# Jonathan Erik Peelle

Center for Cognitive and Brain Health E-mail: j.peelle@northeastern.edu Northeastern University **ISEC 320** Web: jonathanpeelle.net (personal) peellelab.org (lab) 360 Huntington Avenue Boston, MA 02115 github.com/jpeelle **Current Position** Associate Professor, Northeastern University 2022-Center for Cognitive and Brain Health Department of Communication Sciences and Disorders Department of Psychology Honorary Associate Professor, Macquarie University 2020-**Education** PhD (Neuroscience), Brandeis University (Advisor: Arthur Wingfield) 2005 MA (Cognitive Psychology), Brandeis University 2002 BA (Psychology), BMus (Horn performance), Houghton College 1999 **Past Academic Positions and Employment** Associate Professor, Otolaryngology, Washington University 2017-2022 Assoc. Professor, Psychological & Brain Sciences, Washington University 2017-2022 Assistant Professor, Otolaryngology, Washington University 2012-2017 Research Associate, Department of Neurology, University of Pennsylvania 2011-2012 Postdoctoral fellow, MRC Cognition & Brain Sciences Unit, Cambridge UK 2008-2010 Postdoctoral fellow, Department of Neurology, University of Pennsylvania 2006-2008 Postdoctoral fellow, Volen National Center, Brandeis University 2005-2006 **Honors and Awards** Fellow, Psychonomic Society 2016 Royal Society International Travel Award 2010 Individual NRSA F31DC004376 2003 American Psychological Association (APA) Dissertation Research Award 2003

2003

APA Division 20 Award for Proposed Doctoral Research

# Research

### **Research Interests**

My research is centered on the psychological and neural basis for human communication. I am especially interested in the interaction between sensory, cognitive, and social factors, and individual differences in how different people perceive speech. Because of the central role of spoken language in our everyday lives, understanding contributors to communication success—and how these might be modified—has implications for social, mental, and physical well-being.

## **Current Grant Support**

NIH R01 DC019507 (Role: PI)  "Individual differences in brain networks supporting speech understanding in patients with cochlear implants"	2021-2026
NIH R21 AG067295 (Role: Co-PI) "Healthy aging and the cost of cognitive effort"	2020-2022
NIH R01 DC017451 (Role: Co-investigator) "Measurement of individualized factors associated with tinnitus burden" (PI: Jay Piccirillo)	2019-2024
NIH R01 DC016594 (Role: Co-investigator) "Audio-visual integration, age, and hearing loss" (PI: Nancy Tye-Murray)	2018-2023
McDonnell Center for Systems Neuroscience (Role: Co-PI) "Effects of single-sided deafness on the brain and behavioral outcomes in listeners with and without a cochlear implant"	2022-2024

## **Completed Grant Support**

NIH R56 AG059265 (Role: PI)	2019-2022
"Age-related changes in language processing"	
NIH K01 DC017522 (Role: Co-investigator)	2020-2022
"Objective, subjective, and informant reports of hearing loss, personality,	
and cognition in adults with dementia" (PI: Kate McClannahan)	

NIH R21 DC016086 (Role: Co-PI) "High-density optical tomography in patients with cochlear implants"	2018-2021
NIH R01 DC014281 (Role: PI) "The neurocognitive basis of effortful listening"	2015-2021
NIH R21 DC015884 (Role: PI) "Neural systems supporting speech processing in listeners with cochlear implants"	2017-2020
NIH R01 DC013063 (Role: Co-Investigator) "Semantic memory and language learning in Alzheimer's Disease and Semantic Dementia" (PI: Jamie Reilly)	2014-2019
NIH R56 AG018029 (Role: Co-Investigator) "Auditory-visual integration and age" (PI: Nancy Tye-Murray)	2017-2018
NIH R01 AG038490 (Role: Co-Investigator) "Aging, hearing loss, and sentence comprehension: Neural correlates" (PI: Murray Grossman)	2012-2017

## **Preprints**

(\* indicates student/trainee author)

- Aschenbrenner AJ, Crawford JL, Peelle JE, Fagan AM, Benzinger TLS, Morris JC, Hassenstab J, Braver TS. Increased cognitive effort costs in healthy aging and preclinical Alzheimer disease. *PsyArXiv*. doi:10.31234/osf.io/pfz6e
- Bajracharya A\*, Peelle JE. A systematic review of neuroimaging approaches to mapping language in individuals. *PsyArXiv*. doi:10.31234/osf.io/jru2z
- McLaughlin DJ\*, Zink M\*, Gaunt L\*, Reilly J, Sommers MS, Van Engen KJ, Peelle JE. Give me a break! Unavoidable fatigue effects in cognitive pupillometry. *PsyArXiv*. doi:10.31234/osf.io/z4quk
- Van Engen KJ, Dey A, Sommers MS, Peelle JE. Audiovisual speech perception: Moving beyond McGurk. *PsyArXiv*. doi:10.31234/osf.io/6y8qw

## **Accepted Stage 1 Registered Reports**

(\* indicates student/trainee author)

- Crusey MR\*, Henry MJ, Peelle JE. The effect of top-down attention on rhythmic auditory entrainment. *Auditory Perception & Cognition*.
- Henry MJ, Obleser J, Crusey MR\*, Peelle JE. How strong is the rhythm of perception? A preregistered direct replication of Hickok, Farahbod, and Saberi (2015). *Royal Society Open Science*. http://peellelab.org/moo

### **Peer-Reviewed Publications**

(78 total; \* indicates student/trainee author; \* indicates registered report)

Google Scholar profile \_\_\_\_\_\_ http://jonathanpeelle.net/scholar

#### IN PRESS

- Fullerton AM\*, Vickers DA, Luke R, Billing AN, McAlpine D, Hernandez-Perez H, Peelle JE, Monaghan JJM, McMahon CM (In press) Cross-modal functional connectivity supports successful speech understanding in listeners with cochlear implants. *Cerebral Cortex*. doi:10.1093/cercor/bhac277
- McClannahan K, Mainardi E\*, Luor A\*, Chiu Y-F, Sommers MS, Peelle JE (In press) Spoken word recognition in adults with mild dementia symptoms. *Journal of Alzheimer's Disease*.

