December 2022

CURRICULUM VITAE

SARAH M. N. WOOLLEY

Zuckerman Institute
Department of Psychology
Center for Integrative Animal Behavior
Kavli Institute for Brain Science
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Academic Positions

2016 -	Professor, Department of Psychology and Zuckerman Institute, Columbia University, New York, NY
2015 – 2018	Co-Director, Ctr for Integrative Animal Behavior, Columbia University, New York, NY
2014 -	Elected member, Kavli Institute for Brain Science, Columbia University, New York, NY
2013 -	Principal Investigator, Zuckerman Institute, Columbia University, New York, NY
2013 - 2016	Department Chair, Psychology, Columbia University, New York, NY
2011 - 2016	Associate Professor, Department of Psychology, Columbia University, New York, NY
2006 - 2011	Assistant Professor, Department of Psychology, Columbia University, New York, NY
2006	Visiting Professor, School of Medicine, University of Auckland, New Zealand

Education

2001 - 2005	Postdoctoral Fellow, Neuroscience and Psychology, University of California, Berkeley, CA, Advisor: Dr. Frederic E. Theunissen
1999 - 2001	Postdoctoral Fellow, Psychology University of Washington, Seattle, WA, Advisor: Dr. John H. Casseday
1992 - 1999	Ph.D., Neurobiology and Behavior, School of Medicine, V. M. Bloedel Hearing Research Center University of Washington, Seattle, WA, Advisor: Dr. Edwin W Rubel
1987 - 1991	B.A., Honors, Biology and Psychology, University of Colorado, Boulder, CO, Advisor: Dr. Anne C. Bekoff

Grants/Fellowships/Awards

Current

2022 – 2025	NIH/NIDCD National Research Service Award (Faculty Mentor)
2010 – 2023	NIH/NIDCD R01 (PI) *Neural coding and perception of learned vocalizations*
2008 -	NIH/NINDS T32 (Faculty Mentor) *Advanced Graduate Training Program in Neurobiology and Behavior* (Llyod Greene PI)

Completed

2020 – 2022	Columbia University Research Initiatives in Science and Engineering (PI) *Neural and genetic mechanisms of vocal communication*

2017 - 2021	NSF/IOS Research Grant (PI), *Adaptations for mate choice: perceptual mechanisms in species with highly divergent communication signals*
2015 – 2016	Kavli Institute for Brain Science (PI) Organizing principles of speech and birdsong (Nima Mesgarani co-PI)
2014 – 2017	NSF Graduate Fellowship (Faculty Mentor)
	Ford Foundation Graduate Fellowship (Faculty Mentor)
2014 – 2016	Croucher Foundation Graduate Fellowship (Faculty Mentor)
2011 – 2014	HHMI International Predoctoral Fellowship (Faculty Mentor)
2010 – 2013	NIH/NIDCD National Research Service Award (Faculty Mentor)
2009 - 2013	NSF/IOS Research Grant (PI), *Co-evolution of auditory coding and vocal behavior*
2007 - 2011	Searle Scholars Award
2009 - 2010	National Organization for Hearing Research (PI)
2006 - 2008	Gatsby Initiative in Brain Circuitry (PI; Liam Paninski, co-PI)
2006	New Zealand International Science and Technology Award
2001- 2004	NIH/NIDCD Individual National Research Service Award (PI)
2000 - 2001	University of Washington Royalty Research Award (PI)
1994	NIH Graduate Neuroscience Training Grant position
1990 - 1991	Howard Hughes Medical Institute (HHMI) Undergraduate Research Fellowship

Professional Service

Ad hoc journal reviewer for: Nature, Science, Neuron, Nature Neuroscience, Journal of Neuroscience, Proceedings of the National Academy of Sciences, Animal Behaviour, Current Biology, Hormones and Behavior, Journal of Neurophysiology, PLoS Biology, JASA, Developmental Neurobiology, European Journal of Neuroscience, Journal of Computational Neuroscience, Journal of Comparative Psychology, Journal of Comparative Physiology-A, PLoS ONE, Hearing Research, Proceedings of the Royal Society Biology, Behavioral Neuroscience, Frontiers in Systems Neuroscience, Frontiers in Neuroendocrinology, Columbia Undergraduate Science Journal

