Doris Jung-Lin Lee

dorisjunglinlee@gmail.com • dorisjunglinlee.com• GitHub: dorisjlee

(510)-731-8742 • Apt #308, 201 S. Wright Street, Champaign, IL, 61820

EDUCATION

Ph.D. Compute Science, University of Illinois, Urbana-Champaign — Aug 2016 - Present

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

RESEARCH EXPERIENCE

Graduate Student Research Assistant at UIUC — Aug 2016 - Present

- Applying machine learning techniques to problems in human-computer interaction and design. Analyzing data streams from social media and new product reviews in fashion.
- Modelling work quality evaluation for crowdsourcing image segmentation.
- Developing user-expectation models for finding interesting data visualizations.

Lawrence Berkeley National Lab Scientific Data Management Group — May 2016 - Aug 2016

- Comparison of load profile clustering techniques and behavioural analytics predictions for residential electricity usage.

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. Paper in prep. for *Nucleic Acids Research*.

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.
- Collaborated with Google ATAP in Project Jacquard, a new e-textile technology.
- Creating low-cost fabrication technique for on-skin wearable electronics. 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- Developed an adaptive algorithm that performs positional update on catalog sources for constructing a newer version of the RC3-cataloged galaxies.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

- Ling Jin, **Doris Jung-Lin Lee**, Alex Sim, Sam Borgeson, John Wu, Anna Spurlock and Annika Todd, Comparison of Clustering Techniques for Residential Energy Behavior using Smart Meter Data, *AAAI Workshop On Artificial Intelligence for Smart Grids and Smart Buildings* 2017.
- **Doris Jung-Lin Lee**, Joanne Lo, Moonhyok Kim, Eric Paulos, Crowdclass: Designing classification-based citizen science learning modules. *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].

PRESENTATIONS

- Crowdclass: Designing classification-based citizen science learning modules. [Slides]
  - 10/31/16 HCOMP, Austin, Texas
  - 10/18/16 UIUC HCI Seminar, Champaign, Illinois
  - 10/13/16 Zooniverse Seminar, Chicago, Illinois
- 06/23/16 **Doris Jung-Lin Lee**, Robert Brunner, "Pattern Discovery and Large-Scale Data Mining on Cosmological Datasets". 6th Workshop on Algorithms for Modern Massive Data Set (MMDS). [Poster]
- 08/08/16 **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. [Report]
- 03/25/15 **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

- Computer Science Excellence Fellowship — Oct 2016
- DIS 2016 Honorable Mention Award — June 2016
- CHI 2016 Best Paper Award — May 2016