

YUBAI YUAN

CONTACT

Address: 141 Giotto, Irvine, CA 92614
Cell Phone: (217) 305 1066
Email: yubaiy@uci.edu
Personal website: <http://yubaiyuan-stats.github.io>

EDUCATION

University of Illinois at Urbana-Champaign Ph.D. in Statistics Advisor: Annie Qu	<i>August 2016 – May 2020</i>
Sun Yat-sen University, China M.S. in Statistics	<i>August 2014 – June 2016</i>
Shandong University, China B.S. in Financial Mathematics	<i>August 2008 – July 2012</i>

RESEARCH INTERESTS

Network data analysis, community detection, link prediction, mediation analysis and causal inference, active learning, crowdsourcing, optimal transport, latent factor modeling.

PUBLICATIONS

1. **Yubai Yuan** and Annie Qu. (2021) “Community detection with dependent connectivity.” *Annals of Statistics*, 49(4), 2378-2428. ASA SLDS section student paper award, 2019.
2. **Yubai Yuan** and Annie Qu. (2021+) “High-order joint embedding for multi-level link prediction.” *Journal of American Statistical Association*, accepted. <https://arxiv.org/abs/2111.05265>
3. Xuan Bi*, Xiwei Tang*, **Yubai Yuan***, Yanqing Zhang*, Annie Qu*. (2021) “Tensors in statistics.” *Annual Review of Statistics and Its Application*, 8, 345-368 (*equal contribution).
4. **Yubai Yuan**, Yujia Deng, Yanqing Zhang, Annie Qu. (2020) “Deep learning from a statistical perspective.” *Stat*, 9(1), e294.
5. Sarah Allison, Katherine Irwin Hamilton, **Yubai Yuan**, Gail Wallis Hague. (2020) “Assessment of progressive muscle relaxation (PMR) as a stress-reducing technique for first-year veterinary students.” *Journal of Veterinary Medical Education*, 47(6), 737-744.

PAPERS UNDER REVIEW

1. Yujia Deng*, **Yubai Yuan***, Haoda Fu, Annie Qu. “Query-augmented active metric learning.” Invited minor revision, *Journal of American Statistical Association* (*joint first author)
Student paper award for ICSA Applied Statistics Symposium, 2021. <https://arxiv.org/abs/2111.04871>
2. Qi Xu, **Yubai Yuan**, Junhui Wang, Annie Qu. “Crowdsourcing utilizing subgroup structure of latent factor modeling.” Under review, *Journal of American Statistical Association*.
3. Jiuchen Zhang, **Yubai Yuan**, Annie Qu. “A tensor factorization recommender system with dependency.” Invited minor revision, *Electronic Journal of Statistics*.

4. Diqing Li, **Yubai Yuan**, Xinsheng Zhang, Annie Qu. “Joint modeling of change-point identification and dependent dynamic community detection.” Invited revision, *Statistica Sinica*.

MANUSCRIPTS

1. **Yuan Yuan** and Annie Qu. “De-confounding causal inference via latent multiple mediators.”
2. **Yuan Yuan**, Wani Agaz, Donglasan Janelle, Chengqi Wang, Wildman Derek, Uddin Monica, Annie Qu “Differential expressed genes testing for count data with high overdispersion.”
3. **Yuan Yuan**, Babak Shahbaba, Norbert Fortin, Annie Qu “Hierarchical latent alignment for cross-species study.”

AWARDS

ASA Student Paper Award in Statistical Learning and Data Science Section, JSM, 2019.

Second Prize of the Graduate Student Scholarship in Sun Yat-sen University, 2014.

TEACHING EXPERIENCE

Instructor, University of Illinois at Urbana-Champaign

- Stat 200: Statistical Analysis (Spring 2019)

Teaching Assistant, University of Illinois at Urbana-Champaign

- Stat 425: Applied Regression and Design (Fall 2017)
- Stat 578: Statistical Learning in Data Science (Spring 2018)

Undergraduate Mentor, University of Illinois at Urbana-Champaign

- Mentoring two undergraduate students on network data analysis project (Summer 2018)

RESEARCH AND CONSULTING EXPERIENCE

Postdoc Researcher, University of California Irvine

June 2020 – current

Advisor: Annie Qu

- Causal mediation analysis and optimal transport project
- Differential expressed gene testing

Research Assistant, University of Illinois at Urbana-Champaign

June 2019 – May 2020

Advisor: Annie Qu

- Hyperlink prediction
- Complex network data analysis
- Optimal transport

Statistical Consultant, Illinois Statistics Office

May 2018 – Jan. 2019

- Provided statistical consultation over 30 projects
- Clients from Eli Lilly and Company, BioFortis Inc, Carle Foundation Hospital, and UIUC
- Machine learning algorithm development
- Experimental design (survey design, clinical trial design)
- Data analyses (longitudinal data, post hoc analyses, structural equation modeling)
- Grant proposal and medical protocol reviews

PRESENTATION

Invited talks

- (2021) ICSA Applied Statistics Symposium.
- (2019) Joint Statistical Meetings, Denver, CO.
- (2018) Statistic Seminar, Fudan University, China.
- (2018) Conference of Statistical Challenges for Large-Scale Complex Data, Kunming, China.

Contributed talks

- (2020) Joint Statistical Meetings, Virtual.
- (2018) Bohrer Workshop, Champaign, IL.

Poster

- (2019) Workshop on Higher-Order Asymptotics and Post-Selection Inference, St. Louis, MO.
- (2019) Statistical Methods in Imaging conference, Irvine, CA.
- (2019) Symposium on Data Science and Statistics, Seattle, WA.
- (2018) Joint Statistical Meetings, Vancouver, Canada.
- (2018) The Conference on Statistical Learning and Data Science / Nonparametric Statistics, Columbia University, New York city, NY.

REFEREE EXPERIENCE

Journal of the American Statistical Association (4), Journal of the Royal Statistical Society: Series B (3), Biometrika (1), Electronic Journal of Statistics (5), The American Statistician (1), Stat (1), 2019 International Joint Conference on Artificial Intelligence (5).

SKILLS

R, Python, Matlab, LATEX, SAS, C++

SOCIETY MEMBERSHIPS

American Statistical Association
Institute of Mathematical Statistics

REFERENCES

Annie Qu, Ph.D.

Chancellor's Professor of Statistics

University of California Irvine, Irvine, CA

Email: aqu2@uci.edu

Xiaofeng Shao, Ph.D.

Professor of Statistics

University of Illinois at Urbana-Champaign, Champaign, IL

Email: xshao@illinois.edu

Babak Shahbaba, Ph.D.

Professor of Statistics

University of California Irvine, Irvine, CA

Email: babaks@uci.edu

Junhui Wang, Ph.D.

Professor of Statistics

City University of Hong Kong, Hong Kong, China

Email: j.h.wang@cityu.edu.hk