Ad hoc grant reviewer for: National Institutes of Health, BRAIN Initiative, National Institutes of Health AREA, National Science Foundation IOS Neural Systems & Behavioral Systems, National Science Foundation OISE IRFP, Human Frontiers Science Program, CUNY Faculty Research, Swiss National Science Foundation, U.K. Darwin Foundation, Harvard Medical School, Mass Eye and Ear Infirmary

Conference evaluator for: Gordon Research Conferences

Textbook reviewer for: Animal Behavior: An Evolutionary Perspective (Alcock), Principles of Animal Behavior (Dugatkin)

2022 – 2026	Elected Councilor, Society for Neuroscience
2022 -	Advocacy Committee, Society for Neuroscience
2022	Grants Review Panel member, Behavioral Systems, National Science Foundation
2021 - 2025	Selection committee, Donald B. Lindsley Prize, Society for Neuroscience
2021	Panel speaker, The job application process, Society for Neuroscience satellite meeting Advances and Perspectives in Auditory Neuroscience
2020 – 2021	Standing member, Scientific Review Group, Sensory Motor Neuroscience, NIH
2020 -	Evaluator, Okinawa Institute of Science and Technology Graduate University
2019 - 2022	Promotion and Tenure Committee, Columbia University

2019 - 2022	Committee on Animal Research, Society for Neuroscience
2019 -	Selection committee, Knowles Prize in Hearing Research
2018 – 2022	Selection committee, Association for Research in Otolaryngology Awards
2017 – 2021	Standing member, Scientific Review Group, Sensorimotor Integration, NIH
2017 -	Advisory Committee, Conte Center, Neurobiology and Dynamics of Active Sensing, NIH (Charles Schroeder PI)
2017	Instructor, Physics of Hearing, Kavli Institute for Theoretical Physics
2016 - 2022	Editor and author, Kandel Quarterly, updates to "Principles of Neural Science," textbook (Kandel, Schwartz, Jessell, Siegelbaum, Hudspeth), McGraw Hill Publishing
2015 - 2016	Program Committee, International Congress on Neuroethology
2014 - 2015	Co-editor, Developmental Neurobiology special issue "Neural Mechanisms of Behavioral Maturation"
2014	Session organizer, Society for Neuroscience Annual Meeting satellite "Birdsong IV"
	Chair, Developing Neuroethology Award Committee, International Society for Neuroethology
	Workshop provocateur and white paper contributor, National Science Foundation, "New Frontiers for the Integrative Study of Animal Behavior"
2013 – 2016	Chair, Department of Psychology, Columbia University
	Panel member, "Achieving tenure in STEM" Vice Provost for Diversity's tenure-track faculty of diversity event, Columbia University
2013 – 2015	Selection committee, Trainee Professional Development Awards, Society for Neuroscience
	Selection committee, Nemko Prize for Cellular or Molecular Neuroscience, Society for Neuroscience
2013 – 2014	Council, International Society for Neuroethology
2013	Scientific Review Group member, NIH AREA Research Project Grants
	Co-organizer/session leader, Society for Neuroscience Annual Meeting satellite "Birdsong III"
2012 – 2014	Academic Review Committee, Columbia University
2012	Discussant, Gordon Research Conference
	Reviewer, Gordon Research Conferences
2011	CUNY Animal Behavior Institute (CABI), founding committee
	Reviewing Editor, *Frontiers of Science – Systems Neuroscience*
	Consulting Editor, *Behavioral Neuroscience*
	Session chair, HHMI Janelia Farm, Producing and Perceiving Complex Acoustic Signals
2010	Program committee, National Academy of Sciences/Kavli Frontiers of Science
	Session moderator, Annual Eastern Auditory Retreat "neural processing"
2009	Computational and Systems Neuroscience (CoSyNe) Annual Meeting workshop organizer
	American Ornithologist Union Annual Meeting symposium organizer
	Session organizer, National Academy of Sciences/Kavli Frontiers of Science
	Chair, Society for Neuroscience Songbird Social
2008	Symposium participant, National Academy of Sciences/Kavli Frontiers of Science
2006	Workshop participant, National Science Foundation/Santa Fe Institute Neuroscience

