

# BOCHAO JIA

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## EDUCATION

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### University of Florida

Gainesville, FL, U.S.A

Doctor of Philosophy in Biostatistics

Aug 2014 - Aug 2018 (Expected)

– Advisor: Prof. Faming Liang

– Dissertation: *Graphical Models theories in high-dimensional data analysis*

### University of Science and Technology of China

Hefei, Anhui, China

Bachelor of Science in Statistics

Sep 2010 - June 2014

– Thesis: *Maximizing pAUC of linear combination with limit of detections*

## SELECTED RESEARCH EXPERIENCE

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### Develop R package ‘*equSA*’ for Graphical Models

Jan 2017 - March 2017

- Obtained the efficiency of coding by applying *.C Interface* in R platform.
- Integrated all novel Graphical Model methods in my research publications into an open source package.
- Published on *CRAN* which are available at [equSA](#)

### A Novel Iterative Method for High-Dimensional Complex Data

Aug 2016 - Jan 2017

- Solved high-dimensional missing data problems by developing an Imputation-Consistency (IC) and Imputation-Conditional Consistency (ICC) algorithm.
- Extended IC algorithm for heterogeneous/mixture data analysis in both supervised and unsupervised learnings.
- Three scientific papers submitted in some top Statistical journals related to the Imputation-Consistency algorithm.

### Collaboration Work in TEDDY Study Group

Nov 2015 - March 2017

- Provided statistical consulting in data analysis during the participation of The Environmental Determinants of Diabetes in the Young (TEDDY) study group.
- Proposed a novel Bayesian method for estimating Graphical Models in longitudinal dataset.
- Experienced in Machine Learning methods for predictive modeling including model selection, model validation and quantitative analysis.

## SKILLS

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**Technologies:** R, Python, MatLab, C, MySQL, SAS, Shell/Scripting

**Language:** English (Fluent), Chinese (Native Speaker)

## PROFESSIONAL EXPERIENCE

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### Visiting Scholar, Purdue University, West Lafayette, IN

Aug 2017 - present

- Participated research projects under Prof. Faming Liang in Department of Statistics.
- Parallel computing using TensorFlow, openMP and openACC for multiple CPUs and GPUs.

### Graduate Research Assistant, University of Florida, Gainesville, FL

Aug 2014 - Aug 2017

- Planned and managed multiple research projects under supervision.

- Developed novel methods and algorithms for big data problem including Graphical Models, high-dimensional reduction and variable selections.
- Experienced in Collaboration work for Statistical Consulting and quantitative analysis.

**Summer Institute in Statistics for Big Data, Seattle, WA**

*July 2015*

- Supervised and unsupervised methods for statistical machine learning, visualization of biomedical big data

**SELECTED PUBLICATIONS**

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1. **Jia, B.**, Xu, S., Xiao, G., Lamba, V., and Liang, F. (2017). Learning gene regulatory networks from next generation sequencing data. *Biometrics*, doi:10.1111/biom.12682.
2. **Jia, B.**, Chang, Y. C. I., and Wang, Z. (2016). Assessing the diagnostic power of variables measured with a detection limit. *Computational Statistics*, 31(4), 1287-1303.
3. Lamba, V., **Jia, B.**, and Liang, F. (2016). STAT5A and STAT5B have opposite correlations with drug response gene expression. *Biochemical and biophysical research communications*, 479(2), 117-124.
4. Liang, F., **Jia, B.**, Xue, J., Luo, Y., and Li, Q. (2017). An Imputation-Consistency Algorithm for High-Dimensional Missing Data Problems and Beyond. Submitted to *Journal of the Royal Statistical Society Series B* (under second round of review).
5. **Jia, B.**, Tseng, G., and Liang, F. (2017). Fast Bayesian Integrative Analysis for Joint Estimation of Multiple Gaussian Graphical Models. Submitted to *Journal of the American Statistical Association*.
6. **Jia, B.**, and Liang, F. (2017) Gaussian Graphical Mixture Model for High-Dimensional Gene Expression Data. Submitted to *Statistica Sinica*.
7. **Jia, B.**, Su, Z., and Liang, F. (2017) Mixture Envelope Model for Heterogeneous Data Analysis. (manuscript)

**SELECTED PRESENTATIONS**

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**Poster and oral, Joint Statistical Meetings, Baltimore, MD**

*July 2017*

- Fast Bayesian integrative analysis for joint estimation of multiple Gaussian Graphical Models

**Poster and Oral, Eastern North American Region, Austin, TX**

*March 2016*

- Inference of genetic network from next generation sequencing data.

**HONORS AND CERTIFICATIONS**

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**SAS Certified Advanced Programmer for SAS 9**

*May 2017*

**SAS Certified Base Programmer for SAS 9**

*May 2017*

**Outstanding Graduate Academic Achievement**

*April 2015*

- Awarded to students with GPA 4.0 in an academic year.

**Travel Awards for Summer Institute in Statistics for Big Data**

*April 2015*

**Outstanding Undergraduate Research Programs**

*May 2014*

- Awarded to the top 2 students in my Bachelors degree.