

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>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. Provisional 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> V Sundar and R Dwaraknath.	Rescience C 2020
	<i>Towards Photorealistic Scene Reconstruction of Lensless Measurements</i> SS Khan*, V Sundar* , V Boominathan, A Veeraraghavan and K Mitra.	TPAMI 2020

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 <i>Best in Show</i> award.	
	UW-Madison Summer Research Award, 2021.	
	Under Display Challenge, ECCV 2020: 2 nd , 5 th (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	<i>Imaging, One Photon at a Time</i>	
	• SIGGRAPH E-Tech (demo and invited talk)	July 2024
	<i>Generalized Event Cameras</i>	
	• CVPR (poster and demo), CVPR CCD workshop.	June 2024
	• Camera Culture Group, MIT	April 2024
	<i>SoDaCam: Software-defined Cameras via Single-Photon Imaging</i>	
	• ICCV (oral)	October 2023
	• Sony Research	October 2023
	• ICCP (poster and demo)	August 2023
	• UW-Madison Research Symposium	April 2023
	<i>Single-Photon Structured Light</i>	
	• Cruise AI	October 2022
	• ICCP (spotlight, poster)	August 2022
	• Sony Research	June, August 2022
	• CVPR (poster), CVPR CCD	June 2022
	<i>[Reprod.] Rigging the Lottery: Making All Tickets Winners</i>	
	• Weights and Biases Salon	March 2021
	<i>Towards Photorealistic Scene Reconstruction of Lensless Measurements</i>	
	• CVPR CCD	June 2020
Additional	Reviewing: CVPR (2023, 2024), ICCV (2023), ECCV (2024), ML Reproducibility 2022, Nature Communications (2024). Service: ICCP 2023 (social media chair). Technical Skills: Python, C, C++, MATLAB (prog. languages); Numpy, Numba, Scipy, Taichi (scientific packages); Pytorch, Tensorflow and JAX (ML frameworks). Misc: Teaching Assistant for Computer Vision (fall 2021, spring 2022) and Data Science (spring 2021) at UW-Madison.	

References	Mohit Gupta, Associate Professor in CS, UW-Madison.	Aswin Sankaranarayanan, Professor in EE, Carnegie Melon University.	Kaushik Mitra, Assistant Professor in EE, IIT Madras.
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