

JULIA M. FISHER

September 2022

CURRICULUM VITAE

CONTACT INFORMATION

The Statistics Consulting Laboratory
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BIO5 Institute
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Tucson, AZ 85721

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EDUCATION

2010–2017 University of Arizona, Tucson, AZ
Ph.D. Linguistics
Dissertation Title: Representations of Spectral Differences Between Vowels in
Tonotopic Regions of Auditory Cortex
Advisors: Stephen M. Wilson and Andrew Wedel
Committee Member: Brad Story

2014–2015 University of Arizona, Tucson, AZ
M.S. Statistics

2013–2014 University of Arizona, Tucson, AZ
Certificate in Statistics

2010–2014 University of Arizona, Tucson, AZ
M.A. Linguistics

2003–2007 Carleton College, Northfield, MN
B.A. Mathematics, summa cum laude with distinction in major

EMPLOYMENT

2019-present Assistant Research Professor
Same description as ‘Statistician’ below. Additional task: conducting research.
The Statistics Consulting Laboratory, BIO5 Institute, University of Arizona,
Tucson, AZ

- 2017-2019 Statistician
Same description as ‘Graduate Research Assistant’ below. Additional tasks include grant writing assistance, power analyses, and manuscript writing.
The Statistics Consulting Laboratory, BIO5 Institute, University of Arizona, Tucson, AZ
- 2015-2017 Graduate Research Assistant
Consults on multiple research projects including those from experimental lab science, experimental psychology, speech and hearing sciences, cognitive neuroscience, biomedical engineering, and health sciences. Works with both experimental and observational data. Tasks include experimental design help, statistical analysis, REDCap database management, statistical tool coding, and writing up of reproducible, statistical reports using R, knitr, and LaTeX.
The Statistics Consulting Laboratory, BIO5 Institute, University of Arizona, Tucson, AZ
- 2014 Teaching Assistant for MATH 363 “Introduction to Statistical Methods”
Class was flipped. Aided professor in helping students with worksheets during class. Graded. Held office hours.
Math Department, University of Arizona, Tucson, AZ
- 2011 Research Assistant
Worked on the project “Behavioral and Neurological Organization of English”.
Bever Language and Cognition Laboratory, University of Arizona, Tucson, AZ
- 2011 Research Assistant
Worked on the Scots-Gaelic Project and on preparation for the Seeing Speech Workshop: NSF Cyberinfrastructure Planning Workshop.
Arizona Phonological Imaging Lab, University of Arizona, Tucson, AZ
- 2010 Teaching Assistant for INDV 101 “Language” (an Introduction to Linguistics)
Graded and taught a Friday section each week.
Linguistics Department, University of Arizona, Tucson, AZ
- 2007–2009 High School Mathematics Teacher (Algebra I, Geometry)
Teach For America
Rio Grande City High School, Rio Grande City, TX

PUBLICATIONS

Burgess J.L., Fisher J.M., Nematollahi A., Jung A.M., Calkins M.M., Graber J.M., Grant C.C., Beitel S.C., Littau S.R., Gullota J.J., Wallentine D.D., Hughes R.J., Popp C., Calafat A.M., Botelho J.C., Coleman A.D., Schaefer-Solle N., Louzado-Feliciano P., Oduwole S.O., Caban-Martinez A.J. Serum Per- and Polyfluoroalkyl Substances in Four Municipal US Fire Departments. *American Journal of Industrial Medicine*. 2022. 1-13.
doi: 10.1002/ajim.23413