- Lee YS, Rogers CS, Grossman M, Wingfield A, Peelle JE (2022) Hemispheric dissociations in regions supporting auditory sentence comprehension in older adults. *Aging Brain* 2022:100051. doi:10.1016/j.nbas.2022.100051
- Jones MS, Zhu Z\*, Bajracharya A\*, Luor A\*, Peelle JE (2022) A multi-dataset evaluation of frame censoring for motion correction in task-based fMRI. *Aperture Neuro* 2. doi:10.52294/ApertureNeuro.2022.2.NXOR2026
- Sherafati A\*, Dwyer N, Bajracharya A\*, Hassanpour MS, Eggebrecht AT, Firszt JB, Culver JP, Peelle JE (2022) Prefrontal cortex supports speech perception in listeners with cochlear implants. *eLife* 11:e75323. doi:10.7554/eLife.75323
- Crawford JL\*, Eisenstein SA, Peelle JE, Braver TS (2022) Domain-general cognitive motivation: Evidence from economic decision-making Final registered report. *Cognitive Research: Principles and Implications* 7:23. doi:10.1186/s41235-022-00363-z ®
- McLaughlin DJ\*, Zink M\*, Gaunt L\*, Spehar B, Van Engen KJ, Sommers MS, Peelle JE (2022) Pupillometry reveals cognitive demands of lexical competition during spoken

- word recognition in young and older adults. *Psychonomic Bulletin and Review* 29:268–280. doi:10.3758/s13423-021-01991-0 Preprint: doi:10.31234/osf.io/6pa3g
- Peelle JE, Spehar B, Jones MS, McConkey S, Myerson J, Hale S, Sommers MS, Tye-Murray N (2022) Increased connectivity among sensory and motor regions during visual and audiovisual speech perception. *Journal of Neuroscience* 42:435–442. doi:10.1523/JNEUROSCI.0114-21.2021

- Peelle JE, Van Engen KJ (2021) Time stand still: Effects of temporal window selection on eye tracking analysis. *Collabra: Psychology* 7:25961. doi:10.1525/collabra.25961
- Brown VA\*, Van Engen KJ, Peelle JE (2021) Face mask type affects audiovisual speech intelligibility and subjective listening effort in young and older adults. *Cognitive Research: Principles and Implications* 6:49. doi:10.1186/s41235-021-00314-0
- Jiramongkolchai P\*, Jones MS, Lee JL, Peterson A, Schneider JS, Klatt-Cromwell C, Drescher AJ, Ogden MA, Brunworth JD, Kallogjeri D, Kukuljan S, Liebendorfer A, Peelle JE, Piccirillo JF (2021) Impact of olfactory training on neural connectivity in patients with post-viral olfactory dysfunction. *JAMA Otolaryngology–Head and Neck Surgery* 147:502–509. doi:10.1001/jamaoto.2021.0086
- McClannahan KS, Chiu Y-F, Sommers MS, Peelle JE (2021) Test-retest reliability of audiometric assessment in individuals with mild dementia. *JAMA Otolaryngology–Head and Neck Surgery* 147:442–449. doi:10.1001/jamaoto.2021.0012
- McLaughlin DJ\*, Braver TS, Peelle JE (2021) Measuring the subjective cost of listening effort using a discounting task. *Journal of Speech, Language, and Hearing Research* 64:337–347. doi:10.1044/2020\_JSLHR-20-00086

- Van Engen KJ, Dey A\*, Runge N\*, Spehar B, Sommers MS, Peelle JE (2020) Effects of age, word frequency, and noise on the time course of spoken word recognition. *Collabra: Psychology* 6:17247. doi:10.1525/collabra.17247
- Rogers CS\*, Jones M, McConkey S, Spehar B, Van Engen KJ, Sommers MS, Peelle JE (2020) Age-related differences in auditory cortex activity during spoken word recognition. *Neurobiology of Language* 1:452–473. doi:10.1162/nol\_a\_00021
- Peelle JE, Miller RL, Rogers CS, Spehar B, Sommers MS, Van Engen KJ (2020) Completion norms for 3085 English sentence contexts. *Behavior Research Methods* 52:1795–1799. doi:10.3758/s13428-020-01351-1

- Botvinik-Nezer R et al. (2020) Variability in the analysis of a single neuroimaging dataset by many teams. *Nature* 582:84–88. doi:10.1038/s41586-020-2314-9
- Reilly J, Flurie M, Peelle JE (2020) The English lexicon mirrors functional brain activation for a sensory hierarchy dominated by vision and audition: Point-counterpoint. *Journal of Neurolinguistics* 55:100895. doi:10.1016/j.jneuroling.2020.100895

- Whitson HE, Cronin-Golomb A, Cruickshanks K, Gilmore GC, Owsley C, Peelle JE, Recanzone G, Sharma A, Swenor B, Yaffe K, Lin FR (2018) American Geriatrics Society and National Institute on Aging bench-to-bedside conference: Sensory impairment and cognitive decline in older adults. *Journal of the American Geriatrics Society* 66:2052–2058. doi:10.1111/jgs.15506
- Lee YS\*, Wingfield A, Min NE, Kotloff E, Grossman M, Peelle JE (2018) Differences in hearing acuity in "normal" hearing young adults modulate the neural basis for speech comprehension. *eNeuro* 5:ENEURO.0263-17.2018. doi:10.1523/ENEURO.0263-17.2018
- Koeritzer MA\*, Rogers CS, Van Engen KJ, Peelle JE (2018) The impact of age, background noise, semantic ambiguity, and hearing loss on recognition memory for speech. *Journal of Speech, Language, and Hearing Research* 61:740–751. doi:10.1044/2017\_JSLHR-H-17-0077
- Peelle JE (2018) Listening effort: How the cognitive consequences of acoustic challenge are reflected in brain and behavior. *Ear and Hearing* 39:204–214.

doi:10.1097/AUD.0000000000000494

2017

- Scott-Wittenborn N\*, Karadaghy O, Piccirillo JF, Peelle JE (2017) A methodological assessment of studies that use voxel-based morphometry to study tinnitus. *Hearing Research* 355:23–32. doi:10.1016/j.heares.2017.09.002
- Hassanpour MS\*, Eggebrecht AT, Peelle JE, Culver JP (2017) Mapping effective connectivity within cortical networks with diffuse optical tomography. *Neurophotonics* 4:041402. doi:10.1117/1.NPh.4.4.041402
- Peelle JE (2017) Optical neuroimaging of spoken language. *Language, Cognition and Neuroscience* 32:847–854. doi:10.1080/23273798.2017.1290810

2016

Reilly J, Peelle JE, Garcia A, Crutch SJ (2016) Linking somatic and symbolic representation in semantic memory: The dynamic multilevel reactivation framework. *Psychonomic* 

