

# XIAOQIAN (DANA) YANG

Postdoctoral Associate, The Fuqua School of Business, Duke University

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Supervisor: Prof. Jiaming Xu

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Research interests: Bayesian analysis, privacy and fairness in machine learning, statistical inference on random graphs, non-convex optimization, nonparametric estimation

## EDUCATION

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**Yale University**

2014 - 2019

*Ph.D. in Statistics & Data Science*

Advisors: Prof. David Pollard, Prof. Yihong Wu, Prof. John Lafferty

Thesis: “A few topics in statistics”

**Yale University**

2013-2014

*M.A. in Statistics*

**Tsinghua University**

2009-2013

*B.S. in Mathematics*

**University of Washington**

Spring 2012

*Exchange student in Mathematics & Statistics*

## PUBLICATIONS AND PREPRINTS

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1. Jian Ding, Yihong Wu, Jiaming Xu and Dana Yang, “Consistent recovery threshold of hidden nearest neighbor graphs”, *arXiv preprint arXiv:1911.08004*, 2019.
2. Dana Yang, “Posterior asymptotic normality for an individual coordinate in high-dimensional linear regression”, *Electronic Journal of Statistics*, 13(2), pages 3082-3094, 2019.
3. Jiaming Xu and Dana Yang, “Optimal query complexity for private sequential learning”, *arXiv preprint arXiv:1909.09836*, 2019.
4. Pierre C. Bellec and Dana Yang, “The cost-free nature of optimally tuning Tikhonov regularizers and other ordered smoothers”, *arXiv preprint arXiv: 1905.12517*, 2019.
5. Jason M. Klusowski, Dana Yang and W.D. Brinda, “Estimating the coefficients of a mixture of two linear regressions by expectation maximization”, *IEEE Transactions on Information Theory*, 65(6), pages 3515-3524, 2019.
6. W.D. Brinda, Jason M. Klusowski and Dana Yang, “Hölder’s identity”, *Statistics & Probability Letters*, Volume 148, Pages 150-154, 2019.
7. David Pollard and Dana Yang, “Rapid mixing of a Markov chain for the exponentially weighted aggregation estimator”, *arXiv preprint arXiv: 1909.11773*, 2019.
8. John Lafferty and Dana Yang, “Fair quantile regression”, *arXiv preprint arXiv: 1907.08646*, 2019.
9. Victor-Emmanuel Brunel, Jason M. Klusowski and Dana Yang, “Estimation of convex supports from noisy measurements”, *under revision for Bernoulli*, 2018.
10. Kun Tian, Xiaoqian Yang, Qin Kong, Changchuan Yin, Rong L. He and Stephen S-T Yau, “Two dimensional Yau-Hausdorff distance with applications on comparison of DNA and protein sequences”, *PloS one*, 10(9), 2015.

11. Sören R. Künzel, David Pollard and Dana Yang, “Remarks on Kneip’s linear smoothers”, *arXiv preprint arXiv: 1405.1744*, 2014.

## AWARDS AND HONORS

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### **Francis J. Anscombe Award for Academic Excellence**

Department of Statistics and Data Science, Yale University

May 2019

## RESEARCH EXPERIENCE

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### **Postdoctoral Associate at The Fuqua School of Business, Duke University**

Aug 2019 - present

Supervisor: Prof. Jiaming Xu, Assistant Professor at the Fuqua School of Business, Duke University

### **Research Assistant at Emonet Lab, Yale University**

Mar 2016 - Mar 2017

Supervisor: Prof. Thierry Emonet, Associate Professor of Molecular, Cellular & Developmental Biology and Physics, Yale University

Project: Detection of behavioral patterns of Escherichia coli (E. coli) bacteria.

## TEACHING EXPERIENCE

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Primary Instructor: responsible for designing and teaching a 25-lecture course.

- S&DS S107: Introduction to Statistics, Yale University, Summer 2017.

Teaching Fellow: responsible for holding recitations/office hours, grading, and occasionally giving lectures.

- S&DS 625: Statistical Case Studies, Yale University, Fall 2016.
- S&DS 610: Statistical Inference, Yale University, Fall 2016.
- S&DS 551: Stochastic Processes, Yale University, Spring 2016.
- S&DS 600: Advanced Probability, Yale University, Spring 2016.
- S&DS 538: Probability and Statistics, Yale University, Fall 2015.
- S&DS 661: Data Analysis, Yale University, Fall 2015.
- S&DS 600: Advanced Probability, Yale University, Spring 2015.
- S&DS 610: Statistical Inference, Yale University, Fall 2014.
- S&DS 103: Introduction to Statistics: Social Sciences, Yale University, Fall 2013.

## TALKS AND PRESENTATIONS

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**Probability Seminar Series, Department of Mathematics, Duke University** Oct 2019

**Decision Science Seminar Series, The Fuqua School of Business, Duke University** Mar 2019

**Statistics + Machine Learning Reading Group, Yale University** Nov 2018

**SMIL@Y Research and Reading Meeting, Yale University** Feb 2018, Sep 2018

**Joint Statistical Meetings** Aug 2016

**Yale Probability Network Group** Apr 2014, Apr 2015

## PROGRAMMING SKILLS

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R, Python

- Top 3000 competitors, Google Code Jam, 2015.
- Second prize in the National Computing Olympiad, China, 2009.

## SERVICE

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**Yale S&DS Data Clinic** 2016-2019

*Consultant: weekly meetings mostly with Yale researchers; in charge of computational interactions.*

**Yale S&DS M.A. admissions committee** 2015-2019

*Reviewer: one of four committee members handling over 300 applications each year and making admission recommendations.*

**Yale YHack competition** 2018

*Judge: reviewing around 50 submitted computational projects.*

**Yale S&DS Graduate Student Seminar Series** 2018

*Organizer: scheduling talks and leading discussions.*

**Occasional reviewer for Bernoulli** 2015, 2019