

Henry Chai

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Education

Washington University in St. Louis

2021 MS in Computer Science
2021 Ph.D. in Computer Science
Advisor: Roman Garnett

Princeton University

2014 BSE in Operations Research and Financial Engineering, *cum laude*
2014 Certificate in Applications of Computing

Professional Appointments

Carnegie Mellon University, Pittsburgh, PA, USA

2022- Assistant Teaching Professor
Machine Learning Department

Carnegie Mellon University, Pittsburgh, PA, USA

2021-2022 Postdoctoral Teaching Fellow
Machine Learning Department

Analytics Operations Engineering, Boston, MA, USA

2014-2016 Analyst (Operations Research Consulting)

Empirasign Strategies LLC, New York City, NY, USA

2013 Software Engineering Intern

Publications

CONFERENCE PAPERS

- 2020 S JIANG, **H CHAI**, J GONZALEZ, AND R GARNETT. BINOCULARS for Efficient, Non-myopic Sequential Experimental Design. *International Conference on Machine Learning (ICML 2020)*.
- 2019 **H CHAI**, J-F TON, MA OSBORNE, AND R GARNETT. Automated Model Selection with Bayesian Quadrature. *International Conference on Machine Learning (ICML 2019)*.
- 2019 **H CHAI** AND R GARNETT. Improving Quadrature for Constrained Integrands. *International Conference on Artificial Intelligence and Statistics (AISTATS 2019)*.

WORKSHOP PAPERS

- 2017 **H CHAI** AND R GARNETT. An Improved Bayesian Framework for Quadrature. *Advances in Approximate Bayesian Inference. Conference on Neural Information Processing Systems (NIPS 2017)*.

PREPRINTS

- 2020 S MONADJEMI, Q NGUYEN, **H CHAI**, R GARNETT, AND A OTTLEY. Active Visual Analytics: Assisted Data Discovery in Interactive Visualizations via Active Search. <https://arxiv.org/abs/2010.08155>.

THESES

- 2021 **H CHAI**. Bayesian Quadrature with Prior Information: Modeling and Policies. Ph.D. Dissertation. Washington University in St. Louis. *Advisor: Roman Garnett*
- 2014 **H CHAI**. A Statistical Model for Simulating Solar Intensity in New Jersey. Senior Thesis. Princeton University. *Advisor: Warren B. Powell*

Grants, Honors & Awards

- 2021 **SIGCSE Travel Grant**
- 2019 **Departmental Teaching Award** - Computer Science and Engineering, Washington University in St. Louis
- 2019 **Teaching Citation** - Center for Teaching and Learning, Washington University in St. Louis
- 2017 **Upsilon Pi Epsilon** member - Washington University in St. Louis Chapter
- 2014 **Sigma Xi** member - Princeton University Chapter

Teaching

Carnegie Mellon University (Student evaluations of teaching/course quality out of 5)

Co-Instructor, 10-301/601: Introduction to Machine Learning – Undergrad/Master’s

F22, 301-A

F22, 301-B

F22, 601-A

F22, 601-B

M22, 301 (30 Students): Overall teaching quality - 4.70, Overall course quality - 4.70

M22, 601 (11 Students): Overall teaching quality - 4.83, Overall course quality - 4.50

F21, 301-A (44 Students): Overall teaching quality - 4.72, Overall course quality - 4.67

F21, 301-B (55 Students): Overall teaching quality - 4.75, Overall course quality - 4.54

F21, 601-A (177 Students): Overall teaching quality - 4.38, Overall course quality - 4.44

F21, 601-B (195 Students): Overall teaching quality - 4.68, Overall course quality - 4.72

F21, 601-D (2 Students): Overall teaching quality - 4.5, Overall course quality - 5

Co-Instructor, 10-315: Introduction to Machine Learning – SCS Majors

S22 (147 Students): Overall teaching quality - 4.35, Overall course quality - 3.71

Co-Instructor, 10-701: Introduction to Machine Learning – Ph.D.

S22 (138 Students): Overall teaching quality - 4.74, Overall course quality - 4.33

F21 (141 Students): Overall teaching quality - 4.45, Overall course quality - 4.27

Co-Instructor, 10-605/805: Machine Learning with Large Datasets

F22, 605 (171 Students)

F22, 805 (33 Students)

Washington University in St. Louis (Student evaluations of teaching quality out of 7)

Instructor, CSE 515T: Bayesian Methods in Machine Learning

S21 (59 Students): Overall teaching quality - 6.53

Instructor, CSE 417T: Introduction to Machine Learning

F19 (133 Students): Overall teaching quality - 6.46

Co-Instructor, CSE 417T: Introduction to Machine Learning

F18, 417T-01 (75 Students): Overall teaching quality - 6.35

Coordinator, CSE 7100: Research Seminar on Machine Learning

S19 (9 Students)

Teaching Assistant, CSE 347: Analysis of Algorithms

S18 (104 Students)

F17 (54 Students)

Talks

INVITED TALKS

- 2020 Bayesian Optimization Session, Institute for Operations Research and the Management Sciences (**INFORMS**) 2020 Annual Meeting, Online
- 2019 Probabilistic Numerics Minisymposium, Sixteenth International Conference on Approximation Theory (**AT**), Vanderbilt University, Nashville, TN, USA
- 2018 Probabilistic Numerics Webinar Series, The Statistical and Applied Mathematical Sciences Institute (**SAMSI**), Durham, NC, USA

CAMPUS TALKS

- 2018 Doctoral Student Seminar, Department of Computer Science and Engineering

Research Advising

UNDERGRADUATE

- 2019 Abigail Kenyon, Washington University in St. Louis. Project: *Fair Kernels for Gaussian Processes Classification*
- 2019 Diana Torteya, Washington University in St. Louis. Project: *Fair Kernels for Gaussian Processes Classification*

Professional Service

REVIEWING

- 2022 Symposium on Educational Advances in Artificial Intelligence (**EAAI**)
- 2020-2022 AAAI Conference on Artificial Intelligence (**AAAI**)
- 2019-2022 International Conference on Artificial Intelligence and Statistics (**AISTATS**)
- 2018 Symposium on Advances in Approximate Bayesian Inference (**AABI**)

Last updated: August 23, 2022