- Bulletin and Review 23:1002-1014. doi:10.3758/s13423-015-0824-5
- Peelle JE, Wingfield A (2016) The neural consequences of age-related hearing loss. *Trends in Neurosciences* 39:486–497. doi:10.1016/j.tins.2016.05.001
- Roland LT\*, Peelle JE, Kallogjeri D, Nicklaus JE, Piccirillo JF (2016) The effect of rTMS to temporoparietal cortex on neural connectivity in tinnitus: A randomized trial. *Laryngoscope* 126:1201–1206. doi:10.1002/lary.25650
- Price AR\*, Peelle JE, Bonner MF, Grossman M, Hamilton RH (2016) Causal evidence for a mechanism of semantic integration in the angular gyrus as revealed by high-definition transcranial direct current stimulation. *Journal of Neuroscience* 36:3829–3838.

  doi:10.1523/JNEUROSCI.3120-15.2016
- DeCaro R, Peelle JE, Grossman M, Wingfield A (2016) The two sides of sensory-cognitive interactions: Effects of age, hearing acuity, and working memory span on sentence comprehension. *Frontiers in Psychology* 7:236. doi:10.3389/fpsyg.2016.00236
- Lee YS\*, Min NE, Wingfield A, Grossman M, Peelle JE (2016) Acoustic richness modulates the neural networks supporting intelligible speech processing. *Hearing Research* 333:108–117. doi:10.1016/j.heares.2015.12.008
- Bonner MF, Price AR\*, Peelle JE, Grossman M (2016) Semantics of the visual environment encoded in the parahippocampal cortex. *Journal of Cognitive Neuroscience* 28:361–378. doi:10.1162/jocn a 00908
- Ward CM\*, Rogers CS\*, Van Engen KJ, Peelle JE (2016) Effects of age, acoustic challenge, and verbal working memory on recall of narrative speech. *Experimental Aging Research* 42:126–144. doi:10.1080/0361073X.2016.1108785

- Lee YS\*, Peelle JE, Kraemer D, Lloyd S, Granger R (2015) Multivariate sensitivity to voice during auditory categorization. *Journal of Neurophysiology* 114:1819–1826. doi:10.1152/jn.00407.2014
- Peelle JE, Sommers MS (2015) Prediction and constraint in audiovisual speech perception. *Cortex* 68:169–181. doi:10.1016/j.cortex.2015.03.006
- Hassanpour MS\*, Eggebrecht AT, Culver JP, Peelle JE (2015) Mapping cortical responses to speech using high-density diffuse optical tomography. *NeuroImage* 117:319–326. doi:10.1016/j.neuroimage.2015.05.058
- Roland LT\*, Lenze EJ, Hardin F-M, Kallogjeri D, Nicklaus JE, Wineland A, Fendell G, Peelle JE, Piccirillo JF (2015) The effects of mindfulness based stress reduction on subjective bother and neural connectivity in chronic tinnitus. *Otolaryngology—Head and Neck Surgery* 152:919–926. doi:10.1177/0194599815571556

- Winder-Rhodes SE, Hampshire A, Rowe JB, Peelle JE, Robbins TW, Owen AM, Barker RA (2015) *MAPT* haplotype influences memory function in Parkinson's disease and healthy aging. *Neurobiology of Aging* 36:1519–1528. doi:10.1016/j.neurobiologing.2014.12.006
- Price AR\*, Bonner MF, Peelle JE, Grossman M (2015) Converging evidence for the neuroanatomic basis of combinatorial semantics in the angular gyrus. *Journal of Neuroscience* 35:3276–3284. doi:10.1523/JNEUROSCI.3446-14.2015
- Cusack R, Vicente-Grabovetsky A, Mitchell DJ, Wild CJ, Auer T, Linke AC, Peelle JE (2015) Automatic analysis (aa): Efficient neuroimaging workflows and parallel processing using Matlab and XML. *Frontiers in Neuroinformatics* 8:90. doi:10.3389/fninf.2014.00090

- Peelle JE (2014) Methodological challenges and solutions in auditory functional magnetic resonance imaging. *Frontiers in Neuroscience* 8:253. doi:10.3389/fnins.2014.00253
- Cook PA, McMillan CT, Avants BB, Peelle JE, Gee JC, Grossman M (2014) Relating brain anatomy and cognitive ability using a multivariate multimodal framework. *NeuroImage* 99:477–486. doi:10.1016/j.neuroimage.2014.05.008
- Van Engen KJ, Peelle JE (2014) Listening effort and accented speech. *Frontiers in Human Neuroscience* 8:577. doi:10.3389/fnhum.2014.00577
- Peelle JE, Powers J, Cook PA, Smith EE, Grossman M (2014) Frontotemporal neural systems supporting semantic processing in Alzheimer's disease. *Cognitive, Affective, and Behavioral Neuroscience* 14:37–48. doi:10.3758/s13415-013-0239-6
- Sohoglu E\*, Peelle JE, Carlyon RP, Davis MH (2014) Top-down influences of written text on perceived clarity of degraded speech. *Journal of Experimental Psychology: Human Perception and Performance* 40:186–199. doi:10.1037/a0033206

- Peelle JE, Chandrasekaran K, Powers J, Smith EE, Grossman M (2013) Age-related vulner-ability in the neural systems supporting semantic processing. *Frontiers in Aging Neuroscience* 5:46. doi:10.3389/fnagi.2013.00046
- Peelle JE, Gross J, Davis MH (2013) Phase-locked responses to speech in human auditory cortex are enhanced during comprehension. *Cerebral Cortex* 23:1378–1387. doi:10.1093/cercor/bhs118
- Bonner MF\*, Peelle JE, Cook PA, Grossman M (2013) Heteromodal conceptual processing in the angular gyrus. *NeuroImage* 71:175–186. doi:10.1016/j.neuroimage.2013.01.006

Grossman M, Peelle JE, Smith EE, McMillan CT, Cook P, Powers J, Dreyfuss M, Bonner MF, Richmond L, Boller A, Camp E, Burkholder L (2013) Category specific semantic memory: Converging evidence from BOLD fMRI and Alzheimer's disease. *NeuroImage* 68:263–274. doi:10.1016/j.neuroimage.2012.11.057

