

## *Education*

### **PhD in Biostatistics**

May 2018

Johns Hopkins Bloomberg School of Public Health

Dissertation: Evidence-Based Methods in Studies of Biology and Data Analysis

Advisor: Kasper Daniel Hansen

### **BS in Biomedical Engineering**

May 2013

Johns Hopkins University

Secondary major: Applied Mathematics and Statistics

Minor: Computer Science

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## *Work Experience*

### **Assistant Professor**

August 2018 - present

Department of Mathematics, Statistics, and Computer Science

Macalester College, Saint Paul, MN

### **Johns Hopkins Biostatistics Center**

July 2016 - August 2017

Student statistical consultant

Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Advisor: Carol Thompson, MS

### **Siemens Competition**

2016 - 2017

Stage I, II, and finalist judge

Categories: Computer Science, Mathematics, Bioinformatics, Cell/Cancer  
Biology, and Genetics

### Published

10. **Myint, L.** 2023. Controlling time-varying confounding in difference-in-differences studies using the time-varying treatments framework. *Health Services & Outcomes Research Methodology*.  
<https://doi.org/10.1007/s10742-023-00305-2>
9. Wulczyn, K., Rhee, E., **Myint, L.**, Kalim, S., & Shafi, T. 2022. Incidence and Risk Factors for Pruritus in Patients with Nondialysis CKD. *Clinical Journal of the American Society of Nephrology: CJASN*.  
<https://doi.org/10.2215/CJN.09480822>
8. Hu J-R, **Myint L\***, Levey AS, Coresh J, Inker LA, Grams ME, Guallar E, Hansen KD, Rhee EP, Shafi T. 2021. A metabolomics approach identified toxins associated with uremic symptoms in advanced chronic kidney disease. *Kidney international*. DOI: 10.1016/j.kint.2021.10.035.  
\* Indicates co-first authorship
7. **Myint L**, Hadavand A, Jager L, Leek J. 2019. Comparison of Beginning R Students' Perceptions of Peer-Made Plots Created in Two Plotting Systems: A Randomized Experiment. *Journal of Statistics Education* 28:98–108. DOI: 10.1080/10691898.2019.1695554.
6. **Myint L**, Wang R, Boukas L, Hansen KD, Goff LA, Avramopoulos D. 2019. A screen of 1,049 schizophrenia and 30 Alzheimer's-associated variants for regulatory potential. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics* 183:61–73. DOI: 10.1002/ajmg.b.32761.
5. **Myint L**, Avramopoulos DG, Goff LA, Hansen KD. 2019. Linear models enable powerful differential activity analysis in massively parallel reporter assays. *BMC Genomics* 20:209. DOI: 10.1186/s12864-019-5556-x.
4. **Myint L**, Leek JT, Jager LR. 2018. Explanation of observational data engenders a causal belief about smoking and cancer. *PeerJ* 6:e5597. DOI: 10.7717/peerj.5597.
  - **Press:**  
Preprint was featured in the [February 2018 issue](#) of Significance Magazine.
3. Monroe AK, **Myint L**, M Rutstein R, Aberg J, L Boswell S, L Agwu A, A Gebo K, D Moore R, HIV Research Network. 2018. Factors Associated With Gaps in Medicaid Enrollment Among People With HIV and the Effect of Gaps on Viral Suppression. *Journal of Acquired Immune Deficiency Syndromes* 78:413–420. DOI: 10.1097/QAI.0000000000001702.
2. Kang JY, Rabiei AH, **Myint L**, Nei M. 2017. Equivocal significance of post-ictal generalized EEG suppression as a marker of SUDEP risk. *Seizure: The Journal of the British Epilepsy Association* 48:28–32. DOI: 10.1016/j.seizure.2017.03.017.
1. **Myint L**, Kleensang A, Zhao L, Hartung T, Hansen KD. 2017. Joint Bounding of Peaks Across Samples Improves Differential Analysis in Mass Spectrometry-Based Metabolomics. *Analytical Chemistry* 89:3517–3523. DOI: 10.1021/acs.analchem.6b04719.

### In Preparation

1. **Myint, L.**, Guallar E, Hansen KD, Rhee EP, Shafi T. Metabolomics of Uremic Symptoms and Mortality in Hemodialysis Patients

### Non-Reviewed Scholarship

- Heggeseth B, **Myint L**, Grinde K. (2018) "STAT 155 Notes" Course text for Introduction to Statistical Modeling. Published at <https://bcheggeseth.github.io/Stat155Notes>
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## *Software*

**yamss:** Tools for the analysis of high-throughput metabolomics data. An R package released through the Bioconductor project.

<https://www.bioconductor.org/packages/yamss>

**mpira:** Tools for the analysis of data from massively parallel reporter assays. An R package released through the Bioconductor project.

<https://www.bioconductor.org/packages/mpira>

**rsemmed:** A programmatic interface to the Semantic MEDLINE database. A tool for computational literature discovery.

<https://www.bioconductor.org/packages/rsemmed>

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## *Grant Participation*

### **Metabolomics of Uremic Symptoms in Dialysis Patients**

*NIH R01 subaward contract*

Dates: 6/1/2019 - present

Role: statistical analyst

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## *Presentations*

### **Access as the intersection of resources and practices**

Joint Statistical Meetings. [Invited session](#).