- Essay P., Fisher J.M., Mosier J.M., Subbian V. Validation of an Electronic Phenotyping Algorithm for Patients With Acute Respiratory Failure. *Critical Care Explorations*. 2022. 4(3). e0645. doi: 10.1097/ccce.0000000000000645
- Neill M., Fisher J.M., Brand C., Lei H., Sherman S.J., Chou Y.-H., Kuo P.H. Practical Application of DaTQUANT with Optimal Threshold for Diagnostic Accuracy of Dopamine Transporter SPECT. *Tomography*. 2021. 7. 980-989. <https://doi.org/10.3390/tomography7040081>
- Mosier J.M., Fisher J.M., Hypes C.D., Bedrick E.J., Campbell E.S., Lutrick K., Cairns C.B. A Target for Increased Mortality Risk in Critically Ill Patients: The Concept of Perpetuity. *Journal of Clinical Medicine*. 2021. 10. 3971. doi: 10.3390/jcm10173971
- Davidson A., Musiek F., Fisher J.M., Marrone N. Investigating the Role of Auditory Processing Abilities in Long-Term Self-Reported Hearing Aid Outcomes Among Adults Age 60+ Years. *Journal of the American Academy of Audiology*. 2021. 32 405-419. doi: 10.1055/s-0041-1728771
- York L.D., Fisher J.M., Malladi L., August J.A., Ellis K.E., Marquez J.L., Kaveti A., Khachatryan M., Paz M.K., Adams M.D., Bedrick E.J., Fantry, L.E. Antiretroviral Laboratory Monitoring and Implications for HIV Clinical Care in the Era of COVID-19 and Beyond. *AIDS Research and Human Retroviruses*. 2021. 37. 297-303. doi: 10.1089/aid.2020.0263
- Shende T.C., Fisher J.M., Perez-Velez C.M., Guido A.A., Sprowl K.M., Drake T.M., Adelus M.L., Bedrick E.J., Fantry L.E. PrEP Knowledge and Attitudes Among Adults Attending Public Health Clinics in Southern Arizona. *Journal of Community Health*. 2020. 45. 400-406. <https://doi.org/10.1007/s10900-019-00758-y>
- Roznowski A.P., Fisher J.M., Fane B.A. Mutagenic Analysis of a DNA Translocating Tube's Interior Surface. *Viruses*. 2020 Jun 22;12(6):E670. PMID: 32580341
- Ellis K.E., Nawas G.T., Chan C., York L., Fisher J., Connick E., Zangeneh T. T. Clinical Outcomes Following the Use of Archived Proviral HIV-1 DNA Genotype to Guide Antiretroviral Therapy Adjustment. *Open Forum Infectious Diseases*. 2020. 7(1). ofz533. <https://doi.org/10.1093/ofid/ofz533>.
- Gerald J.K., Fisher J.M., Brown M.A., Clemens C.J., Moore M.A., Carvajal S.C., Bryson D., Stefan N., Billheimer D., Gerald L.B. School-Supervised Use of a Once-Daily Inhaled Corticosteroid Regimen: A Cluster Randomized Trial. *Journal of Allergy and Clinical Immunology*. 2019. 143(2). 755-764. pii: S0091-6749(18)31134-5. doi: 10.1016/j.jaci.2018.06.048. [Epub ahead of print].
- Fisher J.M., Dick F.K., Levy D.F., Wilson S.M. Neural representation of vowel formants in tonotopic auditory cortex. *NeuroImage*. 2018. 178. 574-582. doi: 10.1016/j.neuroimage.2018.05.072. Epub 2018 May 31.
- Majeed A., Beatty N., Iftikhar A., Mushtaq A., Fisher J., Gaynor P., Kim J.C., Marquez J.L., Mora F.E., Georgescu A., Zangeneh T. A 20-year experience with nocardiosis in solid organ transplant (SOT) recipients in the Southwestern United States: A single-center study. *Transplant Infectious Disease*. 2018. 20(4). e12904. doi: 10.1111/tid.12904. Epub 2018 May 9.

Marsh K.M., Schipper D., Ferng A.S., Johnson K., Fisher J., Knapp S., Dicken D., Khalpey Z. Metabolic Impact of Rapamycin (Sirolimus) and B-Estradiol Using Mouse Embryonic Fibroblasts as a Model for Lymphangioliomyomatosis. *Lung*. 2017. 195(4). 425-430. doi: 10.1007/s00408-017-0016-3. Epub 2017 Jun 2.

