Jung Lin (Doris) Lee

dorislee@berkeley.edu • dorisjunglinlee.com• GitHub: dorislee0309

(510)-731-8742 • Apt #6, 2032 Delaware Street, Berkeley , C.A. 94709

EDUCATION

University of California, Berkeley Sept 2013 - May 2016

Major: Physics, Astrophysics

Relevant Coursework: Honors Mechanics, Structure & Interpretation of Computer Programs, Multivariable Calculus, Honors Electromagnetism, Differential Equations and Linear Algebra, Algorithms and Data Structures, Honors Modern Physics, Optical and Infrared Astronomy Lab, Statistical Mechanics, Quantum Mechanics, Electromagnetism and Optics, Modern Physics and Advanced Electrical Laboratory, Introduction to High Performance Computing for Astrophysicists, Stellar Astrophysics, Planetary Astrophysics, Analytical Mechanics

SKILLS

High Performance Computing: Fortran , C, C++, OpenMP, MPI. 200k+ hours of HPC history.
Scripting/Data Analysis: Python, Java, Bash, Scheme, IDL, SQL, ROOT
Others: Git, HTML, PHP, JavaScript, LaTeX, Mathematica, LabView

EXPERIENCE

Berkeley Star Formation Simulation Research November 2014 - Present
Advisor: Dr. Steve Stahler

- Investigating the effect of magnetic fields in protostar formation.
- Using the parallel, adaptive mesh refinement magnetohydrodynamical code, *RAMSES*, to simulate the evolution of a collapsing dense core.

Berkeley Human-Computer Interaction Group June 2014 - Present
Advisor: Prof. Eric Paulos

- Designing new educational software approaches to conventional mechanical turk classification tasks in citizen science. Paper in preparation for ACM UIST 2016.
- Creating low-cost fabrication technique for on-skin wearable electronics. Paper in submitted to ACM CHI 2016.
- Collaborated with Google ATAP in Project Jacquard, a new e-textile technology. Showcased in Google I/O 2015. Paper in submitted to ACM CHI 2016.
- Developed a ferro-fluid sketching technique as a new interface for actuation and interaction.
- Refined a fabrication pipeline for rapid prototyping PCB-like circuits using flexible polystyrene plastic sheets as substrates.

University of Illinois Laboratory for Cosmological Data Mining May 2014 - Present
Advisor: Prof. Robert Brunner

- Applying Machine Learning techniques to search for dark matter haloes in large-scale N-body cosmological simulations.
- Developed an algorithm that performs positional update on catalog sources for constructing a newer version of the RC3-cataloged galaxies. Designed a general software pipeline for creating scientifically-calibrated mosaics from large survey imaging datasets. Publically released pipeline source code (ASCL:1411.006) and an online database for accessing data products. Paper submitted to *Astronomy and Computing*.

Princeton Astrophysical Fluid Dynamics Group Summer 2015
Advisor: Prof. James Stone

- Explored the effects of Papaloizou-Pringle and magnetorotational instabilities on accretion disk torus. Constructed global, magnetohydrodynamical disk simulations on supercomputers for testing the new *Athena++* code .

Lawrence Berkeley National Lab Cosmology Group August 2014 - January 2015
Advisor: Dr. David Schlegel

- Investigated how systematics affect the imaging data quality from the Sloan Digital Sky Survey. Identified possible biases to Baryon Oscillation Spectroscopic Survey's initial target selection to further constrain cosmological parameters.

Berkeley Quantum Information Trapped Ions Group Summer 2014
Advisor: Prof. Hartmut Haffner

- Investigated Rabbi oscillations of trapped calcium ions in two-level system as a realization of quantum computer. Developed Python and LabRAD programs for laser control, experimental measurements, and real-time data analysis.

ACTIVITIES

News Editor for Association for Computing Machinery Student Magazine Nov 2014-Present
Club Liaison Society of Physics Student Sept 2014-Present
Peer Mentor Society of Physics Student Sept 2015-Present
Volunteer and Summer Program Coordinator at Berkeley COMPASS Project Sept 2013-Present
Outreach education and support diversity in the physical sciences.
UC Berkeley Computer Science Scholars Program 2013-2014 Academic Year