

# SHAWN SHIN

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## EDUCATION

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University of California, Berkeley  
B.A. Physics

Graduated May 2021  
Major GPA: 3.73/4.00

## RESEARCH EXPERIENCE

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Associate Research Scientist, Incom, Inc.  
Supervisor: Dr. Alexey Lyashenko

Jul 2021 – Present  
Charlton, MA

- *Primary role:* Fabricate, seal, and characterize MCP-based PMTs (Large Area Picosecond Photodetector) in ultra-high vacuum chamber.
- Developed and deposited experimental bialkali and multialkali photocathodes with high quantum efficiencies ( $> 30\%$ ).
- Producing LabVIEW program that would automate the photocathode deposition process.
- Key supporting researcher in multiple DOE SBIR programs

Summer Researcher, CERN  
Advisor: Prof. Joel Fajans

May 2021 – Jul 2021  
Meyrin, Switzerland

- Summer research intern at Antihydrogen Laser Physics Apparatus (ALPHA) collaboration at CERN.
- Optimized and improved LabVIEW code that automated Argon and Krypton gas-mixing in Third Harmonic Generation chamber to produce Lyman- $\alpha$  laser.
- Designed a structural support for octupole magnet leads using Autodesk Inventor.

Undergraduate Researcher, Mesbah Lab, UC Berkeley  
Advisor: Prof. Ali Mesbah

Jan 2021 – May 2021  
Berkeley, CA

- Led a group of graduate students on the circuit mapping of an Atmospheric Pressure Plasma Jet (APPJ).
- Produced a schematic diagram and preliminary PCB layout using Autodesk EAGLE.

## PRIMARY AUTHOR PUBLICATIONS

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1. S. Shin et al. *Advances in the Large Area Picosecond Photodetector – LAPPD<sup>TM</sup>*. In preparation.

## SCIENTIFIC TALKS

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1. Shawn Shin. *Advances in Large Area Picosecond Photodetectors – LAPPD<sup>TM</sup>*.  
APS April Meeting 2022, April 2022. New York City, NY.
2. Shawn Shin. *LAPPD Overview: Recent Performance Results of Gen-II (Capacitively Coupled) LAPPDs*.  
LAPPD Virtual Workshop, March 2022. CFNS, Stony Brook University.

## TEACHING EXPERIENCE

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Undergraduate Group Tutor, UC Berkeley Dept. of Physics  
PHYS 111A: Instrumentation Laboratory

Jan 2021 – May 2021  
Berkeley, CA

- Undergraduate student instructor for PHYS 111A taught by Prof. Joel Fajans and Prof. Kam-Biu Luk.
- Held weekly office hours that involved review of semiconductor circuit theory and debugging of students' circuits and LabVIEW codes.

## SKILLS

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<b>Programming Languages</b>	Python, Java, MATLAB, SQL, R
<b>Tools</b>	LabView, LaTeX, Mathematica, SolidWorks, Autodesk Inventor, EAGLE
<b>Technology</b>	Ultra-High Vacuum Systems, Photomultiplier Tubes, High Voltage