PRESENTATIONS AND POSTERS

- 2022 *Simultaneously Understanding Individual Connection and Neural Network Differences Between Groups: Simulation Pipeline and Algorithm Development.* Fisher J.M. (presenter). Women in Data Science - Tucson 2022. Oral Presentation.
- 2020 *Multi-parametric optimization of dopamine transporter SPECT software quantification for diagnosis of parkinsonian syndromes.* Neill M. (presenter), Fisher J.M., Kay M.D., Zhang T., Sherman S., Lei H., Chou Y.-H., Kuo, P.H. Society of Nuclear Medicine & Molecular Imaging 2020 Annual Meeting. Poster.
- 2019 *PrEP Knowledge and Attitudes Among Adults Attending Public Health Clinics in Southern Arizona.* Shende T.C. (presenter), Fisher J.M., Perez-Velez C.M., Guido A.A., Sprowl K.M., Drake T.M., Adelus M.L., Bedrick E.J., Fantry L.E. 10th IAS Conference on HIV Science. Poster. Mexico City, Mexico.
- Facilitating Research with Customized Statistics Tools.* Julia Fisher (presenter) and Bonnie LaFleur. Discover BIO5: Research to Innovation Showcase. Poster. Tucson, AZ.
- 2018 *Mutagenic Analysis of a DNA Translocating Tube's Interior Surface.* Aaron Roznowski (presenter), Julia Fisher, Bentley Fane. FASEB Virus Structure and Assembly Conference. Poster. Steamboat Springs, CO.
- Variational Bayes for fMRI Data: Detecting Scattered Signal.* Julia Fisher (presenter). 2018 Bayesian Symposium. Presentation. Tucson, AZ.
- 2017 *Supervised Asthma Medicine in Schools: The SAMS Study.* Joe K. Gerald (presenter), Mark Brown, Dean Billheimer, Julia Fisher, Conrad Clemens, Melissa Moore, Scott Carvajal, Donna Bryson, Nikki Stefan, Lynn B. Gerald. The 2017 American Thoracic Society International Conference. Presentation. Washington, DC.
- Among Hispanic Children with Asthma, Greater Maternal Acculturation is Associated with Having a Medical Home.* Ashley A. Lowe (presenter), Joe K. Gerald, Julia Fisher, Dean Billheimer, Scott Carvajal, Lynn B. Gerald. The 2017 American Thoracic Society International Conference. Poster. Washington, DC.
- PrEP Uptake and Emergent HIV infections in Southern Arizona: Is There a Disconnect?* Anca Georgescu (presenter), Cesar Egurrola, Spencer Schaff, Julia Fisher, Shannon Smith, Catalin Florita, Alyssa Guido, Stephen Klotz. Open Forum Infectious Diseases. 4(suppl_1). S438-S439. doi: 10.1093/ofid/ofx163.1111. (Poster presented at ID Week 2017; San Diego, CA.)

- Hair biomarkers among middle-school children in relation to school stress and asthma.* Eyal Oren (presenter), Erika Barrett, Mark L. Laudenslager, Julia Fisher, Dean Billheimer, Lynn B. Gerald. Poster. 38th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine. San Diego, CA.
- 2016 *Long-Term Recovery in Aphasia.* Mara Goodman (presenter), Pélagic Beeson, Stephen Wilson, Julia Fisher. The 2016 American Speech-Language-Hearing Association Convention. Philadelphia, PA.
- Mobile Telemedicine Programs in School Could Increase Clinician Efficiency and Improve Access to Health Care Among Children with Asthma.* Ashley A. Lowe (presenter), Joe K. Gerald, Conrad Clemens, Mark Brown, Melissa Moore, Tara Carr, Mark Goforth, Julia Fisher, Dean Billheimer, Lynn B. Gerald. Presentation. The 2016 American Thoracic Society International Conference. San Francisco, CA.
- Impact of Supervised Asthma Medication Use on Sleep Outcomes of Elementary School Children.* Eyal Oren (presenter), Daniel Combs, Julia Fisher, James L. Goodwin, Dean Billheimer, Joe K. Gerald, Conrad Clemens, Mark Brown, Lynn B. Gerald. Poster. The 2016 American Thoracic Society International Conference. San Francisco, CA.
- 2014 *Speech Perception and Our Brains.* Julia Fisher (presenter). Presentation. Osher Lifelong Learning Institute at the University of Arizona. Tucson, AZ.
- 2013 *Optimal design of speech perception fMRI studies for robust quantification of single trial activation patterns.* Julia Fisher (presenter), Stephen M. Wilson. Poster. Neurobiology of Language Conference 2013. San Diego, CA.
- Computational Explorations into Bilingual Vowel Acquisition: A Model of an Interesting Pattern of Success and Failure in Two Discrimination Paradigms.* Julia Fisher (presenter). Presentation. University of Arizona Linguistics Department Colloquium Series. Tucson, AZ.
- Our Amazing Speech Perception Abilities.* Julia Fisher (presenter). Presentation. University High School. Tucson, AZ.
- 2012 *Auditory Masked Priming and Lexical Processing in People with Differing Familial Handedness.* Julia Fisher (presenter), Roeland Hancock, Thomas G. Bever. Poster. Neurobiology of Language Conference 2012. San Sebastian, Spain.
- Auditory Masked Priming and Lexical Access in L1 and Early L2 English Speakers with Differing Familial Handedness.* Julia Fisher (presenter). Presentation. Harald Clahsen's Laboratory Group. Universität Potsdam. Potsdam, Germany.
- Looking at Lexical Access with Auditory Masked Priming.* Julia Fisher (presenter). Guest lecture in Thomas G. Bever's Writing Systems course. University of Arizona. Tucson, AZ.
- 2011 *The Tools of the Trade: Ultrasound Analysis Techniques.* Julia Fisher (presen-

