

## *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*

### **Associate Professor**

2023 - present

### **Assistant Professor**

2018 - 2023

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.

### Submitted

1. Al Awadhi S, **Myint L\***, Guallar E, Clish C, Wulczyn K, Kalim S, Thadhani R, Segev D, McAdams DeMarco M, Moe S, Moorthi R, Hostetter T, Himmelfarb J, Meyer T, Powe N, Tonelli M, Rhee E, Shafi T. A

Metabolomics Approach to Identify Metabolites Associated with Mortality in Hemodialysis Patients: The LUCID Study.

\* Indicates co-first authorship

### In Preparation

1. **Myint, L.**, Guallar E, Rhee EP, Shafi T. Metabolomics of Uremic Symptoms 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>

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

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

**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](#). ([slides](#))

August 2023

### **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

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## *Professional Service*

### **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: Health Services and Outcomes Research Methodology
- 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

## *Institutional Service*

### **Department Service**

- MSCS Honors Seminar Organizing Committee (2023-4)
- Mathematics Tenure-Track Position Hiring Committee (2023)
- DataFest Organizer (2023)
- Student Community Committee (2023)
- Revision of Department Majors (2021)
- Statistics Tenure-Track Position Hiring Committee (2019, 2022)
- Statistics Allocation Request (2019, 2022)
- Statistics Visitor Hiring Committee (2020, 2023)
- Statistics Postdoc Hiring Committee (2018, 2020)

### **Undergraduate Research Advising**

#### Honors Advisor

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

#### Honors Reader

- Paige Tomer (2024)
- Sarah Tannert-Lerner (2023)
- 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

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

#### Internship Supervisor

- Juliet Cramer (Spring 2024)
- Ronan Manning (Spring 2024)

### **College Service**

- Community and Global Health Concentration Co-Director (2023-present)
- Strategic Planning Implementation: First-Year Experience Committee (2023-2024)
- Strategic Planning Implementation: Student-Ready Campus Committee (2023)
- COVID Testing Committee (2020-2021)
- Community and Global Health Concentration Steering Committee (2020-present)