2012

- Peelle JE (2012) The hemispheric lateralization of speech processing depends on what "speech" is: A hierarchical perspective. *Frontiers in Human Neuroscience* 6:309. doi:10.3389/fnhum.2012.00309
- Wild CJ, Yusuf A, Wilson D, Peelle JE, Davis MH, Johnsrude IS (2012) Effortful listening: The processing of degraded speech depends critically on attention. *Journal of Neuroscience* 32:14010–14021. doi:10.1523/jneurosci.1528-12.2012
- Peelle JE, Davis MH (2012) Neural oscillations carry speech rhythm through to comprehension. *Frontiers in Psychology* 3:320. doi:10.3389/fpsyg.2012.00320
- Reilly J, Westbury C, Kean J, Peelle JE (2012) Arbitrary symbolism in natural language revisited: When word forms carry meaning. *PLOS ONE* 7:e42286. doi:10.1371/journal.pone.0042286
- Sohoglu E\*, Peelle JE, Carlyon RP, Davis MH (2012) Predictive top-down integration of prior knowledge during speech perception. *Journal of Neuroscience* 32:8443–8453. doi:10.1523/jneurosci.5069-11.2012
- Szenkovits G, Peelle JE, Norris D, Davis MH (2012) Individual differences in premotor and motor recruitment during speech perception. *Neuropsychologia* 50:1380–1392. doi:10.1016/j.neuropsychologia.2012.02.023
- Peelle JE, Cusack R, Henson RNA (2012) Adjusting for global effects in voxel-based morphometry: Gray matter decline in normal aging. *NeuroImage* 60:1503–1516. doi:10.1016/j.neuroimage.2011.12.086

- Peelle JE, Troiani V, Grossman M, Wingfield A (2011) Hearing loss in older adults affects neural systems supporting speech comprehension. *Journal of Neuroscience* 31:12638–12643. doi:10.1523/jneurosci.2559-11.2011
- Rogalski Y, Peelle JE, Reilly J (2011) Effects of perceptual and contextual enrichment on visual confrontation naming in adult aging. *Journal of Speech, Language, and Hearing Research* 54:1349–1360. doi:10.1044/1092-4388(2011/10-0178)
- Reilly J, Peelle JE, Antonucci SM, Grossman M (2011) Anomia as a marker of distinctive semantic memory impairments in Alzheimer's Disease and Semantic Dementia. *Neuropsychology* 25:413–426. doi:10.1037/a0022738

Reilly J, Rodriguez AD, Peelle JE, Grossman M (2011) Frontal lobe damage impairs process and content in semantic memory: Evidence from category-specific effects in progressive non-fluent aphasia. *Cortex* 47:645–658. doi:10.1016/j.cortex.2010.05.005

2010

- Peelle JE, Eason RJ\*, Schmitter S, Schwarzbauer C, Davis MH (2010) Evaluating an acoustically quiet EPI sequence for use in fMRI studies of speech and auditory processing. *NeuroImage* 52:1410–1419. doi:10.1016/j.neuroimage.2010.05.015
- Peelle JE, Johnsrude IS, Davis MH (2010) Hierarchical processing for speech in human auditory cortex and beyond. *Frontiers in Human Neuroscience* **4:51.** doi:10.3389/fnhum.2010.00051
- Peelle JE, Troiani V, Wingfield A, Grossman M (2010) Neural processing during older adults' comprehension of spoken sentences: Age differences in resource allocation and connectivity. *Cerebral Cortex* 20:773–782. doi:10.1093/cercor/bhp142

2005 - 2009

- Troiani V, Peelle JE, McMillan C, Clark R, Grossman M (2009) Magnitude and parity as complementary attributes of quantifier statements. *Neuropsychologia* 47:2684–2685. doi:10.1016/j.neuropsychologia.2009.04.025
- Peelle JE, Troiani V, Grossman M (2009) Interaction between process and content in semantic memory: An fMRI study of noun feature knowledge. *Neuropsychologia* 47:995–1003. doi:10.1016/j.neuropsychologia.2008.10.027
- Troiani V, Peelle JE, Clark R, Grossman M (2009) Is it logical to count on quantifiers? Dissociable neural networks underlying quantity-based and logical quantifiers. *Neuropsychologia* 47:104–111. doi:10.1016/j.neuropsychologia.2008.08.015
- Peelle JE, Troiani V, Gee J, Moore P, McMillan C, Vesely L, Grossman M (2008) Sentence comprehension and voxel-based morphometry in progressive nonfluent aphasia, semantic dementia, and nonaphasic frontotemporal dementia. *Journal of Neurolinguistics* 21:418–432. doi:10.1016/j.jneuroling.2008.01.004
- Golomb JD\*, Peelle JE, Addis KM, Kahana MJ, Wingfield A (2008) Effects of adult aging on utilization of temporal and semantic associations during free and serial recall. *Memory and Cognition* 36:947–956. doi:10.3758/MC.36.5.947
- Reilly J, Peelle JE (2008) Effects of semantic impairment on language processing in semantic dementia. *Seminars in Speech and Language* 29:32–43.
- Peelle JE, Grossman M (2008) Language processing in frontotemporal dementia: A brief review. *Language and Linguistics Compass* 2:18–35. doi:10.1111/j.1749-818X.2007.00047.x

- Peelle JE, Cooke A, Moore P, Vesely L, Grossman M (2007) Syntactic and thematic components of sentence processing in progressive nonfluent aphasia and nonaphasic frontotemporal dementia. *Journal of Neurolinguistics* 20:482–494.
  - doi:10.1016/j.jneuroling.2007.04.002
- Golomb JD\*, Peelle JE, Wingfield A (2007) Effects of stimulus variability and adult aging on adaptation to time-compressed speech. *Journal of the Acoustical Society of America* 121:1701–1708. doi:10.1121/1.2436635
- Fallon M, Peelle JE, Wingfield A (2006) Spoken sentence processing in young and older adults modulated by task demands: Evidence from self-paced listening. *Journal of Gerontology: Psychological Sciences* 61:P10–P17.
- Wingfield A, McCoy SL, Peelle JE, Tun PA, Cox C (2006) Effects of adult aging and hearing loss on comprehension of rapid speech varying in syntactic complexity. *Journal of the American Academy of Audiology* 17:487–497. doi:10.3766/jaaa.17.7.4
- Peelle JE, Wingfield A (2005) Dissociations in perceptual learning revealed by adult age differences in adaptation to time-compressed speech. *Journal of Experimental Psychology: Human Perception and Performance* 31:1315–1330. doi:10.1037/0096-1523.31.6.1315
- Wingfield A, Tun PA, O'Kane G, Peelle JE (2004) Language comprehension in complex environments: Distraction by competing speech in young and older adult listeners. In *Advances in Psychology Research* 33. Nova Publishers: Hauppage, NY.
- Peelle JE, McMillan C, Moore P, Grossman M, Wingfield A (2004) Dissociable patterns of brain activity during comprehension of rapid and syntactically complex speech: Evidence from fMRI. *Brain and Language* 91:315–325. doi:10.1037/0096-1523.31.6.1315
- Wingfield A, Peelle JE, Grossman M (2003) Speech rate and syntactic complexity as multiplicative factors in speech comprehension by young and older adults. *Aging, Neuropsychology, and Cognition* 10:310–322. doi:10.1076/anec.10.4.310.28974

