Jung Lin (Doris) Lee

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EDUCATION

B.A. Physics, Astrophysics, University of California, Berkeley — Sept 2013 - May 2016

SKILLS

High Performance Computing: Fortran , C, C++, OpenMP, MPI. 300k+ hours of HPC history.
Scripting/Data Analysis: Python, Java, Bash, Scheme, IDL, SQL, ROOT
Others: Git, HTML, PHP, JavaScript, LaTeX, Mathematica, LabView

RESEARCH EXPERIENCE

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

- Investigating the effect of magnetic fields in protostar formation. Designing parallel, adaptive mesh refinement, magnetohydrodynamical simulations on supercomputers to track 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.
- Collaborated with Google ATAP in Project Jacquard, a new e-textile technology.
- Developed a ferro-fluid sketching technique as a new interactive interface.
- 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 unsupervised machine learning algorithms to search for dark matter haloes in large-scale N-body cosmological simulations.
- Developed an adaptive algorithm that performs positional update on catalog sources for constructing a newer version of the RC3-cataloged galaxies.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 and an online database for accessing data products.

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

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

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 target selection to 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.

Publications

- Laura Devendorf, Joanne Lo, Noura Howell, **Jung Lin Lee**, Nan-Wei Gong, M. Emre Karagozler, Ivan Poupyrev, Eric Paulos, Kimiko Ryokai,"'I dont want to wear a screen': Probing perceptions of and possibilities for dynamic displays on clothing". *ACM Transactions on Computer-Human Interaction (CHI)*, San Jose, USA, May 2016.
- Joanne Lo, **Jung Lin Lee**, Nathan Wong, David Bui, Eric Paulos,"Skintillates: Towards Epidermal Interactions".
- **Jung Lin Lee**, Robert J. Brunner, "Creating updated, scientifically-calibrated mosaic images for the RC3 Catalogue"(2015) [arXiv:1512.01204].

Presentations

- **Jung Lin Lee**, Kengo Tomida, James Stone, "Three-Dimensional Simulations of Instabilities in Accretion Disk Torus". Princeton University Undergraduate Summer Research Program Final Presentation. August 2015. [Presentation; Report]
- **Jung Lin Lee**, Robert Brunner, "Creating updated, scientifically-calibrated mosaic images for the RC3 Catalogue". Society of Physics Students West Coast Zone Meeting. March 2015. [Poster]

Patents

- *Skintillates: Towards Epidermal Electronics Interactions.* Eric Paulos, Joanne Lo, **Jung-Lin Lee**, U.S. Provisional Patent Application No.62/174,735, June 2015.
- *Individually Addressable, Highly Efficient, Trifunctional Conductive Thread.* Eric Paulos, Kimiko Ryokai, Joanne Lo, Laura Devendorf, **Jung-Lin Lee**, Nan-wei Gong, Karen Robinson, Ivan Poupyrev, June 2015.

ACTIVITIES

Organization Mentor for Google Code-in youth programming contest	2015-2016 Season
News Editor for Association for Computing Machinery Student Magazine	Nov 2014-Present
Club Liaison for Society of Physics Students	Sept 2014-Present
Peer Mentor for Society of Physics Students	Sept 2015-Present
Volunteer and Summer Program Coordinator at Berkeley COMPASS Project	Sept 2013-Present
UC Berkeley Computer Science Scholars Program	2013-2014 Academic Year