Philip Jacobson

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219 Hans Bethe House
Ithaca, NY 14853

EDUCATION

Cornell University, Ithaca, NY — Expected May 2019
Bachelor of Arts, Physics GPA: 3.98/4.00
Summa Cum Laude

University of California, Berkeley, Berkeley, CA — Expected May 2021
Masters of Science, Electrical Engineering and Computer Science

University of California, Berkeley, Berkeley, CA — Expected May 2024
PhD, Electrical Engineering and Computer Science

HONORS AND AWARDS

Phi Beta Kappa	Spring 2019
Howard Milstein Scholarship	Spring 2019
Howard Milstein Book Award	Spring 2019
MIT Jacob's Presidential Fellowship	Spring 2019
Malcolm Stacey Memorial Fellowship	Spring 2019
University of Pennsylvania Dean's Fellowship	Spring 2019
Ganster Engineering Fellowship	Spring 2019
Duke Pratt and Gardner Fellowship	Spring 2019
Ohio State College of Engineering Graduate Fellowship	Spring 2019
Michigan ECE Departmental Fellowship	Spring 2019
Dean's List	Fall 2015 - Present
Eagle Scout	Fall 2014

RESEARCH EXPERIENCE

Research Assistant — Department of Physics
January 2018 - Present — Cornell University
Designing X-ray scattering experiments at the Cornell High Energy Synchrotron Source to study Atomic Bremsstrahlung radiation in Prof. Carl Franck's research group. Writing software to aid in the analysis of large amounts of X-ray data. Collaborating with Dr. Stanislav Stoupin in developing a semi-empirical model for the thermal expansion of diamond through fitting to experimental data in the literature.

Research Assistant — Department of Physics
February 2016 - December 2017 — Cornell University
Worked in the lab of Prof. Michael Niemack on instrumentation for the next generation of Cosmic Microwave Background (CMB) telescopes (CCAT-Prime, Simon's Observatory). Designed, built, and tested a Fourier Transform Spectrometer in collaboration with a graduate student for measuring anti-reflection coatings on silicon lenses at microwave frequencies, with work encompassing both hardware and software elements. Optimized optics tube lens layouts of future CMB telescope designs to correct for various optical defects.

PUBLICATIONS

P. Jacobson, R.R. Reeber, K. Wang, S. Stoupin, "Thermal Expansion Coefficient of Diamond in a Wide Temperature Range", in prep.

RESEARCH TALKS

P. Jacobson, A. Rasovic, S. Jia, Y. Li, C. Franck,"Testing for the Continuous Spectrum of X-Rays Predicted to Accompany the Photoejection of an Atomic Inner Shell Electron" American Physical Society March Meeting, March 2019.

J. Kuan, A. Campello, G. Gardner, J. Oh, **P. Jacosbon**, C. Goddard, Y. Chen, C. Franck,"Intra-atomic Bremsstrahlung (IAB) Search at CHESS" NSF Site Visit, March 2018.

P. Jacobson, M. Niemack, P. Corlies, B. Koopman, E. Vavagiakis, N. Cothard, P. Gallardo, "Measuring Silicon Optics with Fourier Transform Spectroscopy", Cornell Undergraduate Astronomy Research Forum, May 2017.

TEACHING EXPERIENCE

Undergraduate Teaching Assistant — Department of Physics
August 2016 - May 2018 — Cornell University
Taught for Phys 1112: Mechanics and Heat and Phys 2214: Oscillations, Waves, and Quantum Physics. Held office hours and homework help sessions, and assisted in teaching during recitation sections.

LEADERSHIP AND OUTREACH

Active Citizen — Hans Bethe House
January 2017 - Present — Cornell University
Encouraging science and community participation for residents of the Hans Bethe House Dormitory. Hosted talks with Cornell professors for students to learn about ongoing research in various fields of physics.

Supervisor — Cornell Dining
August 2015 - Present — Cornell University
Serving as a supervisor for Robert Purcell Marketplace Eatery, Cornell's largest dining hall. Lead student workers during dinner shifts and facilitate trainings, clean-up, and set-up. Awarded worker of the semester for outstanding service.

Eagle Scout
February 2014 - November 2014
Led a community service project building picnic tables and benches for a local church. Supervised over 20 people throughout the design and construction phases of the project in an effort totaling over 100 man hours.

COMPUTER SKILLS

Languages: Python, Java, MATLAB, HTML, CSS, LaTeX
Software: SolidWorks, Zemax OpticStudio, Wolfram Mathematica
Operating Systems: Unix, Linux, Windows

AFFILIATIONS

Society of Physics Students
Cornell Undergraduate Research Board
American Physical Society