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Education

Ph.D. in Applied Mathematics <i>Brown University, Advisor: Stuart Geman</i>	2012-2018
B.S. in Statistics and Probability <i>Peking University</i>	2008-2012
B.A. in Economics <i>Peking University</i>	2009-2012

Work Experiences

Researcher, Vicarious AI 2019.7-present

Postdoctoral Associate, Applied Math, Brown University 2018.9-2019.6

- Semester Postdoc at ICERM Spring 2019 Semester program on Computer Vision
- Organizer of the ICERM Generative Models Discussion Group

Applied Scientist Intern, Amazon Lab126 2017.5-2018.8

- Collaborators: Achi Brandt and Eran Borenstein, Computer Vision Team
- Research on multiscale optimization methods for stochastic ill-conditioning in deep neural networks

Consulting for Quantitative Finance Firms

- Consultant, Qsemble Capital Management 2018.9-2019.6
- Consultant, Engineers Gate 2015.8

Publications

- **Guangyao Zhou**. Mixed hamiltonian monte carlo for mixed discrete and continuous variables. *Accepted, Neural Information Processing Systems (NeurIPS) 2020*(Extended abstract accepted as *talk* at PROBPROG 2020)
- Dileep George, Miguel Lázaro-Gredilla, Wolfgang Lehrach, Antoine Dedieu, and **Guangyao Zhou**. A detailed mathematical theory of thalamic and cortical microcircuits based on inference in a generative vision model. *bioRxiv* 2020.09.09.290601, 2020
- Miguel Lázaro-Gredilla, Wolfgang Lehrach, Nishad Gothoskar, **Guangyao Zhou**, Antoine Dedieu, and Dileep George. Query training: Learning and inference for directed and undirected graphical models. *arXiv:2006.06803 [stat.ML]*, 2020
- Jackson Loper*, **Guangyao Zhou***, and Stuart Geman (* indicates equal contribution). Capacities and efficient computation of first passage probabilities. *Phys. Rev. E* 102, 023304, 2020
- **Guangyao Zhou**, Jackson Loper, and Stuart Geman. Base-pair ambiguity and the kinetics of RNA folding. *BMC Bioinformatics*, 20(1):666, December 2019
- **Guangyao Zhou**, Stuart Geman, and Joachim M Buhmann. Sparse feature selection by information theory. In *2014 IEEE International Symposium on Information Theory*, pages 926–930, June 2014

- **Guangyao Zhou**, Zhiwu Lu, and Yuxin Peng. L1-graph construction using structured sparsity. *Neurocomputing*, 120:441–452, November 2013