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Education

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

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

- Miguel Lázaro-Gredilla, Wolfgang Lehrach, Nishad Gothoskar, **Guangyao Zhou**, Antoine Dedieu, and Dileep George. Query training: Learning a worse model to infer better marginals in undirected graphical models with hidden variables. *AAAI Conference on Artificial Intelligence (AAAI)*, 2021
- **Guangyao Zhou**. Mixed hamiltonian monte carlo for mixed discrete and continuous variables. *Advances in Neural Information Processing Systems (NeurIPS)*, 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
- 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