

# Curriculum Vitae

Jonathan Fischer

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## Current position:

Clinical Assistant Professor – Department of Biostatistics  
College of Public Health & Health Professions and College of Medicine  
University of Florida

## Education

2018	University of California, Berkeley - Ph.D., Statistics
2013	College of William & Mary - B.S., Summa Cum Laude, Physics and Mathematics

## Honors and Awards

2023	<b>Outstanding Teaching Award</b> - For performance as an instructor in the UF Department of Biostatistics for the 2022-2023 academic year
2023	<b>Outstanding Mentor Award</b> - For performance as an academic advisor and mentor in the UF MPH program
2018	<b>Outstanding GSI Award</b> - For performance as TA for mathematical statistics course
2014-2016	<b>NIH Traineeship in Genomics</b>
2013	<b>Don E. Harrison, Jr. Award</b> - Highest achievement by a W&M undergraduate in physics
2013	<b>Cissy Patterson Prize</b> - Recognizes outstanding undergraduate W&M math students
2009-2013	<b>James Monroe Scholar</b> - Research funding for selected (< 10%) W&M undergraduates
2012	<b>Phi Beta Kappa</b>

# SCHOLARLY WORK

## Refereed Publications

- 2023 | A Fidler, P Chaudhari, V Sims, J Payne-Murphy, J Fischer, and L Cottler. Insomnia among community members in Florida: Associations with demographics, health conditions, and social support. *Journal of Clinical and Translational Science*, 7(1):e128, 2023
- 2022 | S Chattopadhyay, J Garcia-Martinez, G Haimovich, J Fischer, A Khwaja, SG Chuarzman, M Schuldiner, R Elran, MI Rosenberg, S Urim, S Deshmukh, KE Bohnsack, MT Bohnsack, JE Perez-Ortin, and M Choder. RNA-controlled nucleocytoplasmic shuttling of mRNA decay factors regulates mRNA synthesis and a novel mRNA decay pathway. *Nature Communications*, 13:7184, 2022
- 2022 | G Benegas, J Fischer, and YS Song. Robust and annotation-free analysis of alternative splicing across diverse cell types in mice. *eLife*, 11:e73520, 2022
- 2021 | DD Erdmann-Pham\*, J Fischer\*, J Hong, and YS Song. Likelihood-based deconvolution of bulk gene expression data using single-cell references. *Genome Research*, 31(10):1794–1806, 2021
- 2021 | S Richard, L Gross, J Fischer, K Bendalak, T Ziv, S Urim, and M Choder. Numerous modifications of RNA polymerase II subunit Rpb4 link transcription with post-transcription mechanisms. *Cell Reports*, 34(2):108578, 2021
- 2020 | J Fischer, YS Song, N Yosef, J di Iulio, LS Churchman, and M Choder. The yeast exoribonuclease Xrn1 and associated factors modulate RNA polymerase II processivity in 5' and 3' gene regions. *Journal of Biological Chemistry*, 295(33):11435–11454, 2020
- 2019 | M Wang, J Fischer, and YS Song. Three-way clustering of multi-tissue multi-individual gene expression data using semi-nonnegative tensor decomposition. *Annals of Applied Statistics*, 13(2):1103–1127, 2019
- 2017 | M Wang, K Dao Duc, J Fischer, and YS Song. Operator norm inequalities between tensor unfoldings on the partition lattice. *Linear Algebra and its Applications*, 520:44–66, 2017
- 2014 | M Rodriguez-Vega, J Fischer, S Das Sarma, and E Rossi. Ground state of graphene heterostructures in the presence of random charged impurities. *Physical Review B*, 90(3):035406, 2014

## Courses taught

- UF | **PHC 6050: Statistical Methods for Health Sciences Research I**  
**PHC 6051: Biostatistical Methods II**  
**PHC 6052: Introduction to Biostatistical Methods**  
**PHC 6064: Survey of Advanced Biostatistical Methods**  
**PHC 6088: Statistical Analysis of Genetic Data**  
**PHC 6089: Public Health Computing**  
**STA 6177: Applied Survival Analysis**
- UCB | **DATA 88: Data Science in Genetics and Genomics**  
**STAT 134: Probability (TA)**  
**STAT 135: Mathematical Statistics (TA)**
- W&M | **MATH 213: Multivariable Calculus (TA)**

