

Curriculum Vitae

Jonathan Fischer

PO Box 117450
Gainesville, FL 32610

5223 CTRB
(352) 294-5459
jfischer1@ufl.edu

Current position:

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

Education

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

Honors and Awards

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| 2018 | Outstanding GSI Award - For performance as TA for mathematical statistics course |
| 2014-2016 | NIH Traineeship in Genomics |
| 2013 | Don E. Harrison, Jr. Award - Highest achievement by a W&M undergraduate in physics |
| 2013 | Cissy Patterson Prize - Recognizes outstanding undergraduate W&M math students |
| 2009-2013 | James Monroe Scholar - Research funding for selected (< 10%) W&M undergraduates |
| 2012 | Phi Beta Kappa |

SCHOLARLY WORK

Refereed Publications

- 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. *J. Biol.Chem.*, 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

Preprints

- 2020 | DD Erdmann-Pham*, J Fischer*, J Hong, and YS Song. RNA-Sieve: A likelihood-based deconvolution of bulk gene expression data using single-cell references. *bioRxiv*, 2020

Classes taught

- Sp 2021 | **PHC 6088: Statistical Analysis of Genetic Data** – UF
PHC 6050: Statistical Methods for Health Sciences Research I – UF
- Fa 2020 | **PHC 6052: Introduction to Biostatistical Methods** – UF
- Sp 2020 | **DATA 88: Data Science in Genetics and Genomics** – UCB
- Fa 2019 | **DATA 88: Data Science in Genetics and Genomics** – UCB
- Fa 2017 | **STAT 135: Mathematical Statistics (TA)** – UCB
- Su 2015 | **STAT 134: Probability (TA)** – UCB
- Fa 2011 | **MATH 213: Multivariable Calculus (TA)** – WM

Academic History

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

Industry Experience

- 2016 **Baseball Operations Intern – Oakland Athletics**
Wrote Python scripts to obtain and prepare data for subsequent analyses, and applied machine learning methods to provide novel measures of player effectiveness.
- 2011 **Analyst Intern – Red Ventures**
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 **Statistical deconvolution and decomposition of gene expression data.** Oral presentation at the University of Florida Biostatistics symposium.
- 2019 **Statistical decomposition and deconvolution of gene expression data.** Oral presentation at the United States Naval Academy Mathematics symposium.
- 2019 **Statistical decomposition and deconvolution of gene expression data.** Oral presentation at Wake Forest University Mathematics and Statistics symposium.
- 2019 **Statistical decomposition and deconvolution of gene expression data.** Oral presentation at Swarthmore College Mathematics and Statistics symposium.
- 2019 **Statistical decomposition and deconvolution of gene expression data.** Oral presentation at Lafayette College Mathematics symposium.
- 2019 **Statistical decomposition and deconvolution of gene expression data.** Oral presentation at Macalester College MSCS symposium.
- 2019 **Statistical decomposition and deconvolution of gene expression data.** Oral presentation at Middlebury College Mathematics symposium.
- 2018 **Three-way clustering of multi-tissue multi-individual gene expression data using semi-nonnegative tensor decomposition.** Poster presentation at Berkeley Statistics Annual Research Symposium.
- 2017 **Effect of Decay Factor Knockouts on Yeast mRNA Synthesis.** Oral presentation at UC Berkeley computational biology retreat.
- 2017 **Effect of Decay Factor Knockouts on Yeast mRNA Synthesis.** Poster presentation at The Biology of Genomes meetings.
- 2016 **Effect of Decay Factor Knockouts on Yeast mRNA Synthesis.** Poster presentation at NHGRI annual meeting.
- 2013 **Ground State of Disordered Graphene Heterostructures.** Oral presentation at William & Mary Undergraduate Science Research Symposium.
- 2012 **Stability of Food Webs.** Poster presentation at William & Mary Undergraduate Summer Research Symposium.
- 2010 **Mathematical Prediction of Major League Baseball Game Outcomes.** Poster presentation at William & Mary Undergraduate Summer Research Symposium.

Service

- 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*

Skills

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