

# Pratul Srinivasan

## about

Citizenship: USA

pratul@berkeley.edu

personal website

Google Scholar

## programming

Python (numpy)

JAX

Tensorflow

Matlab

## interests

Research problems at the intersection of computer vision, computer graphics, and machine learning. Recent work focuses on deep learning for 3D data and inverse graphics/rendering.

## education and academic experience

- 2014-now **Ph.D. in EECS** University of California at Berkeley  
Advised by *Ren Ng* and *Ravi Ramamoorthi*. Conducting research in computer vision, computer graphics, and machine learning.
- 2010-2014 **B.S.E. magna cum laude with distinction** Duke University in Durham, NC  
Dual Major in Biomedical Engineering and Computer Science. Conducted research in medical computer vision advised by *Sina Farsiu*.
- 2006-2010 **High School Diploma** Henry M. Gunn High School in Palo Alto, CA

## industry experience

- June 2020-now **Google Research** San Francisco, CA  
Research scientist in *David Salesin's* group.
- June 2018-Dec 2019 **Google Research** New York, NY  
Research internship in computer vision and computer graphics hosted by *Noah Snavely*. Work published at CVPR 2019.
- May 2017-Nov 2018 **Google Research** Mountain View, CA  
Research internship in computer vision and computational photography in *Marc Levoy's* team, hosted by *Jon Barron*. Work published at CVPR 2018.

## publications

Please refer to my *personal website* or my *Google Scholar page* for more details. \* denotes authors with equal contribution.

- [1] B. Mildenhall\*, P. P. Srinivasan\*, M. Tancik\*, J. T. Barron, R. Ramamoorthi, and R. Ng, "NeRF: representing scenes as neural radiance fields for view synthesis," *arXiv*, 2020.
- [2] P. P. Srinivasan\*, B. Mildenhall\*, M. Tancik, J. T. Barron, R. Tucker, and N. Snavely, "Lighthouse: predicting lighting volumes for spatially-coherent illumination," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- [3] M. Tancik\*, P. P. Srinivasan\*, B. Mildenhall\*, S. Fridovich-Keil, N. Raghavan, U. Singhal, R. Ramamoorthi, J. T. Barron, and R. Ng, "Fourier features let networks learn high frequency functions in low dimensional domains," *arXiv*, 2020.
- [4] B. Mildenhall\*, P. P. Srinivasan\*, R. Ortiz-Cayon, N. K. Kalantari, R. Ramamoorthi, R. Ng, and A. Kar, "Local light field fusion: practical view synthesis with prescriptive sampling guidelines," *ACM Transactions on Graphics (SIGGRAPH)*, 2019.

- [5] P. P. Srinivasan, R. Tucker, J. T. Barron, R. Ramamoorthi, R. Ng, and N. Snavely, "Pushing the boundaries of view extrapolation with multiplane images," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [6] P. P. Srinivasan, R. Garg, N. Wadhwa, R. Ng, and J. T. Barron, "Aperture supervision for monocular depth estimation," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [7] S. A. Cholewiak, G. D. Love, P. P. Srinivasan, R. Ng, and M. S. Banks, "Chromablur: rendering chromatic eye aberration improves accommodation and realism.," *ACM Transactions on Graphics (SIGGRAPH Asia)*, 2017.
- [8] P. P. Srinivasan, R. Ng, and R. Ramamoorthi, "Light field blind motion deblurring," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017.
- [9] P. P. Srinivasan, T. Wang, A. Sreelal, R. Ramamoorthi, and R. Ng, "Learning to synthesize a 4D RGBD light field from a single image," *IEEE International Conference on Computer Vision (ICCV)*, 2017.
- [10] M. W. Tao, P. P. Srinivasan, S. Hadap, S. Rusinkiewicz, J. Malik, and R. Ramamoorthi, "Shape estimation from shading, defocus, and correspondence using light-field angular coherence," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2016.
- [11] P. P. Srinivasan, M. W. Tao, R. Ng, and R. Ramamoorthi, "Oriented light-field windows for scene flow," *IEEE International Conference on Computer Vision (ICCV)*, 2015.
- [12] M. W. Tao, P. P. Srinivasan, J. Malik, S. Rusinkiewicz, and R. Ramamoorthi, "Depth from shading, defocus, and correspondence using light-field angular coherence," *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015.
- [13] P. P. Srinivasan, S. J. Heflin, J. A. Izatt, V. Y. Arshavsky, and S. Farsiu, "Automatic segmentation of up to ten layer boundaries in SD-OCT images of the mouse retina with and without missing layers due to pathology," *Biomedical Optics Express*, 2014.
- [14] P. P. Srinivasan, L. A. Kim, P. S. Mettu, S. W. Cousins, G. M. Comer, J. A. Izatt, and S. Farsiu, "Fully automated detection of diabetic macular edema and dry age-related macular degeneration from optical coherence tomography images," *Biomedical Optics Express*, 2014.
- [15] J. Y. Lee, S. J. Chiu, P. P. Srinivasan, J. A. Izatt, C. A. Toth, S. Farsiu, and G. J. Jaffe, "Fully automatic software for retinal thickness in eyes with diabetic macular edema from images acquired by cirrus and spectralis systems," *Investigative Ophthalmology & Visual Science*, 2013.

## awards

2015	<b>National Science Foundation Graduate Research Fellowship</b>	
2015	<b>National Defense Science and Engineering Graduate Fellowship Winner</b>	
2014	<b>U.S. Department of Education Graduate Assistance in Areas of National Need Fellowship</b>	UC Berkeley EECS Departmental Fellowship
2014	<b>Howard G. Clark Memorial Award</b>	Duke University Graduation Award
2013	<b>Pratt School of Engineering Undergraduate Fellowship</b>	

## teaching and service

TA for CS 184/284A: Computer Graphics and Imaging (taught by Ren Ng) during Spring 2018 and Spring 2019.

Outstanding reviewer award for CVPR 2018, CVPR 2019, ICCV 2019.

UC Berkeley EECS Department PhD admissions reviewer in 2015-2016 and 2019-2020.

Reviewer for CVPR, ICCV, ECCV, SIGGRAPH, SIGGRAPH Asia, ACM TOG, IEEE PAMI, IEEE TCI, Optics Express, Eurographics, and others.