Professional Memberships

Society for Neuroscience, Association for Research in Otolaryngology, International Society for Neuroethology, New York Academy of Sciences, American Physiological Society, American Psychological Association

Publications

1. Rivera, M, Edwards, JA, Hauber, ME, **Woolley, SMN** (2023) Machine learning classification of vocal

communication reveals acoustic features that identify species in estrildid songbirds. *(submitted)*

2. Schumacher, JS, **Woolley, SMN** (2023) Rapid organization of receptive fields in auditory cortex neurons following developmental exposure to vocal communication. *(submitted)*
3. Yeh, Y, Rivera, M, **Woolley, SMN** (2022) Auditory sensitivity and vocal behaviour in five species of estrildid songbirds. *Anim Behav,* in press.
4. So, L, Edwards, JA, **Woolley, SMN** (2020) Auditory selectivity for spectral contrast in cortical neurons and behavior. *J Neurosci* 40: 1015-1027.
5. **Woolley, SMN** (2020) The human auditory cortex shows lateralized encoding of the acoustic modulations in speech and melody. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
6. Woolley, SC, **Woolley, SMN** (2020) Integrating Form and Function in the Songbird Auditory Forebrain. Springer Handbook on Auditory Research: The Neuroethology of Birdsong, Vol. 71. Eds. Sakata, J., Woolley, SC, Fay, R.R., Popper, A.
7. **Woolley, SMN** (2020) Wiring brain circuits for learned motor performance. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
8. Moore, JM, **Woolley, SMN** (2019) Emergent tuning for learned vocalizations in auditory cortex. *Nat Neurosci,* 22: 1469-1476.
9. **Woolley, SMN** (2019) Hierarchical motor control of vocal turn-taking during social communication. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
10. **Woolley, SMN** (2019) Dopamine neurons signal motor performance error in natural behavior. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
11. **Woolley, SMN** (2018) Organizing auditory maps before hearing onset. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
12. **Woolley, SMN** (2017) Early Experience and Auditory Development in Songbirds. In: Springer Handbook on Auditory Research: Auditory Development and Plasticity, Vol. 63. Eds. Cramer, K., Coffin, A., Fay, R.R., Popper, A.
13. Buesing, L, Calabrese, A, **Woolley, SMN**, Paninki, L (2017) A statistical model of shared variability in the songbird auditory system. *bioRxiv*. 113670; doi: https://doi.org/10.1101/113670
14. **Woolley, SMN** (2017) Synchronous Oscillations in Motor and Sensory Cortex Impact Memory. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
15. W**oolley, SMN** (2017) New Connections for Cognitive control of Fear. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
16. **Woolley, SMN** (2017) A cellular mechanism for cortical plasticity. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
17. **Woolley, SMN** (2017) Modality dominance in sensory integration and perception. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
18. Hall, IC, **Woolley, SMN,** Kwong-Brown, U, Kelley, DB (2016) Sex differences and endocrine regulation of auditory-evoked, neural responses in African clawed frogs (Xenopus). *J Comp Physiol A*, 202: 17-34.
19. **Woolley, SMN** (2016) Social experience induces parallel changes in sensory coding and behavior. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
20. **Woolley, SMN** (2016) Premotor inhibition stabilizes learned motor behavior. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
21. **Woolley, SMN** (2016) Gap junctions give motor neurons control over their own input. Principles of Neural Science; Kandel, ER, *Kandel Quarterly*, McGraw Hill.
22. Calabrese, A, **Woolley, SMN** (2015) Coding principles of the canonical cortical microcircuit in the

