

University Address

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Yongyi Zhao

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Permanent Address

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Education

Carnegie Mellon University, Pittsburgh PA.
Bachelor of Science in Electrical and Computer Engineering
Overall GPA: 3.91/4.00

Dec 2017

Research Experience

Carnegie Mellon University: Image Science Lab

- ❖ **Supervisor:** Prof. Aswin Sankaranarayanan
- ❖ Researching, developing, and analyzing accuracy of computational camera models
- ❖ Developing prototype of spherical imaging device

Jan 2017 – Present
Pittsburgh, PA

Carnegie Mellon University: Inorganic Nanoparticles for Chiral Separation

- ❖ **Supervisor:** Dr. Nisha Shukla
- ❖ Synthesize and characterize gold nanoparticles in chiral sensing/separation
- ❖ Establish procedure for reproducible production of faceted gold nanoparticles

Oct 2014 – Dec 2017
Pittsburgh, PA

Stony Brook University: Antibacterial Applications of Graphene/Polymer Blend

- ❖ **Supervisor:** Prof. Miriam Rafailovich & Prof. John Jerome
- ❖ Established methodology for synthesizing antibacterial polymer structures
- ❖ Synthesized material that could puncture microbial films

Jun – Aug 2013
Stony Brook, NY

Northeastern University: Gas Sensing Properties of Functionalized Graphene

- ❖ **Supervisor:** Prof. Swastik Kar
- ❖ Researched applications of graphene in vapor detection
- ❖ Developed gas sensing probes, using graphene, for detection of acetone

Aug 2012 – Jun 2013
Boston, MA

Northeastern University: Genetic Regulation of Cell Migration in *C. elegans*

- ❖ **Supervisor:** Prof. Erin Cram
- ❖ Utilized RNAi to study genetic regulation of distal-tip cell migration in *C. elegans*
- ❖ Established relation between specific gene sequences and migration patterns

Jun – Aug 2012
Boston, MA

Publications & Presentations

Ozturk B., **Zhao Y.**, et. al. Atomically Thin Layers of BNCO with Tunable Composition. *Science Advances*. **1** (2015). <http://advances.sciencemag.org/content/1/6/e1500094>

Zhao Y., Nuhfer, T., & Nisha Shukla. "Synthesis and Characterization of Tetrahedral Gold Nanoparticles." Berg Symposium, Carnegie Mellon University. Doherty Hall, Pittsburgh, PA. 21 Sep 2015. Oral Presentation.

Projects

Cartoon Interpolation Animator

- ❖ Animate 2-D image using interpolation: manipulate using cage, skeleton, spline interpolation
- ❖ Implemented program in Python, using python image library for speed optimization and user interface

Dec 2016

Racing Simulation using OpenCV Motion Detection

- ❖ Presented as one of top 15 projects (of ~400 students) for 15-112 Spring 2015 Course
- ❖ Used OpenCV library to create racing game that could read hand and feet motion of user as controls

April 2015

Awards & Honors

Andrew Carnegie Society (ACS) Scholar	Sep 2017
❖ Recognized as one of 40 students from graduating class for academics, involvement and leadership	
Eta Kappa Nu, IEEE Honor Society	Nov 2017
Tau Beta Pi Engineering Honors Society	Nov 2016
CMU Summer Undergraduate Research Fellowship	May 2015
National Merit Scholarship Finalist	May 2014
Siemens Science Competition Semifinalist	Oct 2013
❖ Selected as semifinalist (300 total) for outstanding original research report	

Work Experience

Teaching Assistant (TA), 18-240 at Carnegie Mellon University	Aug 2017 – Present
❖ Lead lab section of 30 students, weekly project to deepen students' understanding	Pittsburgh, PA
❖ Perform course-support tasks: grading, tutoring at office hours, leading review sessions	
Software Development Engineer Intern, Amazon.com	May 2017 – Aug 2017
❖ Working on Amazon AWS, Elastic Compute Cloud Team	Seattle, WA
❖ Designing and implementing container service	
Teaching Assistant (TA), 15-112 at Carnegie Mellon University	Aug 2016 – Dec 2016
❖ Lead recitation of 20 students, weekly lecture to deepen students' understanding	Pittsburgh, PA
❖ Perform course logistics: grading, tutoring at office hours, leading review sessions	

Skills

Programming/Computing:

- ❖ **Strong:** Python, C, SystemVerilog
- ❖ **Proficient:** C++, Matlab, Linux
- ❖ **Limited:** Version Control (Git), Qt

Languages: Fluent in English and Chinese (Mandarin)

Volunteer Activities

Mentor, Higher Achievement	Oct 2014 – May 2017
❖ Tutored group of 2-5 middle school students in project design and scientific method	
❖ Created and implemented projects to teach programming and experimental design	