

VEDANG BHUPESH SHENVI NADKARNI

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ABOUT ME

As a PhD student, I am designing mechanisms to inject physics knowledge, such as PDEs and empirical physical laws, into modern computer vision systems for physically aware systems which can be used by the scientific community. My work will be applied to X-ray Computational Tomography and numerical simulations applied for structural and material analysis, where data generation may be expensive and availability is low. I'm motivated to do research that creates an impact in the research community and the industry for the benefit of society.

EDUCATION

Free University of Bozen-Bolzano (UniBZ) Nov 2025 – Present
PhD in Computer Science (Computer Vision, Physically Informed Artificial Systems) Bolzano, Italy

Birla Institute of Technology and Science, Pilani (BITS Pilani) Nov 2020 – July 2025
Dual Degree - Integrated MSc. Physics and B.E. Computer Science - CGPA - 8.94/10 Pilani, India

PUBLICATIONS

An Efficient Federated Transfer Learning Approach for Multi-UAV Systems NCC 2025
Vedang Bhupesh Shenvi Nadkarni, Sandeep Joshi, L. Rajya Lakshmi

GLiDR: Topologically Regularized Graph Generative Network for Sparse LiDAR Point Clouds CVPR 2024
Prashant Kumar, Kshitij Madhav Bhat, Vedang Bhupesh Shenvi Nadkarni, Prem Kalra

Differentiable SLAM Helps Deep Learning-based LiDAR Perception Tasks BMVC 2023
Prashant Kumar, Dheeraj Vattikonda, Vedang Bhupesh Shenvi Nadkarni, Erqun Dong, Sabyasachi Sahoo

EXPERIENCE

Research Intern | Inria Centre at Université Côte d'Azur Dec 2024 – May 2025
Knowledge injection in image diffusion models for data augmentation in Team MAASAI with Prof. Frédéric Precioso and Prof. Diane Lingrand Sophia-Antipolis, France

Research Intern | Universitat de Barcelona Jun 2024 – Nov 2024
Efficient 3D Human capture using multi-view cameras and depth at the HUPBA group of Prof. Sergio Escalera Barcelona, Spain

Research Intern | Max Planck Institute for Intelligent Systems (MPI-IS) May 2023 – Aug 2023
Object detection and 3D mapping for Boston Dynamics Spot with Dr. Wieland Brendel's Polybot team Tübingen, Germany

Research Intern | Intel Labs June 2022 – Nov 2022
Optimizing Deep Learning Recommendation systems (RecSys) for cloud computing infrastructure through software-enabled design, and hardware access control Bangalore, India

HONORS AND AWARDS

DAAD-WISE Scholarship 2023
Funding for a summer internship at MPI-IS, Tübingen German Academic Exchange Service

Indian National Astronomy Olympiad 2020
Qualification (top 27) for selection camp for the International Olympiad on Astronomy and Astrophysics HBCSE-TIFR

KVPY Fellowship 2019
National Fellowship for Research in Science Department of Science and Technology (India)

NTSE Scholarship 2018
National Talent Search Examination NCERT

VOLUNTEERING

Reviewer for CVPR '26, ECCV '26

Chairperson, IEEE BITS Pilani Student Chapter 2023 – 2024

Software Lead, CRISS Robotics, BITS Pilani 2022 – 2023