avian brain. *PNAS*, 112: 3517-3522.
23. **Woolley, SMN**, Sanes, DH (2015) Introduction to the special issue on neural mechanisms of behavioral maturation. *Dev Neurobio*, 75: 1049-1050.
24. Hall, IC, **Woolley, SMN,** Kwong-Brown, U, Kelley, DB (2015) Sex differences and endocrine regulation of auditory-evoked, neural responses in African clawed frogs (*Xenopus*). *J Comp Physiol A*, 202: 17-34.
25. Schneider, DM, **Woolley, SMN** (2013) Sparse and background-invariant coding of vocalizations in auditory scenes. *Neuron,* 79: 141-152.
26. **Woolley, SMN** and Portfors, CV (2013) Conserved mechanisms of vocalization coding in mammalian and songbird auditory midbrain. *Hearing Res,* 305: 45-56.
27. **Woolley, SMN** (2013) The Songbird Auditory System. In: Animal Models of Speech and Language Disorders. S. Helekar ed. New York, Springer Press.
28. **Woolley, SMN** (2013) Mechanisms of perceiving communication sounds in scenes. *POMA*, 19: 1-5.
29. Hauber, ME, **Woolley, SMN**, Cassey, P, Theunissen, FE (2013) Experience dependence of neural responses to different classes of male songs in the primary auditory forebrain of female songbirds. *Beh Brain Res*, 243: 184-190.
30. **Woolley, SMN** (2012) Early experience shapes vocal neural coding and perception in songbirds. *Dev Psychobiol,* 54: 612-631.
31. Sanes, DH, **Woolley, SMN** (2011) A behavioral framework to guide research on central auditory development and plasticity. *Neuron*, 72: 912-929.
32. Schneider, DM, **Woolley, SMN** (2011) Extra-classical tuning predicts stimulus-dependent receptive fields in auditory neurons. *J Neurosci,* 31: 11867-11878.
33. Gess, A, Schneider, DM, Vyas, A, **Woolley, SMN** (2011) Automated auditory recognition training and testing. *Anim Behav,* 82: 285-293.
34. Schumacher, JW, Schneider, DM, **Woolley, SMN** (2011) Anesthesia modulates excitability but not spectral tuning or neural discrimination in auditory midbrain neurons. *J Neurophys*, 106: 500-514.
35. **Woolley, SMN,** Moore, JM (2011) Coevolution of communication senders and receivers: vocal behavior and auditory processing in multiple songbird species. *Ann NY Academy of Sciences*, 1225: 155-165.
36. Ramirez, AD, Ahmadian, Y, Schumacher, JW, Schneider, DM, **Woolley, SMN**, Paninski, L (2011) Incorporating naturalistic correlation structure improves spectrogram reconstruction from neuronal activity in the songbird auditory midbrain. *J Neurosci* 31: 3828-3842.
37. Lewi, J, Schneider, DM, **Woolley, SMN**, Paninski, L (2011) Automating the design of informative sequences of sensory stimuli. *J Comp Neurosci* 30: 181-200.
38. Calabrese, A, Schumacher, JW, Schneider, DM, Paninski, L and **Woolley, SMN** (2011) A generalized linear model for estimating spectrotemporal receptive fields from responses to natural sounds. *PLoS ONE*, http://dx.plos.org/10.1371/journal.pone.0016104.
39. Schneider, DM, **Woolley, SMN** (2010) Discrimination of communication vocalizations by single neurons and groups of neurons in the auditory midbrain. *J Neurophys* 103: 3248-3265.
40. Ranjard, L, Anderson, MG, Rayner, MJ, Payne, RJ, McLean, I, Briskie, JV, Ross, HA, Brunton, D, **Woolley, SMN**, Hauber, ME (2010) Bioacoustic distances between begging calls of brood parasites and their host species: a comparison of bioacoustic techniques. *Behav Ecol and Sociobiol* 64: 1915-1926.
41. Hauber, ME, Campbell, DLM, **Woolley, SMN** (2010) Functional role and female perception of male song in the zebra finch. *Emu* 110: 209-218.
42. **Woolley, SMN**, Hauber, ME, Theunissen, FE (2010) Developmental experience alters information coding in auditory midbrain and forebrain neurons. *Dev Neurobio* 70: 235-252.
43. **Woolley, SMN**, Gill, PR, Fremouw, TE, and Theunissen, FE (2009) Functional groups in the avian

