YUBAI YUAN

CONTACT

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EDUCATION

University of Illinois at Urbana-Champaign *August 2016 – May 2020*
Ph.D. in Statistics
Advisor: Annie Qu

Sun Yat-sen University, China *August 2014 – June 2016*
M.S. in Statistics

Shandong University, China *August 2008 – July 2012*
B.S. in Financial Mathematics

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. "Community detection with dependent connectivity." ***Annals of Statistics***, to appear. Available at `https://arxiv.org/abs/1812.06406` ASA SLDS section student paper award, 2019.

2. Xuan Bi*, Annie Qu*, Xiwei Tang*, **Yubai Yuan***, Yanqing Zhang*. (2021) "Tensor in statistics." ***Annual Review of Statistics and Its Application***, **8**, 345-368 (*equal contribution).

3. **Yubai Yuan**, Yujia Deng, Yanqing Zhang, Annie Qu. (2020) "Deep learning from a statistical perspective." ***Stat***, **9**(1), e294.

4. 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. **Yubai Yuan** and Annie Qu. "High-order joint embedding for multi-level link prediction." Invited 2nd revision submitted to ***Journal of American Statistical Association***.

2. Yujia Deng*, **Yubai Yuan***, Haoda Fu, Annie Qu. "Query-augmented active metric learning." Invited revision submitted to ***Journal of American Statistical Association*** (*joint first author)
Student paper award for ICSA Applied Statistics Symposium, 2021.

3. Qi Xu, **Yubai Yuan**, Junhui Wang, Annie Qu. "Crowdsourcing with multi-directional subgroups." Under review, ***Journal of American Statistical Association***.

4. Jiuchen Zhang, **Yubai Yuan**, Annie Qu. "A tensor factorization recommender system with dependency." Under review, ***Electronic Journal of Statistics***.

5. Diqing Li, **Yubai Yuan**, Xinsheng Zhang, Annie Qu. "Joint modeling of change-point identification and dependent dynamic community detection." Under review, ***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 "The generalized linear mixed modeling for differential expressed genes testing."

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

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Xiaotong Shen, Ph.D.
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