

Doris Jung-Lin Lee

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EDUCATION

B.A. Physics, Astrophysics, University of California, Berkeley

Sept 2013 - May 2016

RESEARCH EXPERIENCE

Berkeley Lab Scientific Data Management Group

May 2016 - Aug 2016

- Comparison of load profile clustering techniques for residential electricity usage data.

Berkeley AMP Lab

January 2016 - Aug 2016

- Developing data visualization for Mango, a scalable genome browser for analyzing reads, variants, and features built on top of the ADAM genomics processing engine and Spark.

Berkeley Star Formation Simulation Research

November 2014 - Aug 2016

- 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 - Aug 2016

- Designing new educational software approaches to conventional mechanical Turk classification tasks in citizen science.
- 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 - Jan 2016

- 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- Developed an adaptive algorithm that performs positional update on catalog sources for constructing a newer version of the RC3-cataloged galaxies.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

- 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.

Publications

- **Doris Jung-Lin Lee**, Joanne Lo, Moonhyok Kim, Eric Paulos, Crowddclass: Designing classification-based citizen science learning modules. To appear in *The Fourth AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2016)*, Austin, Texas, November 2016.
- Joanne Lo, **Doris Jung-Lin Lee**, Nathan Wong, David Bui, Eric Paulos, “Skintillates: Towards Epidermal Interactions”. *ACM Designing Interactive Systems (DIS)*, Brisbane, Australia, June 2016. *Honorable Mention*.
- 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. *Best Paper Award*.
- **Jung Lin Lee**, Robert J. Brunner, “Creating updated, scientifically-calibrated mosaic images for the RC3 Catalogue”(2015) [arXiv:1512.01204].

POSTERS/PRESENTATIONS

- **Doris Jung-Lin Lee**, Robert Brunner, “Pattern Discovery and Large-Scale Data Mining on Cosmological Datasets”. Workshop on Algorithms for Modern Massive Data Sets (MMDS). June 2016. [Poster]
- **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.

AWARDS

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| • DIS 2016 Honorable Mention Award | June 2016 |
| • CHI 2016 Best Paper Award | May 2016 |
| • UC Berkeley Student Opportunity Fund Travel Award | March 2016 |

ACTIVITIES

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