# Cindy M. Nguyen

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**INTERESTS** | Computer vision, computational imaging, deep learning

## EDUCATION

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|---|---|---|---|
| PhD | Stanford University | Electrical Engineering | Sept 2019 - Present |
| MS | Stanford University | Electrical Engineering | Sept 2019 - Present |
| BS | Stanford University | Bioengineering | Sept 2015 - June 2019 |

**Relevant Coursework:** Geometric and Topological Data Analysis, Fourier Optics, Modern Optics, Convex Optimization, Computational Imaging, Linear Dynamical Systems, Convolutional Neural Networks, Machine Learning, Artificial Intelligence, Meta-Learning, Decision Making under Uncertainty, Natural Language Processing

## RESEARCH EXPERIENCE

**Stanford Computational Imaging Lab** | Stanford University, Stanford, CA **January 2020 – Present**

*Research Assistant*

Advised by Gordon Wetzstein. Working on end-to-end optimization for camera ISPs.

**Brian Feldman Lab** | Stanford University, Stanford, CA (moved to UCSF) **Sept 2017 – Mar 2019**

*Research Assistant*

Performed RNA-Seq analysis to study mature adipocytes as *in vivo* nutrient biosensors and identify metabolic systemic cues.

**Markus Schwaninger Lab** | Universität zu Lübeck, Lübeck, Germany **July 2018 – Sept 2018**

*German Academic Exchange Service RISE Fellow*

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

**Stanley Qi Lab** | Stanford University, Stanford, CA **Mar 2016 – Feb 2018**

*Research Assistant*

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

**Sean Wu Lab** | Stanford University, Stanford, CA

*Research Assistant* **June 2015 – Aug 2015**

*Research Assistant* **June 2014 – Aug 2014**

Developed CRISPR/Cas9 and Cas9 nickase systems targeting human cardiomyocyte loci in induced pluripotent stem cells.

## PUBLICATIONS AND PREPRINTS

1. Ikoma, H., **Nguyen, C.M.,** Peng, Y., Metzler, C., Wetzstein, G. (2021) Depth from Defocus with Learned Optics for Imaging and Occlusion-Aware Depth Estimation. *Under review*.
2. Wang, H., Nakamura, M., Abbott, T.R., Zhao, D., Luo, K., Yu, C., **Nguyen, C.M.,** Lo, A., Daley, T., La Russa, M., Liu, Y., Qi, L.S. (2019). CRISPR-Mediated Live Imaging of Genome Editing and Transcription. *Science*.
3. Wang, H., Nakamura, M., Zhao, D., **Nguyen, C.M.,** Yu, C., Lo, A., Daley, T., La Russa, M., Liu, Y., Qi, L.S. (2019). Temporal-Spatial Visualization of Endogenous Chromosome Rearrangements in Living Cells. *bioRxiv.*
4. Wang, H., Xu, X., **Nguyen, C.M.,** Liu, Y., Gao, Y., Lin, X., Daley, T., Kipniss. N.H., La Russa, M., Qi, L.S. (2018). CRISPR-Mediated Programmable 3D Genome Positioning and Nuclear Organization. *Cell.*
   *Press: Stanford Medicine, Stanford Daily, Quanta, Science*

## FELLOWSHIPS AND GRANTS

**National Science Foundation Graduate Research Fellowship** **2019**
Three-year fellowship awarded to ~15% of applicants nationally (USD 34,000/year)

**Stanford NeuroTech Fellowship** **2019**
Declined early acceptance to three-year fellowship

**German Academic Exchange Service Scholarship** **2018**
Scholarship for conducting research abroad at the Universität zu Lübeck (EUR 1,250/month)

**Stanford Bio-X Undergraduate Research Fellowship** **2017**
Fellowship for conducting summer research (USD 7,000)

**Google igniteCS Grant** **2017**
Grant to direct and organize computer science educational workshop series in low-income communities (USD 4,000)

**National Science Foundation Undergraduate Research Fellowship** **2016**
Fellowship for conducting summer research (USD 6,400)

**Stanford Haas Education Partnerships Grant** **2016, 2017**
Grant to direct and organize educational outreach programs in low-income communities (USD 2,000)

## PRESENTATIONS

1. Nguyen, C.M., Wang, H., Qi, L.S. Annual Biomedical Research Conference for Minority Students, Phoenix, AZ, Nov. 2017. ***selected for Outstanding Poster Presentation in Engineering, Mathematics & Physics**
2. Nguyen, C.M., Wang, H., Qi, L.S. Symposia of Undergraduate Research and Public Service, Stanford, CA, Oct. 2017.
3. Nguyen, C.M., Wang, H., Qi, L.S. Stanford Bio-X, Stanford, CA, Aug. 2017.
4. Nguyen, C.M., Wang, H., Qi, L.S. NSF Research Experiences for Undergraduates, Stanford, CA, Aug. 2016.
5. Nguyen, C.M., Plonowska, K., Sturzu, A.C., Wu, S.M. CIRM Creativity Awards, San Francisco, CA, Aug. 2014.
6. Nguyen, C.M., Plonowska, K., Sturzu, A.C., Wu, S.M. Stanford Institutes of Medicine Research Program, Stanford, CA, Jul. 2014. ***selected for best oral presentation**

## TECHNICAL SKILLS

**Fields |** Optics, Computational Imaging, Deep Learning, Computer Vision, Machine Learning, Microscopy
**Programming |** Python, MATLAB
**Tools |** Blender, Zemax, Git, LaTeX, PyTorch, Tensorflow

## TEACHING EXPERIENCE

**Oral Communication Tutor for Hume Center for Reading and Writing** March 2018 – December 2019
Tutored undergraduates and graduate students on oral presentations and thesis defenses.

**TA for Stanford Institutes of Medicine Research Program** June 2019 – September 2019
Mentored high school students in creating biomedical prototypes.

**Course Grader for Systems Physiology, BIOE 103** March 2019 – June 2019
Hosted weekly office hours and graded assignments.

## OUTREACH

**Program Director for Stanford STEM to SHTEM** February 2019 – Present
*Press: Stanford Electrical Engineering (2019, 2020), Stanford News*
**Programs Officer for Future Advancers of Science and Technology** February 2017 - Present
**Project Lead for Google igniteCS at Stanford** February 2017 – May 2017
**Co-Founder of Catalist at Stanford** January 2016 – May 2017