auditory system. *J Neurosci* 29: 2780-93.
44. Theunissen, FE, Amin, N, Shaevitz, S, **Woolley, SMN**, Fremouw, T and Hauber, ME (2008) Song selectivity and the songbird brain. In: Neuroscience of Birdsong. P Zeigler and P Marler eds. New York, Cambridge University Press.
45. **Woolley, SMN** (2008) Auditory feedback and singing in adult birds. In: Neuroscience of Birdsong. HP Zeigler and P Marler eds. New York, Cambridge University Press.
46. Gill, PR, **Woolley, SMN**, Fremouw, TE, and Theunissen FE (2008) What's that sound? Auditory area CLM encodes stimulus surprise, not intensity or intensity changes. *J Neurophys* 99: 2809-2820.
47. Hauber, ME, Cassey, P, **Woolley, SMN** and Theunissen, FE (2007) Neurophysiological response selectivity for conspecific songs over synthetic sounds in the auditory forebrain of non-singing female songbirds. *J Comp Physiol- A* 193: 765-774.
48. Hauber, ME, **Woolley, SMN**, and Theunissen, FE (2007) Learning, memory and mate choice: Early experience and neuronal discrimination of songs by female Zebra Finches. *J Ornithol* 48: 231-239.
49. Gill, PR Zhang, J, **Woolley, SMN**, Fremouw and TE, Theunissen, FE (2006) Sound representation methods for spectro-temporal receptive field estimation. *J Comput Neurosci* 21:5-20.
50. **Woolley, SMN,** Gill, P, and Theunissen, FE (2006) Stimulus-dependent auditory tuning results in synchronized population coding of vocalizations in the songbird midbrain. *J Neurosci* 26:2499-2512.
51. **Woolley, SMN**, Fremouw, TE, Hsu, A, and Theunissen, FE (2005) Tuning for spectro-temporal modulations as a mechanism for auditory discrimination of natural sounds. *Nat Neurosci* 8: 1371- 1379.
52. **Woolley, SMN** and Casseday, JH (2005) Processing of modulated sounds in the zebra finch auditory midbrain: responses to noise, frequency sweeps and sinusoidal amplitude modulations. *J Neurophysiol* 94: 1143-1157.
53. **Woolley, SMN** (2004) Auditory Experience and Adult Song Plasticity. In: Behavioral Neurobiology of Birdsong. PH Zeigler and P Marler eds. *Ann NY Academy of Sciences* 1016: 208-221.
54. Theunissen, FE, **Woolley, SMN,** Hsu, A, and Fremouw, T (2004) Methods for analysis of auditory processing in the brain. In: Behavioral Neurobiology of Birdsong. PH Zeigler and P Marler eds. *Ann NY Academy of Sciences* 1016: 187-207.
55. Theunissen, FE, Amin, N, Shaevitz, S, **Woolley, SMN**, Fremouw, T and Hauber, ME (2004) Song Selectivity in the Song System and in the Auditory Forebrain. In: Behavioral Neurobiology of Birdsong. HP Zeigler and P Marler eds. *Ann NY Academy of Sciences* 1016: 222-245.
56. Hsu, A, **Woolley, SMN**, Fremouw, TE and Theunissen, FE (2004) Modulation and phase spectrum of natural sounds enhance neural discrimination performed by single auditory neurons. *J Neurosci* 24: 9201 -9211.
57. **Woolley, SMN** and Casseday, JH (2004) Response properties of single neurons in the zebra finch auditory midbrain: response patterns, frequency coding, intensity coding and spike latencies. *J Neurophysiol* 91: 136-151.
58. Rubel, EW, **Woolley, SMN,** Goode, CT and Fuchs, AF (2003) Hair cell regeneration reveals central nervous system plasticity in the avian brain. *Sem Hearing*: 24(2).
59. **Woolley, SMN** and Rubel, EW (2002) Vocal memory and learning in adult Bengalese finches with regenerated hair cells. *J Neurosci* 22: 7774-7787.
60. **Woolley, SMN**, Wissman, AM, and Rubel, EW (2001) Auditory thresholds and hair cell regeneration following aminoglycoside ototoxicity in Bengalese finches. *Hear Res* 153: 181-195.
61. Brenowitz, EA and **Woolley, SMN** (2000) The avian song control system: a model for understanding changes in neural structure and function. In: Springer Handbook of Auditory Research, Plasticity of the Auditory System. TN Parks, EW Rubel, AN Popper and RR Fay eds. Springer, New York.
62. Stone, JS, Choi, Y-S, **Woolley, SMN**, Yamashita, H and Rubel, EW (1999) Progenitor cell cycling