ter). Presentation. Seeing Speech Workshop: NSF Cyberinfrastructure Planning Workshop. Tucson, AZ.

2007 *Interesting Property of the Symmedian Point*. Julia Fisher (presenter), A. Carr, A. Roberts, P. Xu. Presentation. Spring Meeting of the North Central Section of the Mathematical Association of America. College of St. Catherine, St. Paul, MN.

The Symmedian Locus for a Circle of Triangles. Julia Fisher (presenter), A. Carr, A. Roberts, P. Xu. Presentation. Undergraduate Colloquium. Idaho State University, Pocatello, ID.

SUBMITTED AND IN PREP MANUSCRIPTS

Nematollahi A., Fisher J.M., Furlong M.A., Beamer P.I., Goodrich J.M., Graber J.M., Calafat A.M., Botelho J.C., Beitel S.C., Littau S.R., Gulotta J.J., Wallentine D.D., Burgess J.L. Cross-Sectional and Longitudinal Serum PFAS Concentrations in Municipal Firefighters. In Prep.

RESEARCH INTERESTS

Primary: *Simultaneously Investigating Individual Connection and Network Connectivity Changes with Functional Magnetic Resonance Imaging*: This research involves extending the network-based statistics and threshold-free network-based statistics approach to understanding neural connectivity differences between two populations. The extension seeks to allow inference on individual connection differences and on larger-scale network differences simultaneously in a way that capitalizes on neighborhood information to boost power.

Other: Neurological correlates of language and other cognitive processing, neurological correlates of disease (Parkinson's, mild cognitive impairment), linear models, speech perception, bilingualism/multilingualism

HONORS, AWARDS, AND FELLOWSHIPS

2014 Honorable Mention, University of Arizona Graduate and Professional Student Council Achievement Award in the category Outstanding Interdisciplinary Development (\$50)

2013 Recipient, University of Arizona Graduate and Professional Student Council Travel Grant (\$500)

2011 Fellow, National Science Foundation Graduate Research Fellowship Program

2010	Honorable Mention, National Science Foundation Graduate Research Fellowship Program
2007	Summa cum laude, Carleton College
2007	Phi Beta Kappa, Carleton College
2007	Distinction in Major, Carleton College Earned by achieving distinction on the integrative exercise (senior thesis) and having a cumulative GPA of at least 3.5 in all courses taken in the major department
2006	Nominated to the American Mathematical Society (AMS) by the Mathematics Department at Carleton College
2005	Nominated to the Mathematical Association of America (MAA) by the Mathematics Department at Carleton College
2004–2006	Dean’s List, Carleton College GPA in highest 10% of class

SERVICE

2022	Session Chair Statistical Methods in Imaging Conference 2022
2021	Planning Committee Leader Women in Data Science - Tucson
2020	Planning Committee Member Women in Data Science - Tucson
2017-2018	Statistical Reviewer Journal: Circulation
2014-2015	Student Representative Statistics Graduate Interdisciplinary Program, University of Arizona, Tucson, AZ
2013	Travel Grant Reviewer Graduate and Professional Student Council, University of Arizona, Tucson, AZ
2011-2013	Fundraiser Arizona Linguistics Circle, University of Arizona, Tucson, AZ
2011-2012	Mentor (for Independent Study Students) Bever Language and Cognition Lab, University of Arizona, Tucson, AZ
2011	Faculty Representative Arizona Linguistics Circle, University of Arizona, Tucson, AZ

LANGUAGES (NATURAL AND TECHNICAL)

Natural	English (native), Spanish (advanced), some knowledge of Russian and Mandarin Chinese
Technical	R, knitr, REDCap, LaTeX, Matlab, Psychophysics Toolbox for Matlab, Python, moderate knowledge of Perl, Praat scripting
