

Varun Sundar

Contact	Email: vsundar4@wisc.edu	Webpage: varun19299.github.io
Education	University of Wisconsin Madison PhD candidate, Computer Science, GPA: 4.0/4.0. Advised by Mohit Gupta.	Jan 2021–Present
	Indian Institute of Technology Madras B.Tech in Electrical Engineering, GPA: 9.67/10.0.	2016–2020
Experience	Graduate Research Assistant WISIONLab, University of Wisconsin-Madison. Algorithms and applications for single photon devices.	2021–Present PI: Mohit Gupta.
	Undergraduate Research Assistant Computational Imaging Lab, Indian Institute of Technology Madras. Data-driven algorithms for lensless image reconstruction.	2019–2020 PI: Kaushik Mitra.
	Undergraduate Research Intern Iris Vision Lab, University of Southern California. Attribute and object detection on partially annotated datasets.	May–Aug 2019 PI: Ram Nevatia.
	Machine Learning Intern Satellite Imaging Team, Hyperverge India. Robust asset detection from large-scale satellite data.	May–Aug 2018 Mentor: Nikhil Naphade.
Publications	<i>Quanta Computer Vision</i> V Sundar and M Gupta. Invited article.	XRDS Crossroads, 2025
	<i>A Live Demo of Single-Photon Imaging and Applications</i> S Jungerman*, V Sundar* , and M Gupta. Best in show award.	SIGGRAPH E-Tech 2024
	<i>Generalized Event Cameras</i> V Sundar* , M Dutson*, A Ardelean, C Bruschini, E Chabron and M Gupta. Patent filed.	CVPR 2024
	<i>SoDaCam: Software-defined Cameras via Single-Photon Imaging</i> Oral presentation, 1.8% acceptance rate V Sundar , A Ardelean, T Swedish, C Bruschini, E Chabron and M Gupta. Patent filed.	ICCV 2023
	<i>Seeing Photons in Color</i> S Ma, V Sundar , P Mos, C Bruschini, E Chabron and M Gupta.	SIGGRAPH 2023
	<i>Single-Photon Structured Light</i> V Sundar , S Ma, A Sankaranarayanan and M Gupta. US Patent App. 17/807,656, 2023.	CVPR 2022
	<i>[Reprod.] Rigging the Lottery: Making All Tickets Winners</i>	Rescience C 2020

V Sundar and R Dwaraknath.

Towards Photorealistic Scene Reconstruction of Lensless Measurements TPAMI 2020
SS Khan*, **V Sundar***, V Boominathan, A Veeraraghavan and K Mitra.

Deep Atrous Guided Filter for UDC Image Restoration ECCV Workshops, 2020
V Sundar*, S Hegde*, D Kothandaraman and K Mitra.

* denotes equal contribution.

Awards
and honors

SIGGRAPH 2024 Emerging Technologies *Best in Show* award.

UW-Madison Summer Research Award, 2021.

Under Display Challenge, ECCV 2020: 2nd, 5th (P-OLED, T-OLED tracks).

Graduate Scholarship at UW Madison: fall 2021 and spring 2022.

IUSSTF-Viterbi REU at USC: one of 15 awardees among 1000+ applicants. Mentored by Ram Nevatia, summer 2019.

Talks and
presentations

Imaging, One Photon at a Time

- UW-Madison CS Research Fair (poster) October 2024
- SIGGRAPH E-Tech (demo and invited talk) July 2024

Generalized Event Cameras

- Sony Research October 2024
- CVPR (poster and demo), CVPR CCD workshop. June 2024
- Camera Culture Group, MIT April 2024
- IIT Madras December 2024

SoDaCam: Software-defined Cameras via Single-Photon Imaging

- ICCV (oral) October 2023
- Sony Research October 2023
- ICCP (poster and demo) August 2023
- UW-Madison Research Symposium April 2023

Single-Photon Structured Light

- Cruise AI October 2022
- ICCP (spotlight, poster) August 2022
- Sony Research June, August 2022
- CVPR (poster), CVPR CCD June 2022

[Reprod.] Rigging the Lottery: Making All Tickets Winners

- Weights and Biases Salon March 2021

Towards Photorealistic Scene Reconstruction of Lensless Measurements

- CVPR CCD June 2020

Additional	<p>Reviewing: CVPR (2023, 2024, 2025), ICCV (2023), ECCV (2024), ML Reproducibility 2022, Nature Communications (2024).</p> <p>Service: ICCP 2023 (social media chair).</p> <p>Technical Skills: Python, C, C++, MATLAB (prog. languages); Numpy, Numba, Scipy, Taichi (scientific packages); Pytorch, Tensorflow and JAX (ML frameworks).</p> <p>Misc: Teaching Assistant for Computer Vision (fall 2021, spring 2022) and Data Science (spring 2021) at UW-Madison.</p>		
References	<p>Mohit Gupta, Associate Professor in CS, UW-Madison.</p>	<p>Aswin Sankaranarayanan, Professor in EE, Carnegie Melon University.</p>	<p>Kaushik Mitra, Assistant Professor in EE, IIT Madras.</p>