

Adam R. Fishbein, PhD

B333 McGill Hall • San Diego, CA 92161 • email: arfishbein@ucsd.edu, afishbein87@gmail.com

EDUCATION

University of Maryland: College Park, MD

Degree: PhD in Neuroscience and Cognitive Science Aug 2015 – May 2021

Thesis: “Auditory Processing of Sequences and Song Syllables in Vocal Learning Birds”

Advisor: Robert Dooling (Psychology)

Committee Members: Greg Ball (Psychology),

Juan Uriagereka (Linguistics), Bill Idsardi (Linguistics), Catherine Carr (Biology)

University of Southern California: Los Angeles, CA

Degree: Master of Professional Writing, concentration in fiction Aug 2010 – Aug 2012

Thesis: Short story collection “Leftover People and Other Stories”

University of Maryland: College Park, MD

Degree: B.A. Philosophy; B.A. Linguistics Aug 2005 – May 2009

Graduated Cum Laude

RESEARCH AND TRAINING

Postdoctoral Researcher

Cortical Systems and Behavior lab, UCSD, PI: Cory Miller Aug 2021 – Present

Graduate Research Assistant

Avian Behavioral Neuroscience lab, UMD July 2015 – May 2021

Summer School Course in Acoustic Communication

Terrestrial and Marine Field Stations of the Institute of Biology, University of Southern Denmark Aug 2017

Field Course in Animal Communication

Project title: Duetting in Chestnut-Backed Antbirds July 2016 – Aug 2016

Barro Colorado Island, Panama

Baggett Summer Research

Studied Vocal Mimicry in Satin Bowerbirds, UMD Summer 2008

PUBLICATIONS

Jovanovic, V., **Fishbein, A.R.**, de la Mothe, L., Lee, K-F, Miller, C.T. Behavioral context affects social signal representations within single primate prefrontal cortex neurons. *Neuron*. 2022.

Fishbein, A. R.*, Prior, N.H.*, Brown, J.B., Ball, G. F., Dooling, R. J. Discrimination of natural acoustic variation in vocal signals. *Scientific Reports*. 2021.

Fishbein, A. R., Idsardi, W. J., Ball, G. F., Dooling, R. J. Sound sequences in birdsong: how much do birds really care? *Philosophical Transactions of the Royal Society B*. 2020.

Fishbein, A. R., Fritz, J. B., Idsardi, W. J., Wilkinson, G. S. What can animal communication teach us about human language? *Philosophical Transactions of the Royal Society B*. 2020.

Brown, J. B., Brittan-Powell, E. F., Dooling, R. J., **Fishbein, A. R.**, Ball, G. F., Madison, F. N. Strain differences in hearing in song canaries. *Journal of the Acoustical Society of America*. 2019.

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Fishbein, A. R., Lawson, S. L., Dooling, R.J., Ball, G.F. How Canaries Listen to Their Song: Species-Specific Shape of Auditory Perception. *Journal of the Acoustical Society of America*. 2019.

Fishbein, A. R., Löschner, J., Mallon, J. M, Wilkinson, G. S. Dynamic Sex-Specific Responses to Synthetic Songs in a Duetting Suboscine Passerine. *PLOS ONE*. 2018.

Lawson, S.L., **Fishbein, A. R.**, Prior, N.H., Dooling, R.J., Ball, G.F. Relative Saliency of Syllable Structure and Syllable Order in Zebra Finch Song. *Animal Cognition*. 2018.

In Preparation

Fishbein, A. R. (*in review*) Auditory pattern discrimination in budgerigars (*Melopsittacus undulatus*).

Stennette, K.A., **Fishbein, A.R.**, Prior, N.H., Ball, G.F., Dooling, R.J. (*in review*) Sound order discrimination in two species of bird.

PRESENTATIONS

Fishbein, A.R. Wearable Audiologger. (2022) Presentation at Marmoset PI meeting, Boulder, CO.

Fishbein, A. R. How birds perceive auditory sequences and song syllables. (2021) Invited talk at the cognitive and comparative psychology colloquium at the CUNY graduate center.

Fishbein, A. R. Lu, K., Liu, W., Idsardi, W. J., Fritz, J.B., Shamma, S.A., Dooling, R.J. (2021). Sequence processing in the auditory forebrain of the zebra finch (*Taeniopygia guttata*) and the budgerigar (*Melopsittacus undulatus*). Poster presented at SfN Global Connectome: A Virtual Event.