### Other Publications

- Peelle JE (2016) A manuscript checklist for improving science. *The Winnower* 3:e145877.77781. doi:10.15200/winn.145877.77781
- Peelle JE (2016) Reviewing for open science. *The Winnower* 3:e145877.76807. doi:10.15200/winn.145877.76807
- Peelle JE (2016) Speaker gender balance at Society for the Neurobiology of Language conferences 2009–2015. *The Winnower* 3:e145573.38893. doi:10.15200/winn.145573.38893

## Editorials, Introductions, Lightly-Reviewed Opinion Pieces, etc.

- Peelle JE, Wingfield A (2022) How the brain makes sense of noisy speech. *Acoustics Today* 18:40–48. doi:10.1121/AT.2022.18.3.40
- Peelle JE (2018) Speech comprehension: Stimulating discussions at a cocktail party. *Current Biology* 28:R68–R70. doi:10.1016/j.cub.2017.12.005
- Peelle JE, Wingfield A (2016) Listening effort in age-related hearing loss. *The Hearing Journal* **69:10**, **12**. doi:10.1097/01.HJ.0000508368.12042.08
- Peelle JE (2016) Introduction to special issue on age, hearing, and speech comprehension. *Experimental Aging Research* **42:1–3.** doi:10.1080/0361073X.2016.1108714
- Wingfield A, Peelle JE (2015) The effects of hearing loss on neural processing and plasticity. *Frontiers in Systems Neuroscience* 9:35. doi:10.3389/fnsys.2015.00035
- Wingfield A, Peelle JE (2012) How does hearing loss affect the brain? *Aging Health* 8:107–109. doi:10.2217/AHE.12.5

# Books (as editor)

Speech Perception (Springer Handbook of Auditory Research, vol. 74) (2022) (Holt, Peelle, Coffin, Popper, Fay, eds). Springer. https://link.springer.com/book/10.1007/978-3-030-81542-4

## **Book Chapters and Sections**

- Holt LL, Peelle JE (2022) The auditory cognitive neuroscience of speech perception in context. In: *Speech Perception* (Springer Handbook of Auditory Research, vol. 74) (Holt, Peelle, Coffin, Popper, Fay, eds), pp. 1–12. Springer. doi:10.1007/978-3-030-81542-4\_1
- Rogers CS, Peelle JE (2022) Interactions between audition and cognition in hearing loss and aging. In: *Speech Perception* (Springer Handbook of Auditory Research, vol. 74) (Holt and Peelle, eds; Popper, Fay, Coffin, series eds), pp. 227–252. Springer. doi:10.1007/978-3-030-81542-4 9 Preprint: https://psyarxiv.com/d2bxw
- Peelle JE (2020) Age-related sensory deficits and their consequences. In: *The Handbook of Cognitive Aging: A Life Course Perspective* (Thomas and Gutchess, eds), pp. 179–199. Cambridge University Press. Preprint: https://psyarxiv.com/3cptq
- Peelle JE (2019) The neural basis for auditory and audiovisual speech perception. In: *The Routledge Handbook of Phonetics* (Katz and Assmann, eds), pp. 193–216. New York: Routledge. Preprint: https://psyarxiv.com/39ej7
- Peelle JE (2018) Language and aging. In: *The Oxford Handbook of Neurolinguistics* (de Zubicaray and Schiller, eds), pp. 295–316. Oxford: Oxford University Press.

Preprint: https://psyarxiv.com/xp29u

# **Invited Non-conference Talks**

## INTERNATIONAL

University of British Columbia Language Sciences	2021
School of Psychology, University of Birmingham	2021
MRC Cognition and Brain Sciences Unit, Cambridge, UK	2019
New Zealand Institute of Language, Brain & Behaviour	2017
Department of Experimental Psychology, Oxford University	2017
Brain & Mind Doctoral Program, University of Helsinki/Aalto University	2015
Australian Hearing Hub, Macquarie University, Sydney, Australia	2015
Division of Psychology and Language Sciences, University College London	2015
Centre for Neural Circuits and Behaviour, Oxford University, Oxford, UK	2015
MRC Institute for Hearing Research, Nottingham, UK	2013
Max Planck Institute for Human Cognitive and Brain Sciences	2012
Brain and Mind Institute, University of Western Ontario, London, Canada	2011
NATIONAL	
Hearing Sciences Interest Group, Medical University of South Carolina	2022
Communication Sciences & Disorders Research Roundtable,	2021
University of Pittsburgh	
Science of Learning and the Art of Communication Series,	2021
University of Connecticut	
Core for Advanced MRI, Baylor College of Medicine	2019
Cochlear Center for Hearing and Public Health, Johns Hopkins University	2019
Department of Psychology, Brandeis University	2019
Department of Neurosurgery, University of Iowa	2018
Department of Pharmacology, Southern Illinois University	2017
Department of Communication Sciences & Disorders,	2017
Northeastern University	
Department of Psychological Sciences, University of Missouri	2016
Neuroscience and Cognitive Science Colloquium, University of Maryland	2016
Department of Speech, Language, and Hearing Sciences, Purdue University	2014
Beckman Institute, University of Illinois, Urbana Champaign	2013
Department of Psychology, Washington University in Saint Louis	2012
Department of Communicative Sciences & Disorders,	2012
Michigan State University	
Department of Otolaryngology, Washington University in Saint Louis	2012
Department of Communication Sciences & Disorders, University of South	2012
Carolina	

Department of Psychology and CNBC, Carnegie Mellon University	2012
Department of Psychology, University of Missouri-Saint Louis	2011
Department of Communicative Sciences & Disorders, NYU	2011

#### LOCAL

Knight Alzheimer's Disease Research Center, Washington University	2020
Department of Otolaryngology, Washington University	2019
Children's Hospital/Washington University Audiology Grand Rounds	2019
Cognitive, Computational & Systems Neuroscience Retreat	2017
Department of Psychological and Brain Sciences, Washington University	2016
Department of Otolaryngology, Washington University	2015
Department of Psychology, Washington University	2013
Saint Louis Children's Hospital/Wash U Audiology Grand Rounds	2013
University of Pennsylvania Center for Cognitive Neuroscience Talk Series	2011
Translational Research Center, University of Pennsylvania	2011
Department of Audiology, University of Pennsylvania	2011
MRC Cognition and Brain Sciences Unit, Cambridge, UK	2010
MRC Cognition and Brain Sciences Unit, Cambridge, UK	2009
University of Pennsylvania Brain and Language Series	2008
International Research Training Group Winterschool	2007
University of Pennsylvania Brain and Language Series	2006

## **Conference and Workshop Talks**

### INVITED

Cognitive contributions to understanding acoustically challenging speech. *Gordon Research Conference on the Auditory System,* Smithfield, RI, July 2022.

