

Hong Suh
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Github: <https://github.com/hongsuh7>
Website/Portfolio: <https://hongsuh7.github.io>

EDUCATION

<i>Ph.D.</i> , Mathematics	on leave	<i>M.A.</i> , Mathematics	2019	<i>B.A.</i> , Mathematics, cum laude	2016
Specializations: Probability, PDEs		Specializations: Probability, PDEs		GPA: 3.89	
UC Berkeley, Berkeley, CA		GPA: 3.85		Pomona College, Claremont, CA	
		UC Berkeley, Berkeley, CA			

SKILLS

Programming: Python, R, SQL, Mathematica, \LaTeX
Tools/Packages: PyTorch, scikit-learn, NumPy, CuPy, Pandas, tidyverse, plotly, caret, Google Colab

SELECT PROJECTS

- **Neural network model for image classification and generation.**
 - Developed a new high-performance 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, CuPy, plotly.
- **PhD research on 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.
- **Undergraduate research on 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 daily 2-hour lesson plans covering advanced math subjects—such as 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