during hair cell regeneration in the vestibular and auditory epithelia of the chick. *J Neurocytol* 28: 863-876.

63. **Woolley, SMN** and Rubel, EW (1999) High frequency auditory feedback is not required for adult song maintenance in Bengalese finches. *J Neurosci* 19: 358-371.
64. **Woolley, SMN** and Rubel, EW (1997) Bengalese finches *Lonchura Striata domestica* depend upon auditory feedback for the maintenance of adult song. *J Neurosci* 17: 6380-6390.

Invited Talks

International and national meetings

2021 NIH BRAIN Initiative, Brain Connectivity Workshop, virtual
Conference on the Adaptive Brain, Weizmann Institute of Science and Columbia University, virtual
2020 South American Neuroscience Annual Meeting, virtual
2019 Dynamics of the Brain: Temporal Aspects of Computation, Rungstedgaard, Denmark
2018 Society for Neuroscience Annual Meeting satellite "Birdsong 8," San Diego, CA
Gordon Research Conference, Neurobiology of Cognition, Newry, ME
2017 International Conference on Auditory Cortex, Banff, Canada
Kavli Institute for Theoretical Physics, Santa Barbara, CA
2016 Presidential Special Lecture, Society for Neuroscience Annual Meeting, San Diego, CA
International Congress on Neuroethology, Montevideo, Uruguay
American College of Laboratory Animal Medicine, Annual Conference, St. Pete, FL
Society for Integrative and Comparative Biology, Annual Conference, Portland, OR
2015 9th Annual Canadian Neuroscience Conference, Vancouver, BC
Symposium on Learning about the Vocal World, Emory University, Atlanta, GA
2014 Plenary speaker, International Congress on Neuroethology, Sapporo, Japan
Gordon Research Conference, The Auditory System, Lewiston, ME
2013 Association for Research in Otolaryngology Annual Meeting, Baltimore, MD
International Congress on Acoustics, Montreal, Quebec, CA
2012 Songbird Satellite, Society for Neuroscience Annual Meeting, New Orleans, LA
Computational and Systems Neuroscience Annual meeting, Salt Lake City, UT
Natural Environments, Tasks and Intelligence Conference, Austin, TX
CUNY Animal Behavior Institute first annual meeting
2011 Society for Neuroscience Annual Meeting, Washington DC
Frontiers in the Neuroscience of Music, Italian Academy, Columbia University
Model Systems in Producing and Perceiving Vocalizations, Janelia Farm, HHMI
2010 Auditory System Gordon Conference, New London, NH
Society for Behavioral Neuroendocrinology Annual Meeting, Toronto, Canada
Neurobehavioral Evolution – a memorial to Wally Welker, Washington DC
2009 Society for Neuroscience Annual Meeting Symposium, Chicago, IL
American Ornithologist's Union Annual Meeting, University of Pennsylvania, Philadelphia, PA
Computational & Systems Neuroscience (CoSyNe) Annual Meeting Workshop
2005 Spring Brain Conference, Sedona, AZ
2004 Gordon Research Conference, Sensory Coding and the Natural Environment, Oxford University, England
7th International Congress of Neuroethology, Nyborg, Denmark, Symposium
Computational & Systems Neuroscience (CoSyNe) Annual Meeting, Cold Spring Harbor, NY
2002 Conference on Neurobiology of Birdsong, Hunter College, New York, NY