Hearing and cognition. *Hearing Aid Research – Ecological Conditions and Outcome Measures* (HEAR-ECO) Workshop, April 2022.

Four ways of measuring cognitive effort during listening. *Symposium for Cognitive Auditory Neuroscience*, April 2021.

Using optical neuroimaging to understand cognitive effort in listeners with cochlear implants. *Midwinter Meeting of the Association for Research in Otolaryngology*, San Jose, CA, January 2020.

Cognitive contributions to understanding acoustically challenging speech. *Aging and Speech Communication Conference*, Tampa, FL, November 2019.

- Measuring and overcoming cognitive challenge during speech comprehension. *Conference on Hearing and Cognition,* Knowles Hearing Center at Northwestern University, Evanston, IL, October 2019.
- Neural systems supporting speech perception in listeners with cochlear implants. *Conference on Implantable Auditory Prostheses*, Lake Tahoe, CA, July 2019.
- Cognitive contributions to understanding acoustically challenging speech. *IMPRS Neuro-Com Summer School in Cognitive Neuroscience*, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany, June 2019.
- Cognitive contributions to understanding acoustically challenging speech. *Cognitive Hearing Science for Communication*, Linköping, Sweden, June 2019.
- How entrained cortical oscillations affect spoken language processing. *CSHL Banbury Course "Genetics and the neurobiology of language"*, Cold Spring Harbor Laboratory, New York, July-August 2018.
- The role of entrained cortical oscillations in understanding audiovisual speech. *ARC Centre of Excellence in Cognition and its Disorders–Kanazawa Institute of Technology MEG Workshop*, Macquarie University, Sydney, Australia, December 2017.
- Interaction between cognitive and acoustic processing during speech comprehension. *Eleanor M. Saffran Conference on Cognitive Neuroscience and Rehabilitation of Language Disorders*, Philadelphia, PA, September 2017.
- Individual differences in neural systems supporting speech comprehension. *World Congress of Audiology*, Vancouver, Canada, September 2016. \* session organizer/chair
- Echoes of the acoustic speech signal in spoken language comprehension. *Center for Hearing Research Annual Symposium*, UC Irvine, May 2016.
- Aging, hearing acuity, and cascading effects of perceptual effort. *Annual Meeting of the American Auditory Society*, Scottsdale, AZ, March 2016.
- Individual differences in auditory and cognitive factors during spoken language comprehension. *Annual Meeting of the Society for the Neurobiology of Language*, Chicago, IL, October 2015.
- Hearing loss and the brain: Insights from neuroimaging. *Annual Meeting of the Gerontological Society of America*, Washington, DC, November 2014.
- Individual differences in neural responses to diverse speech signals. *Language in Interaction Workshop on Language Evolution and Diversity*, Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands, October 2014.
- Cognitive consequences of acoustic challenge. *Midwest Auditory Research Conference-Midwest Auditory Neuroscience Symposium*, Saint Louis, MO, July 2014.

- Auditory and cognitive effects of reduced speech intelligibility. *Signal and Noise along the Auditory Pathway (SNAP)*, Leipzig, Germany, December 2013.
- Age, hearing loss, and the neural systems that support sentence comprehension. *Aging and Speech Communication Conference*, Indiana University, Bloomington, Indiana, October 2013.
- What age and hearing loss tell us about acoustic and cognitive factors in speech comprehension. *Central Midwest Tinnitus Symposium*, University of Illinois Urbana Champaign, October 2013.
- Neural signatures of effort and intelligibility during speech comprehension. *International Conference on Cognitive Hearing Science for Communication*, Linköping, Sweden, June 2013.
- Cortical responses to degraded speech are modulated by linguistic predictions. *International Congress on Acoustics (Joint with Acoustical Society of America and Canadian Acoustical Association)*, Montreal, Canada, June 2013.

#### CONTRIBUTED

- Peelle JE. Dorsolateral prefrontal cortex supports spoken word recognition in listeners with cochlear implants: Evidence from high-density diffuse optical tomography. *Annual Meeting of the International Society for Behavioural Neuroscience*, June 2021.
- Peelle JE. Cognitive consequences of acoustic challenge during spoken communication. *Society of Biological Psychiatry*, April 2021.
- Rogers CS, Jones M, McConkey S, Spehar B, Van Engen KJ, Sommers MS, Peelle JE. Agerelated differences in auditory cortex activity during spoken word recognition. *OHBMx*, March 2020. https://twitter.com/OHBMequinoX/status/1241103520880824323
- Peelle JE, Jones M, Luor A, Zhu Z, Bajracharya A.Comparing approaches for motion mitigation in task-based fMRI. *OHBMx*, March 2020.
  - https://twitter.com/OHBMequinoX/status/1241160118223470597
- Peelle JE. Age-related changes in speech perception and/or movement. *Annual Meeting of the International Society for Behavioural Neuroscience*, Anchorage, AL, June 2018.
- Peelle JE. Effects of age and hearing loss on neural processing of speech. *Annual Meeting of the International Society for Behavioural Neuroscience*, Kohala Coast, HI, June 2015.
- Peelle JE. Cognitive consequences of hearing loss (Symposium: The effects of hearing loss on neural processing, plasticity, and aging). *Annual Meeting of the Society for Neuroscience*, Washington, DC, November 2014. \* symposium organizer/co-chair
- Peelle JE. The effect of age and acoustic challenge on memory for narrative speech. *Age, Hearing, and Speech Comprehension: A Symposium in Honor of Art Wingfield,* Waltham, MA, July 2014.

