

Fei Xue

Department of Biostatistics, Epidemiology and Informatics
University of Pennsylvania
207 Blockley Hall, 423 Guardian Drive
Philadelphia, PA, 19104, USA
✉ fei.xue@pennmedicine.upenn.edu
🏠 Homepage: <https://feixue-stat.github.io/>

Employment

2019–current **Postdoc Researcher**, *The University of Pennsylvania*, USA.
Supervisor: Hongzhe Li

Education

2014–2019 **Ph.D. in Statistics**, *The University of Illinois at Urbana–Champaign*, USA.
Advisor: Annie Qu
2010–2014 **B.S. in Mathematics and Applied Mathematics**, *Fudan University*, China.

Research Interests

Data integration, missing data, mediation analysis, personalized modeling, precision medicine, high dimensional inference, variable selection, statistical genetics, and survival analysis.

Papers

Publications

Fei Xue, Annie Qu (2020). Integrating multi-source block-wise missing data in model selection. *Journal of the American Statistical Association*, accepted.

Xiwei Tang, **Fei Xue**, Annie Qu (2020). Individualized multi-directional variable selection. *Journal of the American Statistical Association*, accepted.

Simona Buetti, **Fei Xue**, Qiawen Liu, Juyoen Hur, Gavin Jun Peng Ng, and Wendy Heller (2020). Perceived control in the lab and in daily life impact emotion-induced temporal distortions. *Timing & Time Perception*, accepted.

Grace S Kim, Alicia Smith, **Fei Xue**, Vasiliki Michopoulos, Adriana Lori, Don L. Armstrong, Allison E. Aiello, Karestan C. Koenen, Sandro Galea, Derek E. Wildman, and Monica Uddin (2019). Methyloomic profiles reveal sex-specific shifts in leukocyte composition associated with post-traumatic stress disorder. *Brain, Behavior, and Immunity*, 81: 280–291.

Under Revision

Fei Xue, Yanqing Zhang, Wenzhuo Zhou, Haoda Fu, Annie Qu. Multicategory angle-based learning for estimating optimal dynamic treatment regimes with censored data. *Journal of the American Statistical Association*, invited revision. Available at <https://arxiv.org/pdf/2001.04629.pdf>

Fei Xue, Annie Qu. Semi-standard partial covariance variable selection when irrerepresentable conditions fail. *Statistica Sinica*, invited revision.

Submitted/Preprint

Agaz Wani, Allison Aiello, Grace S Kim, **Fei Xue**, Andrew Ratanatharathorn, Annie Qu, Karestan Koenen, Sandro Galea, Derek Wildman, Monica Uddin. The impact of psychopathology, social adversity and stress-relevant DNAm on prospective risk for post-traumatic stress: A machine learning approach. *Journal of Affective Disorders*, submitted. Available at <https://www.biorxiv.org/content/10.1101/2020.09.25.313635v1>

Fei Xue, Xiwei Tang, Grace Kim, Allison Aiello, Karestan Koenen, Sandro Galea, Derek Wildman, Monica Uddin, and Annie Qu. Heterogeneous mediation analysis for causal inference. To be submitted. Available at <https://www.biorxiv.org/content/10.1101/2020.10.13.336826v1>

In preparation

Fei Xue, Hongzhe Li. An empirical Bayes regression for multi-tissue eQTL data analysis. In preparation.

Fei Xue, Rong Ma, Hongzhe Li. Semi-supervised statistical inference for high-dimensional linear regression with blockwise missing. In preparation.

Selected awards

- 2019 **ICSA New Researcher Award**, *International Chinese Statistical Association*, USA.
- 2019 **IMS Hannan Graduate Student Travel Award**, *Institute of Mathematical Statistics*, USA.
- 2018 **ASA Student Paper Award**, *Statistical Learning and Data Science Section of the American Statistical Association*, USA.
- 2018 **Horace W. Norton Prize for Outstanding Thesis Research Finalist**, *Department of Statistics, UIUC*, USA.
- 2018 **The Third Place in Student Poster Competition**, *The Fourth International Workshop on the Statistical Analyses of Multi-Outcome Data*, USA.
- 2013 **Meritorious Winner**, *Mathematical Contest in Modeling*, USA.
- 2010 **Bronze medal**, *Chinese Mathematical Olympiad*, China.

Teaching Experience

Instructor at UIUC

Fall 2016 Stat 200: **Statistical Analysis**

Independently led a class of 40 undergraduate students, gave lectures, held office hours and designed exams and homework assignments

Graduate Teaching Assistant at UIUC

Spring 2017 Stat 427: **Statistical Consulting**

Summer 2016 Stat 448: **Advanced Data Analysis**

Spring 2016 Stat 511: **Mathematical Statistics II**

Fall 2015 Stat 510: **Mathematical Statistics I**

Summer 2015 Stat 410: **Statistics and Probability II**
Spring 2015 Stat 510: **Mathematical Statistics I**
Fall 2014 Stat 410: **Statistics and Probability II**

Consulting experience

- 2016–2019 **Statistical Consultant**, *Illinois Statistics Office*, UIUC.
Provided statistical consultation to 40+ clients
- Clients from Eli Lilly and Company, Pace Suburban Bus, Accel Entertainment, BioFortis Inc, Carle Foundation Hospital, and University of Illinois
 - In the fields of biology, business, ecology, engineering, finance, marketing, medicine, psychology, sociology, etc
- Covered a wide range of services
- Grant proposal and medical protocol review
 - Experimental design (survey design, clinical trial design)
 - Data analysis (ANOVA, regression, factor analysis, mixed models, etc.),
 - Prediction (market prediction, yield prediction)
 - Software tutorial and technical report writing

Talks

- Aug. 2020 **JSM, Philadelphia, PA, USA.**
Multicategory angle-based learning for estimating optimal dynamic treatment regimes with censored data
- Dec. 2019 **Fudan University, Shanghai, China.**
Integrating multi-source block-wise missing data in model selection
- Dec. 2019 **East China Normal University, Shanghai, China.**
Integrating multi-source block-wise missing data in model selection
- Dec. 2019 **The 11th ICSA International Conference, Hangzhou, China.**
Integrating multi-source block-wise missing data in model selection
- Nov. 2019 **Workshop on LEADERS, New Haven, CT, USA.**
Heterogeneous mediator selection for high-dimensional data
- July 2019 **JSM, Denver, CO, USA.**
Integrating multi-source block-wise missing data in model selection
- June 2019 **The ICSA Applied Statistics Symposium, Raleigh, NC, USA.**
Integrating multi-source block-wise missing data in model selection
- Aug. 2018 **JSM, Vancouver, Canada.**
Variable selection for highly correlated predictors
- Nov. 2018 **Borher Workshop, Champaign, IL, USA.**
Integrating multi-source block-wise missing data in model selection
- Nov. 2017 **Borher Workshop, Champaign, IL, USA.**
Variable selection for highly correlated predictors
- Oct. 2017 **Yunnan University, Kunming, China.**
Variable selection for highly correlated predictors

Referee Experience

Journal of the American Statistical Association (2)
Journal of the Royal Statistical Society: Series B (1)
Electronic Journal of Statistics (2)
Journal of Nonparametric Statistics (1)
Biometrics (1)

Service

July 2017 **Session Chair of Machine Learning Applications.**
JSM, Baltimore, MD, USA

June 2017 **Session Chair of Prediction and inference for high-dimensional data and non-parametric models.**
The ICSA Applied Statistics Symposium, Chicago, IL, USA