University seminars and small meetings

2022 Gordon Research conference, Neural Mechanisms of Acoustic Communication
2021 NIH Neuroscience Seminar Series, virtual
University of Washington, Neurobiology and Behavior Seminar Series, virtual
2019 Columbia University, Annual Brain Insight Lecture, New York, NY
2018 Northwestern University, Neurobiology, Evanston, IL
Princeton University, Neuroscience, Princeton, NJ
2017 Plenary speaker, Sense to Synapse, New York, NY
University of Washington, Bloedel Hearing Research Center, Seattle, WA
Conference on Brain-based Communication Disorders, Miami, FL
Zuckerman Institute Brain Series, Plaza Athénée, New York, NY
2016 Plenary speaker, University of Chicago, Neurosciences Graduate Programs Retreat, MI
Johns Hopkins University, Neurobiology, Baltimore, MD
Duke University, Neurobiology, Durham, NC
Auditory Splash, Massachusetts Institute of Technology, Boston, MA
Boston University, Hearing Research Center, Boston, MA
Colorado State University, Biology, Fort Collins, CO
2015 National Institute for Deafness and Other Communication Disorders, Bethesda, MD
University of California at Berkeley, Neuroscience, Berkeley, CA
University of Southern California, Neuroscience, Los Angeles, CA
Princeton University, Psychology and Neuroscience, Princeton, NJ
Yale University, Psychology, New Haven, CT
Comparative Neural Circuits Meeting, Jackson Hole, WY
Columbia University Teacher's College, New York, NY
2014 Marine Biological Laboratory, Woods Hole, MA
2013 Winthrop University Hospital, Long Island, NY
2012 University of California San Diego Neurobiology, La Jolla, CA
University of Pennsylvania Medical School, Philadelphia, PA
Woods Hole Marine Biological Laboratories, Woods Hole, MA
Boston University, Electrical Engineering, Boston, MA
Columbia University senior administrative officers meeting, New York, NY
Columbia University, Child and Adolescent Psychiatry Grand Rounds, New York, NY
2011 Harvard University Medical School, Cambridge, MA
Johns Hopkins University Neurobiology, Baltimore, MD
Northeastern Ohio Medical Colleges, Rootstown, OH
2010 Columbia University/Technion, New York, NY
New York University, Psychology, New York, NY
2009 New York University, Center for Neural Science, New York, NY
The Linnaean Society of New York, New York, NY
Lehigh University Biology, Bethlehem, PA
2008 Columbia University Electrical Engineering, New York, NY
University of Minnesota Medical School, Minneapolis, MN
Hunter College Bioacoustics Group, New York, NY
CUNY Speech and Hearing, New York, NY
Albert Einstein Medical School, New York, NY

Barnard College, New York, NY
Hunter College Psychology, New York, NY

2007 University of Zurich Institute for Neuroinformatics, Zurich, Switzerland,
Columbia University Department of Physiology, New York, NY
Rockefeller University, New York, NY
New York University Center for Neural Science, New York, NY
Sackler Institute, Cornell Medical School, New York, NY
Columbia Psychobiology, New York, NY
Hunter College Psychology, New York, NY

2006 Princeton University Psychology, Princeton, NJ
Yale University Psychology, New Haven, CT
Columbia University Center for Neurobiology, New York, NY
University of Connecticut, Storrs, CT
University of Auckland Medical School, Auckland, NZ
Rutgers University Psychology, Piscataway, NJ
Columbia University Department of Biology, New York, NY
Columbia University, Behavioral Neuroscience, New York, NY