- Peelle JE. Does acoustic challenge affect memory for narrative speech? *Annual Meeting of the International Society for Behavioural Neuroscience*, Amsterdam, The Netherlands, June 2014.
- Peelle JE. Neural signatures of listening effort during speech comprehension. *Annual Meeting of the International Society for Behavioural Neuroscience*, Montreal, Canada, June 2013.
- Peelle JE, Olafsen T, Davis MH, Wingfield A. Perceptual learning in speech comprehension governed by power law dynamics. *Annual Meeting of the Society for Neuroscience*, San Diego, CA, November 2010. \* nanosymposium organizer/chair
- Peelle JE, Troiani V, Wingfield A, Grossman M. Making up for lost sound: Hearing acuity modulates neural recruitment for speech comprehension in older adults. *Annual Meeting of the Society for Neuroscience*, Washington, DC, November 2008.
- Peelle JE, Reilly J, Anderson C, Moore P, Cross K, Kwok S, Vesely L, Grossman M. Naming in PNFA and SD: Knowledge and processing impairments lead to distinct naming errors. *Annual Meeting of the American Academy of Neurology*, Boston, MA, April 2007.
- Peelle JE. Age-related changes in speech comprehension: Effects of rate and syntax. *IGERT Student Research Symposium*, Pittsburgh, PA, June 2003.

## Poster Presentations (last ~2 years)

(\* indicates student/trainee author)

- Bajracharya A\*, Sherafati A, Culver JP, Peelle JE. Mapping naturalistic listening using high-density diffuse optical tomography. *Annual Meeting of the Society for Near-Infrared Spectroscopy*, Boston, October 2022.
- Auer T, Jones M, Knights E, Peelle JE. Automatic analysis 5.8: A powerful and flexible neuroimaging pipeline in MATLAB. *Annual Meeting of the Organization for Human Brain Mapping*, Glasgow, June 2022.
- Carraturo S\*, McLaughlin DJ\*, Van Engen KJ, Peelle JE. Face masks, speech intelligibility, and listening effort. *Annual Meeting of the Acoustical Society of America*, Seattle WA, November 2021.
- Bajracharya A\*, Sherafati A, Culver JP, Peelle JE. Measuring hierarchical cortical responses to narrative speech using high-density diffuse optical tomography. *Society for Near-Infrared Spectroscopy*, October 2021.
- Fullerton AM, Vickers DA, Luke R, Billing AN, McAlpine D, Hernandez-Perez H, Peelle JE, Monaghan JJM, McMahon CM. Stimulus-specific differences in cross-modal activity and functional connectivity in post-lingually deaf CI users using functional near infrared spectroscopy (fNIRS). *CIAP*, July 2021.

- Sherafati A\*, Dwyer N, Eggebrecht AT, Culver JP, Firszt JB, Peelle JE. Dorsolateral prefrontal cortex supports spoken word recognition in listeners with cochlear implants: Evidence from high-density diffuse optical tomography. *CIAP*, July 2021.
- Peelle JE, Murray O\*, Graegin A\*. Long-term adaptation to noise-vocoded speech. *Annual Meeting of the Psychonomic Society*, November 2020.
- McLaughlin DJ\*, Zink M\*, Gaunt L\*, Spehar B, Van Engen KJ, Sommers MS, Peelle JE. Cognitive demands of lexical competition during spoken word recognition in young and older adults. *Annual Meeting of the Psychonomic Society*, November 2020.
- Sherafati A\*, Hassanpour MS, Dwyer N, Eggebrecht AT, Culver JP, Firszt JB, Peelle JE. Neural mechanisms underlying speech perception in listeners with cochlear implants mapped using high-density diffuse optical tomography. *Midwinter Meeting of the Association for Research in Otolaryngology*, San Jose, CA, January 2020., San Jose CA, January 2020.

# **Teaching**

Mentoring and Supervising	
POSTDOCTORAL FELLOWS	
Chad Rogers Yune Sang Lee (with Murray Grossman)	2014-2016 2013-2016
PHD STUDENTS	
Aahana Bajracharya	2018-
OTOLARYNGOLOGY RESIDENTS	
Pawina Jiramongkolchai (with Jay Piccirillo) Lauren Tashima Roland (with Jay Piccirillo)	2017-2019 2013-2015
AUD STUDENTS (CAPSTONE RESEARCH PROJECT)	
Lauren Jacobs	2021
Helen Newport	2020

Amelia Mainardi Brianne Noud Jennifer Whittaker Margaret Koeritzer Laura Horowitz	2020 2018 2017 2015 2014
UNDERGRADUATE HONORS STUDENTS	
Maria Crusey (Cognitive Neuroscience) Abby Graegin (Cognitive Neuroscience) Cameron Perrin (Cognitive Neuroscience) Olivia Murray (Biology) Ari Zimmer (Cognitive Neuroscience) Tim Goblirsch (Psychology) Hayley Clocksin (Psychology) Rebecca Yang (Biology) Hunter Patterson (Biology) Celia Kaufer (Philosophy-Neuroscience-Psychology) Anna Mai (Linguistics) Kathleen Vogel (Philosophy-Neuroscience-Psychology) Caitlin Ward (Philosophy-Neuroscience-Psychology)	2022 2021 2021 2020 2020 2019 2018 2017 2016 2015 2015 2015
T35 AUDIOLOGY SUMMER TRAINEES	
Jasmin Martinez Jonathan Hirst Brianne Noud	2018 2017 2016
WASHINGTON UNIVERSITY PACS AUDIOLOGY SUMMER TRAINEES Helen Newport	2019
T32 PREDOCTORAL RESEARCH TRAINEES (1 YEAR PLACEMENT)	
Emily Miller Latoya Jeanpierre	2020 2019

# ENDURE NEUROSCIENCE PIPELINE SUMMER STUDENTS

Taylor Reid	2018
DOCTORAL DISSERTATION COMMITTEE MEMBER	
Drew McLaughlin (Psychological and Brain Sciences)	2022
Jessica Nicosia (Psychological and Brain Sciences)	2021
Eric Failes (Psychological and Brain Sciences)	2020
Arefeh Sherafati (Physics)	2020
Adam Horin (Physical Therapy)	2020
Katherine Heisey (Biomedical Engineering)	2020
Lindsay Michalski (Psychological and Brain Sciences)	2019
Cynthia Flores (Psychological and Brain Sciences)	2019
Jihyun Cha (Psychological and Brain Sciences)	2019
Andrew Fishell (Neuroscience)	2019
Ashley Nielsen (Neuroscience)	2019
Elinor Harrison (Physical Therapy)	2018
John Morton (Psychological and Brain Sciences)	2016
Avanti Dey (Psychological and Brain Sciences)	2016
Nicholas Szrama (Biomedical Engineering)	2016
Mahlega (Samira) Hassanpour (Physics)	2015
OUTSIDE DOCTORAL DISSERTATION EXAMINER	
Sonya Karisma (Western Sydney University)	2020
MASTERS THESIS COMMITTEE	
Varia Via (Computor Science)	2020
Kevin Xie (Computer Science) Lauren Gaunt (Psychological and Brain Sciences)	2020 2019
Drew McLaughlin (Psychological and Brain Sciences)	2019
Tommy Peng (Biomedical Engineering)	2019
rommy reng (bioinculcal Engineering)	2017
OUTSIDE MASTERS THESIS EXAMINER	
Amanda Fullerton (Macquarie University)	2016

