

Jerry (Jiahong) Ling

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<https://github.com/moelf>

University of California, Santa Barbara, United States
College of Creative Studies (Honors College)

Expected: B.S. in Physics, Jun 2020
GPA: 3.90/4.00

PUBLICATION & CONFERENCE

Search for SUSY with multileptons & 2LSS in 13 TeV data (Run2 legacy)

Pending

The European Physical Journal C

Work at the AWAKE Experiment

Presented Aug 2019

at Advanced Control Methods for Particle Accelerator workshop

RESEARCH EXPERIENCE

Measure Higgs decay width with HWW Off-shell distribution:

Ongoing Senior Thesis

AWAKE Experiment, UMich-CERN REU: e^- beam line studies

Summer 2019

- Studied photoinjector simulation and developed a fast emittance estimation
- Improved DAQ & monitoring system for the AWAKE Run 2
- Analyzed the effectiveness of ML in advanced beam control optimization
- Work presented at ACM4PA hosted by Los Alamos National Laboratory

Dilepton SUSY Search in CMS Detector: Improving signal region strategy

May 2018 – Jan 2019

- Responsible for new signal region cuts built upon SUS-16-035
- Studied the effectiveness of boosted decision tree in signal-background classification
- Lepton fake rates studies using Fall2018 Monte Carlo

milliQan Detector Testing: Studying property of PMTs

Nov 2017 – Mar 2018

- Applied model-independent calibration to candidate PMTs (photomultiplier)
 - Developed peak recognition to study dark currents and after-pulse patterns
 - Made feedback report to help build the next iteration of milliQan design
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OUTREACH

Physics Circus

Aug 2018 – Aug 2019

Cultivated physics intuitions of K12 students through stimulating demos

Linux China Translation Team (LCTT)

2015 – Present

Top member of translation team

UCSB Learning Assistant

Spring 2019

INIT 15 ~ Statistical / Machine learning

AWARDS

- Department Physics Circus Award
- Summer Undergrad Research Fellowship (SURF)

2018-2019

Summer 2018

SKILLS

Programming: Julia, Python, C++ (with ROOT)

Languages: English, Mandarin & Shanghainese (both native), Japanese (elementary)

Auxiliary: Unix toolchains, Analogue electronics, Git, $\LaTeX 2_{\epsilon}$, Blender(3D Modeling)