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. (2021) "Community detection with dependent connectivity." ***Annals of Statistics***, **49**(4), 2378-2428. ASA SLDS section student paper award, 2019.

2. 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).

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 minor revision, ***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 utilizing subgroup structure of latent factor modeling." 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." 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

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