Hui Jin

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EDUCATION

PhD candidate, *Department of Mathematics, University of California Los Angeles*   *expected Dec 2022*
- Advisor: Guido Montúfar, GPA: 4.0/4.0
- Research Interests: Mathematical Theory of Deep Learning

B.S., *School of Mathematical Sciences, Peking University, China*   *Jul 2017*
Minor: Computer Science and Technology

PUBLICATIONS

Hui Jin, Pradeep Kr Banerjee, Guido Montúfar. **(2021)** Learning curves for Gaussian process regression with power-law priors and targets. *To appear, The Tenth International Conference on Learning Representations (ICLR 2022)*. arxiv.org/pdf/2110.12231

Hui Jin, Guido Montúfar. **(2020)** Implicit bias of gradient descent for mean squared error regression with wide neural networks. *Preprint, Submitted*. arxiv.org/pdf/2006.07356.pdf

Hui Jin, Xie He, Yanghui Wang, Hao Li, Andrea L Bertozzi. **(2019)** Noisy Subgraph Isomorphisms on Multiplex Networks. *2019 IEEE International Conference on Big Data (Big Data)*. Paper link

EXPERIENCE

Graduate Student Researcher   **Los Angeles, CA**
University of California, Los Angeles   *Sep 2018 — Present*
- Characterized the gradient descent training of wide shallow networks.
- Obtained the asymptotic generalization error of Kernel Ridge Regression and Gaussian Process Regression. Presented our work on several workshops and seminars.
- Conducted experiments on toy examples by using PyTorch and verified our theorems.
- Led a team of 2 undergraduate students and proposed a heuristic search algorithm for noisy subgraph matching.

Teaching Assistant   **Los Angeles, CA**
University of California, Los Angeles   *Jan 2018 — Present*
- Taught programming languages (C++, Python) and data structures (linked lists, binary search trees) to undergraduate students.
- Made practice problems for students to discuss and helped them to prepare the exams.

SKILLS

- **Tools and Programming Languages:** C++ (proficient), Python (proficient), scikit-learn, PyTorch, Git, LaTeX, MarkDown, MATLAB
- **Communication:** English, Chinese

AWARDS

- Sliver Medal in Applied Mathematics Section of Shing-Tung Yau Mathematics Contests   *2016*
- Gold Medal in the Chinese Mathematical Olympiad   *2013*