Hong Suh

575 Los Palmos Dr. San Francisco, CA 94127
Github: `https://github.com/hongsuh7`
Website/Portfolio: `https://hongsuh7.github.io`

EDUCATION

Ph.D, Mathematics   on leave
Specializations: Probability, PDEs
UC Berkeley, Berkeley, CA

M.A, Mathematics   2019
Specializations: Probability, PDEs
GPA: 3.85
UC Berkeley, Berkeley, CA

B.A, Mathematics, cum laude   2016
GPA: 3.89
Pomona College, Claremont, CA

SELECT PROJECTS

☐ **Neural network model for image classification and generation.**

- Developed a new neural network architecture for image classification and generation, modifying the methodology in recent normalizing flow papers.
- *Technologies.* Pytorch, R.

☐ **Tennis win prediction model.**

- Eliminated the need for human supervision by automating hyperparameter selection.
- Decreased log-loss error by about 1.5% compared to FiveThirtyEight's model.
- *Technologies.* Python.

☐ **Stochastic homogenization for an exclusion process.**

- Established new quantitative bounds on the long-term statistics of a stochastic growth model, which can model infection disease growth, forest fires, crystal growth, and more.

☐ **Fringe pairs in generalized MSTD sets.**

- Developed new algorithm to construct generalized MSTD sets, which are special finite sets of integers.
- Discovered the most "extreme" MSTD set known at the time using the algorithm.
- *Technologies.* Mathematica.

PUBLICATIONS (AUTHORS IN ALPHABETICAL ORDER)

- M. Asada, S. Manski, S. J. Miller, H. Suh, *Fringe pairs in generalized MSTD sets*, Int. J. Number Theory 13.10 (2017): 2653-2675.

- P. Burkhardt, A. Z.-Y. Chan, G. Currier, S. R. Garcia, F. Luca, H. Suh, *Visual Properties of Generalized Kloosterman sums*, J. Number Theory 160 (2016), 237-253.

EXPERIENCE

Math Teacher   June 2019 – June 2020
Proof School, San Francisco, CA

- Created and executed lesson plans covering nonstandard math topics—such as second-semester university-level linear algebra, number theory, and discrete probability—to kids who love math.

AWARDS

- NSF Graduate Research Fellowship Honorable Mention   2016
- 3 Pomona College Mathematics Department Prizes   2014, 2015, 2016

SKILLS

R, Python, Pytorch, SQL, Mathematica, LaTeX