Fishbein, A. R. Prior, N.H., Ball, G.F., Dooling, R.J. (2020). Limitations in Avian Perception of Vocal Sequences: Implications for Language Evolution. Talk accepted for EvoLang 13, Brussels, Belgium. (Cancelled for Covid-19).

Fishbein, A. R. Lu, K., Liu, W., Idsardi, W. J., Fritz, J.B., Shamma, S.A., Dooling, R.J. (2020). Temporal Integration of Sequences in Secondary Auditory Region of the Zebra Finch Forebrain. Poster presented at 43rd Annual Meeting of the Association for Research in Otolaryngology, San Jose, CA.

Fishbein, A. R., Prior, N. H., Idsardi, W. J., Ball, G. F., Dooling, R. J. (2019). Perception of Variation in Song Motifs by Birds and Humans. Poster presented at 26th International Conference on Comparative Cognition, Melbourne Beach, FL.

Fishbein, A. R. Messages in some of the details: How birds listen to auditory sequences. (2019) Advances in the Study of Bird Perception and Cognition. University of Tokyo, Komaba, Japan.

Fishbein, A.R. Invited talk at the Neuroscience and Cognitive Science program recruitment event. (Feb. 2019).

Fishbein, A. R., Lu, K., Idsardi, W. J., Shamma, S. A., Fritz, J. B., Dooling, R. J. (2019). Neurophysiological Coding of Temporal Fine Structure and Sequence in the Auditory Forebrain of the Zebra Finch. Poster presented at 42nd Annual Meeting of the Association for Research in Otolaryngology, Baltimore, MD.

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Fishbein, A. R., Prior, N. H., Ball, G. F., Dooling, R.J. (2018). Perception of Sequences and Syllables in Vocal Learning Birds. Presentation at Birdsong and Animal Communication Annual Meeting, Millbrook, NY.

Fishbein, A. R., Prior, N. H., Lawson, S. L., Ball, G. F., Dooling, R. J. (2018). Variation in How Birds Listen to Their Songs. Presentation at 55th Annual Conference of the Animal Behavior Society, Milwaukee, WI.

Fishbein, A. R., Ball, G. F., Dooling, R. J. (2018). Use of Transition and Abstract Rules by Budgerigars in Auditory Pattern Processing. Presentation at 175th Meeting of the Acoustical Society of America, Minneapolis, MN.

Fishbein, A. R., Ball, G. F., Dooling, R. J. (2017). Use of Transition and Abstract Rules by Budgerigars in Auditory Pattern Processing. Poster presented at Birdsong 7, College Park, MD.

Fishbein, A. R. and Dooling, R. J. (2017). An Efficient Behavioral Assay for Measuring Auditory Pattern Processing in Budgerigars. Poster presented BBI Research Workshop: New Perspectives on Animal Models of Language and Cognition, College Park, MD.

Fishbein, A. R., Löschner, J., Mallon, J. M., Wilkinson, G. S. (2017). Sex-Specific Responses to Synthetic Songs in a Duetting Suboscine Passerine. Presentation at 4th International Symposium on Acoustic Communication by Animals, Omaha, NE.

Fishbein, A. R. and Dooling, R. J. (2017). An Efficient Behavioral Assay for Measuring Auditory Pattern Processing in Budgerigars. Poster presented at 4th International Symposium on Acoustic Communication by Animals, Omaha, NE.

Lawson, S.L., **Fishbein, A. R.**, Prior, N.H., Dooling, R.J., Ball, G.F. (2017) Perception of Structural Changes in Song Motifs by Zebra Finches. Poster presented at 4th International Symposium on Acoustic Communication by Animals, Omaha, NE.

Fishbein, A. R., Lawson, S. L., Dooling, R.J., Ball, G.F. (2017). How Canaries Listen to Their Song. Presentation at 173rd Meeting of the Acoustical Society of America, Boston, MA.

Lawson, S.L., **Fishbein, A. R.**, Prior, N.H., Lohr, B., Dooling, R.J., Ball, G.F. (2017). Relative Salience of Syllable Order versus Syllable Fine Structure in Zebra Finch Song. Work presented at 173rd Meeting of the Acoustical Society of America, Boston, MA.

Fishbein, A. R., Lawson, S. L., Ball, G.F., Dooling, R. J. (2016). Using Operant Conditioning Methods to Measure Song Perception in Birds. Poster presented at 6th Meeting of the North American Ornithological Conference, Washington, D.C.

