

# Cora Allen-Savietta

Statistics PhD Candidate

Statistician with 7 years of theoretical and applied statistics experience and 2 years of software development experience. Currently developing software in Julia for efficient search, estimation & model comparison in complex network space.

## Education

**PhD Statistics** University of Wisconsin-Madison  
expected December 2020

**BA Psychology** Oberlin College  
high honors

## Research Experience

2018-03 - present	<b>Statistics Research Assistant</b> Professor Cécile Ané, University of Wisconsin–Madison <ul style="list-style-type: none"><li>Develop software in <b>Julia</b> to reconstruct species' evolutionary history by combining efficient algorithms, novel search strategies, and efficient likelihood comparison. <a href="https://github.com/crsl4/PhyloNetworks.jl">github.com/crsl4/PhyloNetworks.jl</a></li></ul>
2016-05 - present	<b>Statistics Research Assistant</b> Professor Ron Gangnon, University of Wisconsin–Madison <ul style="list-style-type: none"><li>Develop a statistical method for flexible weighted clustered rankings using empirical Bayes nonparametric mixture models</li></ul>
2016-05 - present	<b>Lead Data Analyst</b> University of Wisconsin-Madison Department of Epidemiology <ul style="list-style-type: none"><li>Assess breast cancer incidence and survival in a case-control study of over 26,000 women with generalized multivariate additive spatial models, covariate imputation, and variable width smoothing in <b>R</b>.</li></ul>
2018-02 - 2019-03	<b>Lead Data Analyst</b> University of Wisconsin-Madison Department of Medicine <ul style="list-style-type: none"><li>Evaluated program success with multivariate generalized linear mixed effects models in <b>R</b>.</li></ul>
2012-06 - 2015-08	<b>Epidemiology Research Assistant</b> Harvard Medical School & Brigham and Women’s Hospital <ul style="list-style-type: none"><li>Led a clinical trial, supervising a team of five research assistants through patient recruitment and data analysis with <b>R</b></li><li>Managed large-scale healthcare claims data using <b>SAS</b></li><li>Assisted in design, analysis, and publication of pharmaceutical postmarketing surveillance studies</li></ul>

## Teaching and Mentoring Experience

2018-09 - 2018-12	<b>Teaching Assistant for STAT 679: Computational Tools for Data Analytics</b> <ul style="list-style-type: none"><li>Taught 42 graduate students <b>Bash</b> scripting, <b>Python</b>, &amp; <b>Julia</b>.</li><li>Mentored students individually and in small groups through pair programming and <b>GitHub</b> code review.</li></ul>
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## Personal Info

Location	Madison, WI
Phone	608-239-4068
E-mail	<a href="mailto:allencoleman@wisc.edu">allencoleman@wisc.edu</a>
GitHub	<a href="https://github.com/coraallensavietta">github.com/coraallensavietta</a>

## Skills

Julia	<div><div></div><div></div><div></div><div></div><div></div></div>
R	<div><div></div><div></div><div></div><div></div><div></div></div>
Python	<div><div></div><div></div><div></div><div></div><div></div></div>
Bash	<div><div></div><div></div><div></div><div></div><div></div></div>
Java	<div><div></div><div></div><div></div><div></div><div></div></div>

## Awards

2020-08	National Science Foundation Institute for Foundations for Data Science Research Support
2017-07	National Institutes of Health Data Science Traineeship
2015-09	National Institutes of Health Biostatistics Traineeship
2012-03	Leah Freed Memorial Prize for Honors Thesis Research
2012-01	Jerome Davis Prize for Social Science Thesis Research

## Professional Memberships

American Statistical Association
Caucus for Women in Statistics

2016-01 - 2018-05	<p>Undergraduate &amp; Graduate Student Mentoring</p> <ul style="list-style-type: none"> <li>• Mentored 6 Statistics undergraduates in preparing honors thesis projects.</li> <li>• Tutored 7 undergraduates and graduate students in Statistics courses weekly.</li> </ul>
2015-09 - 2015-12	<p>Teaching Assistant for BMI 511: Introduction to Biostatistics</p> <ul style="list-style-type: none"> <li>• Introduced 40 Masters of Public Health students to probability, research design, hypothesis testing, statistical inference, and regression.</li> <li>• Taught one lecture per week and mentored students independently.</li> </ul>

## Peer-reviewed Publications

**Allen-Savietta, C**, Ané, C. Phylogenetic Network Structure Estimation and Identifiability from Concatenated Genetic Sequences. *In preparation*.

Heffron, A, Braun, KM, **Allen-Savietta, C**, Filut, A, Hanewall, C, Huttenlocher, A, Handelsman, J, Carnes, M. Gender Can Influence Student Experiences in MD-PhD Training. *Journal of Women's Health*. April 2020.

Fischer MA, **Allen-Coleman C**, Farrell SF, Schneeweiss S. Stakeholder assessment of comparative effectiveness research needs for Medicaid populations. *Journal of Comparative Effectiveness Research*. 2015 Sept 21.

Bateman BT, Huybrechts KF, Maeda A, Desai RJ, Patorno E, Seely EW, Ecker JL, **Allen-Coleman C**, Mogun H, Hernandez-Diaz S, Fischer MA. Calcium channel blocker exposure in late pregnancy and the risk of neonatal seizures: A cohort study. *Obstetrics and Gynecology*. 2015 Aug; 126(2): 271-8.

Bateman BT, Hernandez-Diaz S, Fischer MA, Seely EW, Ecker JL, Franklin JM, Desai RJ, **Allen-Coleman C**, Mogun H, Avorn J, Huybrechts KF. Statins and congenital malformations: a cohort study. *BMJ*. 2015 Mar 17;350:h1035.

Polinski JM, Kesselheim AS, Frolkis JP, Wescott P, **Allen-Coleman C**, Fischer MA. A matter of trust: Patient barriers to primary medication adherence. *Health Education Research*. 2014; 29: 755-63.

## Conference Presentations

**Allen-Coleman, C.**, Ané, Cécile M. Illuminate Evolutionary History with Phylogenetic Networks. Joint Statistical Meetings in August 2019

**Allen-Coleman, C.**, Ané, Cécile M. Estimating Evolutionary Rates Efficiently in Phylogenetic Networks. Great Lakes Bioinformatics Conference May 2019

**Allen-Coleman, C.**, Gangnon, R.E. Simultaneous Clustering and Ranking of Small Area Health Outcomes Using Nonparametric Empirical Bayes Mixture Models. Contributed presentation at the International Conference on Health Policy Statistics January 2020

**Allen-Coleman, C.**, Gangnon, R.E. Making Ranking Priorities More Explicit. Contributed presentation at Joint Statistical Meetings August 2018

**Allen-Coleman, C.**, Trentham-Dietz, A., McElroy, J.A., Hampton, J.A., Newcomb, P.A., Gangnon, R.E. Geographic Location and Mortality after Breast Cancer Diagnosis. Society for Epidemiologic Research Meeting June 2018