

Cindy M. Nguyen [cindy@stanford.edu](mailto:cindy@stanford.edu) | 408-890-8149 | [ccnguyenn.github.io](https://ccnguyenn.github.io)

INTERESTS | Computational photography, computational imaging, computer vision, deep learning

## EDUCATION

PhD	Stanford University	Electrical Engineering	2019 - Present
MS	Stanford University	Electrical Engineering (GPA 3.69/4.00)	2019 - 2021
BS	Stanford University	Bioengineering (GPA 3.90/4.00)	2015 - 2019

**Relevant Coursework** | Geometric and Topological Data Analysis, Fourier Optics, Modern Optics, Convex Optimization, Linear Dynamical Systems, CNNs, ML, AI, Meta-Learning, Decision Making under Uncertainty, NLP

## RESEARCH

[Stanford Computational Imaging Lab](#) | PhD Candidate

Jan 2020 – Present | Stanford University

Advised by Prof. Gordon Wetzstein.

### Publications

Depth from Defocus with Learned Optics for Imaging and Occlusion-Aware Depth Estimation.

Ikoma, H., [Nguyen, C.M.](#), Peng, Y., Metzler, C., Wetzstein, G. ICCP, 2021.

[Brian Feldman Lab](#) | Research Assistant

Sep 2017 – Mar 2019 | Stanford University

Performed RNA-Seq analysis in mature adipocytes to identify metabolic systemic cues for diabetes.

[Markus Schwaninger Lab](#) | Research Assistant

July 2018 – Sept 2018 | Universität zu Lübeck, Lübeck, Germany

Investigated leptin transport across the blood-brain barrier in porcine cortical endothelial in vitro models.

[Stanley Qi Lab](#) | Research Assistant

Mar 2016 – Feb 2018 | Stanford University

Developed chemically-inducible CRISPR/dCas9-based dimerization systems for human chromatin 3D organization and spatiotemporal gene dynamics tracking through live cell imaging.

### Publications

CRISPR-Mediated Live Imaging of Genome Editing and Transcription.

Wang, H., Nakamura, M., Abbott, T.R., Zhao, D., Luo, K., Yu, C., [Nguyen, C.M.](#), ..., Qi, L.S. Science, 2019.

CRISPR-Mediated Programmable 3D Genome Positioning and Nuclear Organization.

Wang, H., Xu, X., [Nguyen, C.M.](#), Liu, Y., Gao, Y., Lin, X., Daley, T., Kipniss, N.H., La Russa, M., Qi, L.S. Cell, 2018.

Press: [Stanford Medicine](#), [Stanford Daily](#), [Quanta](#), [Science](#)

## SELECTED PROJECTS

Noise vs. Blur | Jan 2021 – Present

Understanding complimentary relationship between short and long exposures. Developing a network that can utilize information from different exposures with varying noise instantiations. Tools: PyTorch.

Depth from Defocus with Learned Optics | Aug 2020 – Jan 2021

Published in ICCP 2021. Personal contributions include rendering ground truth examples in Blender, running analyses of baseline models, designing 3D print-outs for building the camera prototype, PSF and demo captures with prototype.

Tools/Skills: PyTorch, Blender, Onshape, real-life capture, PSF calibration

Focusing Curved Focal Planes in Microscopy | June 2020 – Sep 2020

Designed a DOE to place in front of the sensor to capture non-shift invariant curved focal surface in a microscopy set-up for [COSMOS](#) applications. Tools: Zemax.

HONORS [NSF GRFP](#), [Generation Google Scholarship](#), [German Academic Exchange Service Scholarship](#), Stanford Bio-X Undergrad Research Fellowship, NSF Undergrad Research Fellowship, Google igniteCS Grant

## TECHNICAL SKILLS

Experienced | PyTorch, Python, MATLAB

Familiar | Onshape, Blender, Zemax, ImageJ, InkScape