AWARDS AND HONORS:

Ann G. Wylie Semester Dissertation Fellowship , UMD	2020
Jakob K. Goldhaber Travel Grant , UMD	2020
NRSA Predoctoral F31 Fellowship , NIDCD	2019
NIH Predoctoral Traineeship Fellowship , T32 Grant, CCEBH, UMD	2017
Graduate Student Travel Award , BSOS, UMD	2017
Research Training Award , NACS Program, UMD	2017
Travel Award , NACS Program for First-Year Project, UMD	2016
NSF Research Traineeship Fellowship , Language Science Center, UMD	2016

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Assistant Lectureship, USC	2010
Baggett Summer Research Scholarship, UMD	2008
Honors Program Certificate, UMD	2008

TEACHING EXPERIENCE

Teaching Assistant, LING272 The Biophysics of Language University of Maryland: College Park, MD	Fall 2019
Teaching Assistant, LING272 The Biophysics of Language University of Maryland: College Park, MD	Fall 2018
Graduate Fellow, Pulsar Language Science Research Seminar University of Maryland: College Park, MD	Spring 2017 – Fall 2017
Lecturer, ENGL101 (Academic Writing) University of Maryland: College Park, MD	Fall 2014 – Spring 2015
Lecturer, LIT/WRTG100, LIT/WRTG101 (College Writing I and II) American University: Washington, DC	Fall 2013 – Spring 2015
Graduate Lecturer, WRIT140 (Writing and Critical Reasoning) University of Southern California: Los Angeles, CA	Fall 2010 – Spring 2012

ADDITIONAL TRAINING

Statistics with R Specialization, Coursera	Spring 2020
Practical Data Science with MATLAB Specialization, Mathworks on Coursera	Spring 2020
Independent Study with Lab Research Engineer, Ed Smith Matlab, Sound Recording, Signal Analysis	June 2016 – Dec 2016
Introduction to Bayesian Statistical Modeling, UMD	June 2016
Training in Teaching, UMD	Fall 2014
Training in Teaching, USC	Fall 2010

PROFESSIONAL SERVICE

Chair, Language Science Professional Development Committee	2017 – 2018
Co-Chair, Language Science Lunch Talks Committee	2017
Member, Language Science Winter Storm Planning Committee	2017, 2018
Member, Language Science Professional Development Committee	2016 – Present
Member, Language Science Day Planning Committee	2016

MENTORSHIP EXPERIENCE

Mentor for Undergraduate Student, Delphine Gardiner	Sept 2018 – May 2020
Mentor for Undergraduate Student, Mahler Revsine	May 2018 – Aug 2018
Graduate Fellow for PULSAR Undergraduate Research Program	Jan 2017 – Dec 2017
Mentor for Undergraduate Student, Eli Kane	Sept 2017 – Dec 2017
Mentor for Undergraduate Student, Janeila Benjamin	Mar 2017 – Aug 2017
Tutor for Study Point: Washington, DC	Aug 2014 – Jan 2015
Volunteer Tutor at School on Wheels: Los Angeles, CA	Mar 2012 – Sept 2012
Volunteer Tutor at Los Angeles Mission: Los Angeles, CA	Apr 2012 – Sept 2012

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OUTREACH EXPERIENCE

Lab Tour for Terp Discovery Students	July 2017
Maryland Day Table Volunteer, UMD	Apr 2017
Lunch with Montgomery Blair High School Linguistics Club	Feb 2017

LAY SCIENCE PUBLICATIONS

How birds hear birdsong. *Scientific American*. May 2022.

Seeds for Thought: Is there Structure in Birdsong? [Umdlanguagescience.org](http://umdlanguagescience.org), Mar. 27, 2018.

Birds Can Tell Us a Lot About Human Language. [Scientificamerican.com](http://scientificamerican.com), Feb 2., 2018.

How Canaries Listen to Their Song. Popular version of presentation at 173rd meeting of the Acoustical Society of America. Acoustics.org. 2017.

SKILLS

MATLAB: proficient

Excel: proficient

Powerpoint: proficient

Adobe Audition: proficient

R: proficient

Python: intermediate

SPSS: intermediate

Avisoft: intermediate

Raven Pro: proficient

SAP: intermediate

FICTION PUBLICATIONS AND OTHER ACTIVITIES

DreamLand, Amazon Direct Publishing (2015); "Uncle Camus," *Cactus Heart* (2015); "The Untapped," *The Offbeat* (2015); "Igloo," *Connu* (2013); "Moving In," *Necessary Fiction* (2012); "As A Child," *Stylus* (2009)

Co-Founder and Member, Improv Comedy Group "The Female Accent," Jan 2015 – Mar 2020

Member, Washington Improv Theater ensemble "Thank You for Sharing," Apr 2015 – Sept 2016