 2025 - September 2025  
Diffusion inspired Point Cloud Registration
- **Université Paris-Est Créteil** France  
Semester 3: Master of Science diploma in Biometrics and Intelligent Vision September 2024 - February 2025  
**Relevant Courses:** Computer Vision, Biometrics, Deep Learning, Artificial Intelligence and Innovation, Emerging Technology (AR and VR), Semester Project: Automating cell tracking in biomedical videos
- **University of Eastern Finland** Finland  
Semester 2: Master of Science in Photonics January 2024 - May 2024  
**Relevant Courses:** Machine Vision, Basics of Signal and Image Processing, Numerical methods with Python, Color Science
- **University Jean Monnet** France  
Semester 1: Master of Science diploma in Optics, Image, Vision, Multimedia September 2023 - January 2024  
**Relevant Courses:** Digital Image Processing and Analysis, Algorithms & Programming, Physical optics - Digital processing
- **St. Stephen's College, University of Delhi** India  
BSc - Physical Sciences November 2020 - July 2023  
CGPA: 9.379 / 10.00  
**Subjects:** Computer Science, Mathematics, Physics, Chemistry

## RESEARCH EXPERIENCE

- **Institut des systemes intelligents et de robotique (ISIR), Sorbonne University** France  
Master Thesis: Diffusion inspired Point Cloud Registration March 2025 - September 2025  
**Supervisors:** Catherine Achard, Brahim Tamadazte and Karim Slimani
  - Investigated and validated the efficacy of diffusion models for Point Cloud Registration (PCR)
  - Developed and proposed two new diffusion inspired PCR methods
- **Swiss Plasma Center (SPC), École Polytechnique Fédérale de Lausanne (EPFL)** Switzerland  
Internship: Pre-processing of plasma videos for detection & tracking of REs June 2024 - August 2024  
**Supervisors:** Alessandro Pau and Cristian Sommariva
  - Implemented and compared various image enhancement methods like denoising, super resolution, for experimental plasma videos from JET tokamak.
  - Generated additional data for training YOLO & performed code review for the overall pipeline of detection and tracking of runaway electrons (REs).

## RESEARCH INTERESTS

3D Computer Vision, Point Cloud Registration, Autonomous Systems, Point Cloud Transmission

## COURSES AND CERTIFICATIONS

- Attended the EPFL Lauz-Hack Deep Learning BootCamp (2024)
- Certified with Credly badge for finishing **Applied Data Science Lab** from WorldQuant University. Finished 8 end-to-end applied Data Science Projects. (2023)
- Completed **CS50x: Introduction to Computer Science by Harvard University**. Finished 9 labs and problem sets along with a Final Project (2022)
- Completed **Introduction to Web Development** with Code First Girls (UK) (2022)

- Shortlisted for Winter school for young women in Mathematics organised by **IWM-IIT Kanpur** (Indian Women and Mathematics - Indian Institute of Technology Kanpur) (2021)
- Attained a course on **Web-GIS** offered by **ISRO-IIRS** (Indian Institute of Remote Sensing - Indian Space Research Organisation) (2021)

## VOLUNTEER WORK

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- Served as a volunteer with the Pramanit Foundation, India from 2019 to 2023
- **Event Organisation and Management** - Organised Republic Day Celebration, Independence Day Celebrations, Yoga Day, Polio Drive, Tree Plantation Drive, Cleanliness Drive and several other events ever since joining National Cadet Corps from 2020 to 2023

## HONOURS AND AWARDS

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- Selected for **Erasmus Mundus scholarship** for PSRS (2023-2025)
- Felicitated with **Asha Chatterjee Prize** for academic work, strength of character and leadership qualities at St. Stephen's College (2023)
- Felicitated with **Delhi Science Teacher's Association Scholarship** for securing 2nd rank in Science Open Test (2018-2019)

## EXTRA CURRICULAR ACTIVITIES

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- Editor of the EMJMD PSRS newsletter for its 1st and 2nd edition (2024- 2025)
- Sergeant at National Cadet Corps (NCC), St. Stephen's College (2020-2023)
- Certified by **University of Cambridge, Massachusetts** for CS50x Puzzle Day (2022)
- Represented India during Youth Exchange Program at Independence Day Camp (2022)