## Academic History

2020 - Present	<b>Clinical Assistant Professor – University of Florida</b> Department of Biostatistics.
2019 - 2020	<b>Postdoctoral researcher – University of California, Berkeley</b> Department of Statistics and Computer Science Division.
2013-2018	<b>Ph.D. student – University of California, Berkeley</b> Department of Statistics.
2015-2017	<b>Visiting graduate student – University of Pennsylvania</b> Department of Mathematics.
2010-2013	<b>Undergraduate researcher – College of William &amp; Mary</b> Performed research with faculty in the Departments of Physics and Mathematics.

## Industry Experience

2016	<b>Baseball Operations Intern – Oakland Athletics</b> Wrote Python scripts to obtain and prepare data for subsequent analyses, and applied machine learning methods to provide novel measures of player effectiveness.
2011	<b>Analyst Intern – Red Ventures</b> Compiled and reported daily sales figures from collaborators, analyzed large data sets of customer information, and developed and improved upon analytical tools using statistical methods.

## Presentations

2020	<b>Statistical deconvolution and decomposition of gene expression data.</b> Oral presentation at the University of Florida Biostatistics symposium.
2019	<b>Statistical decomposition and deconvolution of gene expression data.</b> Oral presentation at the United States Naval Academy Mathematics symposium.
2019	<b>Statistical decomposition and deconvolution of gene expression data.</b> Oral presentation at Wake Forest University Mathematics and Statistics symposium.
2019	<b>Statistical decomposition and deconvolution of gene expression data.</b> Oral presentation at Swarthmore College Mathematics and Statistics symposium.
2019	<b>Statistical decomposition and deconvolution of gene expression data.</b> Oral presentation at Lafayette College Mathematics symposium.
2019	<b>Statistical decomposition and deconvolution of gene expression data.</b> Oral presentation at Macalester College MSCS symposium.
2019	<b>Statistical decomposition and deconvolution of gene expression data.</b> Oral presentation at Middlebury College Mathematics symposium.
2018	<b>Three-way clustering of multi-tissue multi-individual gene expression data using semi-nonnegative tensor decomposition.</b> Poster presentation at Berkeley Statistics Annual Research Symposium.
2017	<b>Effect of Decay Factor Knockouts on Yeast mRNA Synthesis.</b> Oral presentation at UC Berkeley computational biology retreat.
2017	<b>Effect of Decay Factor Knockouts on Yeast mRNA Synthesis.</b> Poster presentation at The Biology of Genomes meetings.
2016	<b>Effect of Decay Factor Knockouts on Yeast mRNA Synthesis.</b> Poster presentation at NHGRI annual meeting.
2013	<b>Ground State of Disordered Graphene Heterostructures.</b> Oral presentation at William & Mary Undergraduate Science Research Symposium.
2012	<b>Stability of Food Webs.</b> Poster presentation at William & Mary Undergraduate Summer Research Symposium.
2010	<b>Mathematical Prediction of Major League Baseball Game Outcomes.</b> Poster presentation at William & Mary Undergraduate Summer Research Symposium.

## Service

2022-Present	MPH Biostatistics Concentration Admissions
2020-Present	Department of Biostatistics Diversity and Social Wellness committees
2019	Volunteer for The Latinx Association of Graduate Students in Engineering and Science fellowship workshop. Helped Latinx graduate students apply for fellowships by reviewing and editing application materials with them.
2013-2018	UC Berkeley Statistics Graduate Student Association. Roles included external social committee, party planning, and assisting with prospective student visits.
2018	Volunteer at Berkeley DataFest. Assisted students with programming tasks and questions during hackathon-style competition.

## Peer Review

*Computational Statistics and Data Analysis, Rapid Reviews: COVID-19, PLoS Computational Biology, Effective Methods in Algebraic Geometry, iScience*

## Skills

Computing	R, Python, SAS, SPSS, Unix, LaTeX
Languages	English, conversational Spanish, some French.