

Neerja Aggarwal

Portfolio Website: NeerjaAggarwal.com
neerja@berkeley.edu | 1-832-466-9840 | [linkedin/neerja-aggarwal](https://www.linkedin.com/in/neerja-aggarwal)

EDUCATION

University of California at Berkeley Berkeley, CA | 2019-Present
PH.D ELECTRICAL ENGINEERING AND COMPUTER SCIENCE | THESIS: COMPACT COMPUTATIONAL SPECTRAL IMAGING

Massachusetts Institute of Technology Cambridge, MA | 2012-2018
BSC. ELECTRICAL ENGINEERING AND THEATER ARTS | MENG. ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

EXPERIENCE

UC Berkeley: Computational Imaging Group | GRADUATE RESEARCHER Berkeley, CA | Sep 2019 - Present

- Spectral Diffuser Microscope Project: Redesigning hyperspectral cameras using lensless imaging techniques for snapshot fluorescence
- Compact Spectroscopy for Optical Coherence Tomography Project: Using compressed sensing and multiplexing to design diffuser-based spectrometers
- Published research in *Optica* 2020 journal and presenting at *Focus on Microscopy 2022* Conference
- See full list of current and previous research projects on [Research Site](#).

LivaNova Neuromodulation | ELECTRICAL ENGINEER FULL-TIME Houston, TX | Sep 2018 - Jul 2019

- Led the design of the power circuitry for next generation implantable neuromodulation device for epilepsy
- Collaborated across functional teams of software, mechanical, clinical engineers
- Started new team seminar initiative to encourage continuous learning and pitched a new young professionals development program

MIT: Physical Optics and Electronics Group | MASTERS RESEARCHER Cambridge, MA | Jul 2016 – Sep 2018

- Investigated optical techniques for non-invasive glucose sensing through skin
- Designed and debugged an electro-optical system to achieve a new measurement
- Won prestigious *Siebel Scholarship*; Patented class project on proton imaging

Formlabs: 3D Printing | PRINT PROCESS ENGINEER INTERN Somerville, MA | Jun 2015 - Aug 2015

- Designed the heater control and temperature sensor calibration for the Form 2, advanced stereolithography 3-D printer for product launch in Sep 2015
- Collaborated across electrical, mechanical, software teams to solve print failures and system integration issues

Halliburton: Wireline & Telemetry | ELECTRICAL ENGINEER INTERN Houston, TX | Jun 2014 - Aug 2014

- Evaluated effect of temperature and vibrations on fiber optic components to obtain faster telemetry data rates
- Exceeded expectations and presented results as a finalist out of 100+ interns (including Ph.Ds) to the Vice Presidents of Technology, Wireline, Cementing, and Landmark Product Service Lines; Patented technology

SERVICE LEADERSHIP

MIT 2016 Alumni Class Council | CLASS PRESIDENT Mar 2018 - Present

Bay Area Disc Association | VOLUNTEER COACH Sep 2019 - Present

Photobears Optical Society Chapter | PROFESSIONAL/ACADEMIC EVENTS OFFICER Sep 2019 - Present

SKILLS

Computational Imaging: Optics (free-space, Zemax, Lumerical, spectroscopy), Signal Processing, Convex optimization

Software & Coding: MATLAB, Python, Libraries: Pytorch, Numpy, Jupyter, Anaconda

Hardware: SolidWorks, Onshape CAD, Machining, Prototyping, Altium, LTSpice, Soldering, Circuit Analysis, Layout, Electronics