## NEUROSCIENCE PHD QUALIFYING EXAM COMMITTEE MEMBER

Dillan Newbold	2017
Ryan Raut	2017
Stephanie Schultz	2017
Olga Neyman	2016
Rachel Rahn	2016
Ben Seitzman	2015
Ashley Nielsen	2014
Josh Siegel	2014

## UNDERGRADUATE STUDENTS

I generally have 6-10 undergraduate students in the lab: http://peellelab.org/people

# Lecturing

UNDERGRADUATE

Psych 3604: Cognitive Neuroscience (Washington University)	2015-2022
Psych 4450: Functional Neuroimaging Methods (Washington University)	2017-2021

# **Guest Lecturing**

GRADUATE

Biol 5651: Neural Systems ("Language & Speech") 2014–2021

# Other Lecturing and Teaching

NURS 900: MRI methods for cognitive neuroscience	2011
University of Pennsylvania	
Functional and effective connectivity in fMRI (workshop)	2010, 2011
Advanced SPM Course, Edinburgh, UK	

# Service

University Committees	
Communication Sciences and Disorders Curriculum Committee Communication Sciences and Disorders Merit Committee Communication Sciences and Disorders Tenure and Promotion Committee School of Clinical and Rehabilitation Sciences Research Committee Center for Cognitive and Brain Health Search Committee Washington University Speech and Hearing PhD Program Committee	2022- 2022- 2022- 2022- 2022-2023 2021-2022
Other Leadership and Committee Positions	
Accessibility/Diversity Comm., Society for the Neurobiology of Language Scientific Committee, Fondation pour l'Audition  https://www.fondationpourlaudition.org	2020- 2017-
Meeting liaison, Society for the Neurobiology of Language	2015-2017
Conference and Workshop Organizing	
Organizer, Advancing Methods in Pupillometry Workshop  http://amp2020.live	2020
Program committee member, Sensory impairment and cognitive decline (NIH U13-funded; PI: Whitson)	2017
Program committee chair, Society for the Neurobiology of Language	2016
Age, hearing, and speech comprehension (in honor of Art Wingfield)  http://www.artwingfieldfest.com	2014
Invited Committees and Advisory Panels	
Cochlear Auditory Brainstem Implant think tank NSF workshop: The role of speech science in developing robust processing applications	2016 2015

### **Institutional Service**

Department liaison to the Institute of Clinical and Translational Sciences	2017-2020
Wash U Imaging Interest Group organizer http://peellelab.org/iig/	2013-2019
MRC CBU Scientific Computing Management committee	2009-2010
MRC CBU departmental colloquia (Chaucer club) organizing committee	2009-2010

### **Editorial Service**

ACTION EDITOR (OR EQUIVALENT)

eLife	2019-
Neurobiology of Language	2019-
Language, Cognition and Neuroscience	2016-2020
NeuroImage	2016-2019

### EDITORIAL BOARDS

Frontiers in Brain Imaging Methods 2012-2016

### GUEST EDITING

Experimental Aging Research, "Age, hearing, and speech comprehension" 2015 Frontiers in Systems Neuroscience, "The effect of hearing loss on neural pro-2013 cessing" https://www.frontiersin.org/research-topics/1219

## Occasional Reviewing: Journals

Aging, Neuropsychology and Cognition Cognition

American Journal of Audiology Cognitive and Behavioral Neurology

American Journal of Neuroradiology Cortex

Current Biology *Aphasiology* Attention, Perception, & Psychophysics Ear and Hearing

Behavior Research Methods eLife

**Brain** and Cognition Frontiers in Aging Neuroscience Brain and Language Frontiers in Human Neuroscience

Brain Research Frontiers in Neurology Frontiers in Psychology Canadian Journal of Experimental Psychology Cerebral Cortex Hearing Research

Human Brain Mapping Neurophotonics

JAMA Neurology Neuropsychiatric Disease and Treatment

JAMA Otolaryngology Neuropsychologia Journal of the Acoustical Society of America Neuropsychology IARO Neuroscience

Journal of Clinical and Exp. Neuropsychology PeerJ

Journal of Cognitive Neuroscience Perception

Journal of Memory and Language PLOS Biology

Journal of Neurolinguistics PLOS ONE

Journal of Neurophysiology PNAS

Journal of Neuroscience Psychological Review Language, Cognition and Neuroscience Psychological Science

Language and Cognition Psychonomic Bulletin and Review

Nature Psychology and Aging

Nature Communications Quarterly Journal of Experimental Psychology

Neurobiology of Aging Science

Neurobiology of Language Trends in Cognitive Sciences

NeuroImage Trends in Hearing

# Occasional Reviewing: Research Grants

Action on Hearing Loss

Fondation pour l'Audition

French National Research Agency (Agence Nationale de la Recherche)

India Alliance (Wellcome Trust partnership)

Israel Science Foundation

Leverhulme Trust

NIH (frequent ad hoc study section member)

National Science Foundation

Netherlands Organisation for Scientific Research

Swiss National Science Foundation

US-Israel Binational Science Foundation

Wellcome Trust

### **Professional Memberships**

Cognitive Neuroscience Society International Society for Behavioural Neuroscience Psychonomic Society Society for Functional Near Infrared Spectroscopy Society for the Neurobiology of Language Society for Neuroscience

# Other Professional Activities

Contributor to aa neuroimaging package http://www.automaticanalysis.org	2009-
Conference abstract reviewing: Society for the Neurobiology of Language	2009-2021
Conference paper reviewing: Cognitive Science Society	2017
Conference abstract reviewing: Organization for Human Brain Mapping	2009-2012

# **Public Engagement**

University of Pennsylvania Neuroscience Boot Camp discussion leader	2011, 2012
MRC CBU hands-on exhibit at Royal Society summer science festival	2010
Brandeis Adult Learning Institute lecture	2003
Brandeis University Memory and Cognition Lab annual open house	2001-2005

# **Podcasts**

The Juice and the Squeeze http://juiceandsqueeze.net	2019-
The Brain Made Plain http://thebrainmadeplain.net	2021-