



Jacob Bryon

Curriculum Vitae

"The thing that doesn't fit is the thing that's the most interesting: the part that doesn't go according to what you expected." - Richard Feynman

Education

- 2014–2018 **Bachelors in Physics, Honors**, *The University of California*, Berkeley, *GPA – 3.6.*
Graduate with honors
- 2010–2014 **Community College**, *Cape Fear CC*, Wilmington, NC, *GPA – 4.0.*
Dual enrollment while in High School
- 2010–2014 **High School**, *Eugene Ashley High School*, Wilmington, NC, *GPA – 4.0.*

Honors Thesis

- Title *Effect of Strain on the Charge Density Wave State in Low Dimensional Materials*
Supervisor Professor Alex Zettl
Description Thesis explores the influence of strain applied to both quasi-one dimensional and quasi-two dimensional materials, specifically NbSe_2 and NbSe_3 . The project focusses on strains influence on sliding behavior in the charge density wave.

Experience

Research

- May 2015– **Condensed Matter Physics Researcher**, ALEX ZETTL GROUP, UC Berkeley.
Present Undergraduate Research. Research focused on electrical transport measurements of low dimensional materials, engineering equipment used in experimentation. Worked with machining, cryogenics, electrical measurements.
Selected Projects:
 - Design and Creation of High Vacuum systems
 - Crystal Synthesis via Chemical Vapor Transport
 - Design and Machine Heterostructure Transfer Station
 - Electrical Probe Design and Implementation

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- June 2017– **Nuclear Physics Researcher**, *Huan Huang Group*, UCLA.
Aug. 2017 Summer Program through UC LEADS. Research for the STAR collaboration at the Relativistic Heavy Ion Collider (RHIC). Work focused on data analysis and Monte Carlo simulation for AMPT models.

Miscellaneous

- June 2016 – **MCAT Physics Instructor**, *The Princeton Review*, Berkeley, CA.
Present Create lesson plans and teach a course preparing students to take the Physics portion of the MCAT
- Aug. 2014 – **Gallery Attendant**, *Berkeley Art Museum Pacific Film Archive*, Berkeley, CA.
Present Protect art work in exhibitions and act as a liaison to patrons
- May 2016 – **House President -Ridge House**, *Berkeley Student Cooperative*, Berkeley, CA.
Dec. 2016 Oversee motions and bylaw changes, manage house level managers and run house councils
- Aug. 2015 – **Administrative Committee Board Member**, *Berkeley Student Cooperative*.
Aug. 2016 Make administrative decisions on cases brought to the Berkeley Student Cooperative, to benefit both the students and the Berkeley Student Cooperative

Publications

- 2017 TBA

Research Presentations

- Aug. 2017 UCLA: Summer Research Symposium
Apr. 2017 UC Berkeley: Physics Undergraduate Research Showcase
Mar. 2017 UCLA: UC LEADS State Symposium
Aug. 2016 UC Berkeley: UC LEADS Berkeley Research Showcase
May 2016 UC Berkeley: NERDtopia: STEM Conference
Apr. 2016 UC Berkeley: Physics Undergraduate Research Showcase

Awards

- 2016-2018 UC LEADS Scholar
Spring 2017 UC Berkeley: Dean's List
Spring 2017 Berkeley Physics Undergraduate Research Scholar
Fall 2016 UC Berkeley: Honors to Date
Fall 2016 Berkeley Physics Undergraduate Research Scholar
Spring 2016 Berkeley Physics Undergraduate Research Scholar

Relevant Coursework

- Math Linear Algebra, Differential Equations, Multi-variable Calculus
Physics Classical and Quantum Mechanics, Electricity and Magnetism, Solid State Physics
Comp. Sci/ El. Eng Semi-Conductor Circuits, Integrated-Circuit Devices, Structure and Interpretation of Computer Programs

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Computer skills

- Basic Autocad, Microsoft Office
- Intermediate Mathematica, LaTeX, Python, JavaScript, CSS & HTML
- Advanced C/C++, ROOT

Languages

English **Mothertongue**

German **Intermediate**

Conversationally proficient

Affiliations

- UC LEADS Scholar
- CAL NERDS
- PEACE Tutoring
- Society of Physics Students
- UC Berkeley German Film Club

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