

**Brandon Legried**  
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## EMPLOYMENT AND EDUCATION

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### EMPLOYMENT

**Postdoctoral Research Fellow (RTG)** 2020-present  
University of Michigan - Ann Arbor, Department of Statistics  
Advisors: Edward Ionides and Jonathan Terhorst

**Research Assistant** 2020  
University of Wisconsin - Madison  
Institute for Foundations of Data Science

### EDUCATION

**Ph.D., Mathematics** 2015-2020  
University of Wisconsin - Madison  
Advisor: Sebastien Roch  
Thesis: *Estimating parameters from Markov processes on trees*

**B.S., Mathematics and Finance** 2011-2015  
University of Minnesota - Twin Cities

## PUBLICATIONS

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### PREPRINTS

1. Impossibility of phylogeny reconstruction from  $k$ -mer counts  
Submitted, 2020. With Wai-Tong (Louis) Fan and Sebastien Roch.
2. Species tree estimation under joint modeling of coalescence and duplication: sample complexity of quartet methods  
Submitted, 2020. With Max Hill and Sebastien Roch.

### JOURNAL ARTICLES

3. Impossibility of consistent distance estimation from sequence lengths under the TKF91 model  
Bulletin of Mathematical Biology, 82(9): 123, 2020. With Wai-Tong (Louis) Fan and Sebastien Roch.
4. Polynomial-time statistical estimation of species trees under gene duplication and loss  
Journal of Computational Biology, To appear. With Erin Molloy, Tandy Warnow, and Sebastien Roch.

### CONFERENCE PROCEEDINGS

5. Polynomial-time statistical estimation of species trees under gene duplication and loss  
Proceedings of RECOMB 2020, 120-135. With Erin Molloy, Tandy Warnow, and Sebastien Roch.

### REVIEWER

Selected as reviewer for: Journal of Computational Biology, Systematic Biology

## PRESENTATIONS AND VISITS

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### PRESENTATIONS

1. RECOMB 2020 2020

2. Institute for Fundamentals of Data Science, University of Wisconsin-Madison, Brown Bag 2020
3. Data and Models in Ecology and Evolution Summer Program, Université, Paris-Saclay 2019
4. Indiana University - Bloomington, Probability Seminar 2019
5. Institute for Fundamentals of Data Science, University of Wisconsin-Madison, Summer Seminar. 2019

## VISITS

6. Research assistant, Institute for Fundamentals of Data Science, University of Wisconsin-Madison 2020
7. Research visitor, Indiana University - Bloomington, Department of Mathematics 2019

## CONFERENCES AND COLLOQUIA

8. Midwest Probability Colloquium 2019,2020
9. American Mathematical Society, Sectional Meeting 2019
10. Data and Models in Ecology and Evolution Summer Program, Université, Paris-Saclay 2019
11. Institute for Fundamentals in Data Science, University of Wisconsin-Madison, Summer camp 2018
12. Minnesota Center for Actuarial and Financial Mathematics,  
University of Minnesota-Twin Cities, Summer symposium 2015

## TEACHING

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### AS LECTURER

1. Winter 2021: Statistics 430 - Applied Probability, Introduction to Stochastic Processes (Undergraduate)
2. Fall 2020: Statistics 510 - Probability Theory (Graduate)

### AS TEACHING ASSISTANT

1. Spring 2020: Mathematics 734 - Theory of Probability II (Graduate)
2. Fall 2019: Mathematics 733 - Theory of Probability I (Graduate)
3. Fall 2018: Mathematics 234 - Calculus of Several Variables (Undergraduate), teaching coordinator
4. Spring 2017: Mathematics 234 - Calculus of Several Variables (Undergraduate)
5. Fall 2017: Mathematics 211 - Calculus for Business Students (Undergraduate)
6. Spring 2016: Mathematics 234 - Calculus of Several Variables (Undergraduate)
7. Fall 2015: Mathematics 221 - Calculus and Analytic Geometry I (Undergraduate)