August 2023 (upcoming)

### **Controlling time-varying confounding in difference-in-differences studies using the time-varying treatments framework**

American Causal Inference Conference ([poster](#))

May 2023

### **Alternative grading for "rigor" and beauty**

Macalester College - Center for Scholarship and Teaching seminar ([slides](#))

April 2023

### **Causal inference throughout the statistics curriculum**

Joint Statistical Meetings. [Invited session](#). ([slides](#))

August 2022

### **A metabolic view of symptoms in kidney disease**

University of St. Thomas - Department of Applied Probability and Statistics seminar ([slides](#))

April 2022

### **Exploring biomedical concept graphs with rsemmed**

Bioconductor Conference 2021 ([poster](#))

August 2021

### **What Did I Just Read? Organizing Knowledge From the Research Literature Using Graph Databases**

Minnesota Women in Analytics and Data Science conference ([slides](#))

October 2020

### **Graphs Galore! Representing Knowledge in the Sciences and Humanities**

Carleton College - Department of Statistics seminar ([slides](#))

October 2019

Macalester College - Center for Scholarship and Teaching seminar ([slides](#))

November 2019

### **Statistical methods for querying the regulatory role of DNA**

Creighton University Math Colloquium ([slides](#))

March 2019

### **Magical Web Scraping with rvest**

Baltimore R Ladies Group ([slides](#))

May 2018

**Joint Preprocessing of Samples Improves Power in Differential Analysis for Mass Spectrometry-Based Metabolomics**

Johns Hopkins University - Department of Biophysics seminar

December 2017

**Shiny Applications for Teaching and Dungeons and Dragons**

Baltimore UseR Group ([slides](#))

September 2017

**A Method for Joint Processing of Mass Spectrometry-Based Metabolomics Data for Improved Differential Analysis**

Poster: ENAR, Washington D.C.

March 2017

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## Teaching

### Macalester College

#### *Instructor*

- STAT 125: Epidemiology (F19, S24)
- STAT 155: Introduction to Statistical Modeling (F18, S20, F20)
- STAT 212: Intermediate Data Science (F23, S24)
- STAT 253: Statistical Machine Learning (S19, S21, S23)
- STAT 451: Causal Inference (F20, S23) (Formerly STAT 394 (S20))

### Cloud-Based Data Science Specialization

#### *Content developer*

A massive open online course on the Leanpub platform for providing a highly accessible data science education. Content developer for the following courses:

- [Organizing Data Science Projects](#)
- [Version Control](#)
- [Introduction to R](#)
- [Data Tidying](#)

### Johns Hopkins Bloomberg School of Public Health

#### *Instructor*

- Statistical Thinking for Informed Decision Making (2 semesters)  
I developed this course as part of the [Gordis Teaching Fellowship](#), a school-wide award that provides funds to design and teach an undergraduate class. A news article-motivated introduction to major biostatistical areas, including causal inference, survey sampling, and survival analysis.

#### *Teaching Assistant*

- Public Health Biostatistics (3 semesters)
- Introduction to R for Public Health Researchers (1 course)
- Statistical Methods in Public Health (3 quarters)
- Data Analysis Workshop (2 courses)
- Statistics for Genomics (1 quarter)
- Statistics for Laboratory Scientists (2 quarters)
- Summer Institute: Statistical Reasoning in Public Health (2 courses)

#### *Tutor*

- Statistical Methods in Public Health (2 quarters)
- Mentor for Center for Talented Youth Cogito Research Award Recipient (3 months)

### Johns Hopkins University

#### *Teaching Assistant*

- Introduction to Java (1 semester)

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## Awards

### Helen Abbey Award

Johns Hopkins Bloomberg School of Public Health  
Excellence in teaching ([website](#))

May 2017

### **Memberships**

- American Statistical Association
- Society for Causal Inference

### **Conferences**

- 2020: Organizer and Chair for an invited session for the [Education Track](#) at the Symposium on Data Science and Statistics

### **Reviewer**

- 2023: Journal of Statistics and Data Science Education
- 2022: Causal Learning and Reasoning (CLear 2023) conference
- 2022: Clinical Journal of the American Society of Nephrology
- 2021: PeerJ
- 2020: [Open Case Studies](#)
- 2020: Journal of Statistics Education
- 2019: Nature Human Behaviour
- 2019: Technology Innovations in Statistics Education
- 2019: Journal of Statistics Education
- 2018: [BiOverlay](#)
- 2018: American Journal of Epidemiology
- 2017: Observational Studies

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## *Institutional Service*

### **Department Service**

- DataFest Organizer (2023)
- Student Community Committee (2023)
- Revision of Department Majors (2021)
- Statistics Hiring Committee (2019, 2022)
- Statistics Allocation Request (2019, 2022)
- Statistics Postdoc Hiring Committee (2018, 2020)

### **Undergraduate Research Advising**

#### Honors Advisor

- Ben Christensen (2023-2024)
- Charlotte Giang (2020-2021)
- Fiona Adams (2019-2020)

#### Honors Reader

- Connie Zhang (2023)
- Zuofu Huang (2021)
- Liam Purkey (2021)
- Coco Li (2021)
- Aidan Toner-Rodgers (2021)
- Millie Baker (2020)
- Kieu-Giang Nguyen (2020)
- Katie Jolly (2019)

#### Student Research Supervisor

- Ben Christensen (Summer 2023)
- Nicholas Di (Summer 2019)

### **College Service**

- Student-Ready Campus Committee (2023-2024)
- COVID Testing Committee (2020-2021)
- Community and Global Health Concentration Steering Committee (2020-present)