2005 Harvard University Center for Brain Science, New York, NY
University of Massachusetts Psychology, Amherst, MA
Cornell University Psychology, Ithaca, NY
Columbia University Psychology, New York, NY

2004 University of California, Berkeley Neuroscience Institute, Berkeley, CA

2003 University of California San Francisco, San Francisco, CA
University of California Berkeley Psychology, Berkeley, CA

2001 University of California Berkeley Molecular and Cellular Neurobiology, Berkeley, CA

2000 Rockefeller University, New York, NY
Duke University Neurobiology, Durham, NC
University of Washington Otolaryngology/Head and Neck Surgery, Seattle, WA

Outreach/Popular Press

Cricket Magazine, Ben Silvers (2022) "Science@Work, Sarah Woolley Neuroscientist"
PR Newswire (2019) "Scientists Identify Brain Region That Enables Young Songbirds to Change Their Tune"
Canadian Broadcasting Corporation (2019) "How to sing like a bird"
Spectrum Magazine, Sarah Deweerdt (2019) "Songbirds speak volumes about language learning "
Earth.com NEWS (2019) "Young birds dedicate specialized brain cells to learning new songs"
Cosmos Magazine (2019) "Songbirds show remarkable flexibility in learning tunes"
Technology Networks (2019) "The amazing musical flexibility of the songbird brain"
Daily Mail, Harry Pettit (2018) "Songbirds have brains designed to find mates"
New York Times, Joanna Klein (2018) "Some songbirds have brains specially designed to find mates for life"
Psychology Today, Lydia Denworth (2018) "Wooing with Song and Mating for Life"
Zuckerman Institute (2018) "Learning the Language of Love"
Watch @ https://www.youtube.com/watch?v=4gnACxmMD2g
PNAS, Helen Shen (2017) "Vocal Learning"
PBS (2017) "Treasures of New York: Jerome L. Greene Science Center"
Bill Retherford (2016) "Your Beautiful Brain," Columbia Magazine
PBS (2014) "Treasures of New York: Columbia University"

NPR, Morning Edition, Annemarie Fertoli (2013) "Birds, Music and the Brain"
Listen @ https://www.wnyc.org/story/271399-blog-birds-music-and-brain/
Columbia News, Adam Piore (2013) "Songbirds, both Human and Avian, in Spotlight at Café Science"
NPR, Studio 360 (2012) "An Evening of Ignorance"
Weekendavisen, Charlotte Koldbye (2011) "Det forbudte eksperiment (The forbidden experiment)"
The Record, Beth Kwon (2011) "What Songbirds Can Teach Us about the Brain"
NPR, All Things Considered, Robert Siegel (2007) "Scientist Studies Brain Process of Songbirds"
Listen @ https://www.npr.org/2007/06/29/11610428/scientist-studies-brain-process-of-songbirds
Columbia Café Science (2007) "Singing in the Brain"
Picnic Café, Maria Emiliab (2006) "Songbirds" Imagen Informativa con Pedro Ferriz de Con
NPR, The Infinite Mind, Marit Haahr (2003) "Hearing"
Seattle Sunday Times, Warren King (2001) "Tiny finches may hold the key in UW research aimed at helping restore noise-damaged hearing"

Courses

Communicating Science (Instructor) graduate seminar (2006-2022)
Animal Behavior (Instructor) undergraduate lecture course (2006-2021)
Auditory Perception (Instructor) undergraduate seminar (2006-2022)
Undergraduate Honor is Psychology and Neuroscience (Instructor) undergraduate seminar (2009-2012)
Psychology Proseminar (Instructor) graduate seminar (2010-2011)
Systems Neurobiology (guest lecturer) undergraduate lecture course (2011-2015)
Survey of Neuroscience (guest lecturer) graduate course (2008, 2013, 2017, 2019)
Music and Math (guest lecturer) graduate seminar (2019)
Principles of Biology (guest lecturer) undergraduate lecture course (2019)
Behavioral Neuroscience (guest lecturer), undergraduate lecture course