LAUREN COOPER
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EDUCATION

University of Michigan, Ann Arbor, MI
PhD in Electrical Engineering, Expected June 2024
Area of focus: Optics and Photonics

Western Kentucky University, Bowling Green, KY
Bachelor of Science in Mechanical Engineering, May 2019, *summa cum laude*
Thesis: "The Effect of Organic and Inorganic Graphene Quantum Dots on Bacterial Deactivation"

SKEMA Business School, Sophia Antipolis, France
Semester Abroad, Spring 2017

RESEARCH

University of Michigan, Department of Electrical Engineering, Fall 2019-Present
Graduate Student Research Assistant under Dr. Almantas Galvanauskas

Western Kentucky University, Department of Physics, Fall 2017-Spring 2019
Research Assistant under Dr. Ali Er

- Determine emission and absorption rates of graphene quantum dot (GQD) samples using a spectrophotometer
- Characterize GQD samples using a scanning electron microscope and transmission electron microscope
- Aid in the development of more GQD samples using pulsed laser deposition

Western Kentucky University, **Department of Physics**, Fall 2017-Fall 2018
Research Assistant under Professor Gordon Emslie

- Assist in creation of Mathematica simulation of cooling of coronal loops
- Aid in development of equations and modeling of coronal phenomena as needed

EXTRACURRICULAR ACTIVITIES

University of Michigan, Electrical Engineering Ambassador Program, Spring 2020-Present
Ambassador

- Serve as a resource for visiting ECE PhD and Master's students
- Work with Alumni to maintain Alumni-student relations

University of Michigan, Graduate Society of Women Engineers, Spring 2020-Present
Activities Co-Director

- Organize events for members to provide a richer graduate school experience

University of Michigan, Eta Kappa Nu, Spring 2020-Present

Electee

Western Kentucky University, Women in Science and Engineering, Spring 2016-Spring 2019
Founder and President

- Prepare bi-weekly meeting presentations
- Give directives to other officers
- Promote club via discover festivals, website, speaking in classes, etc.

Other Activities:

- **Western Kentucky University, Ogden College Ambassador,** Student Ambassador, Fall 2017-Spring 2019
- **Western Kentucky University, Tau Beta Pi**, Member, Fall 2018-Spring 2019
- **Western Kentucky University, Engineers in Action**, Founder and Co-President, Spring 2018-Spring 2019
- **Western Kentucky University, Society of Women Engineers**, Member, Fall 2016-Spring 2019

HONORS/AWARDS

- Recipient of Western Kentucky University 2018 Randall Harper Award for Outstanding Research in Physics
- FUSE Grant Recipient
- Member of University Honors College
- Recipient of 1906 Founder's Scholarship—Full Tuition, Housing, and $500 Book Stipend
- Recipient of one-time Elk's Lodge Regional Scholarship—Valued at $2000

EMPLOYMENT

SLAC National Accelerator Laboratory, Summer 2019
LCLS Intern

- Designed and built setup for x-ray cross correlator to use in pump-probe experiments
- Utilized interferometric techniques to study dynamic optical properties within vacuum experiments
- Modeled and designed a part in SolidEdge for use in future experiments in L2SI

Heath Co LLC, September 2018-February 2019
Electrical Engineering Intern

- Automating processes using JavaScript for greater production efficiency
- Creating prototypes of products using 3D-printing and CNC technology
- Assisting LabVIEW programming testing mechanical aspects of designs

Tutoring Center for Mathematics, August 2018-February 2019
Math Tutor for Remedial Algebra to Calculus II

- Help students gain further understanding of concepts taught in class

- Provide insight into programming in Mathematica

SLAC National Accelerator Laboratory, Summer 2018
Science Undergraduate Laboratory Internship (SULI) Participant

- Developed a particle coordination number calculator for metal nanoparticles in MATLAB
- Piloted a beamline while recording extended x-ray absorption fine structure (EXAFS) data

Purdue University, Department of Mechanical Engineering, Summer 2017
Summer Undergraduate Research Fellowship (SURF) Participant

- Created COMSOL simulation of particulate composite energetic materials under inertial excitation
- Assisted in mechanical and thermal data acquisition of plate samples excited by an electrodynamic shaker
- Fabricated samples of mock energetic material