



# EVELINA (EV) FEDORENKO

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## Brief bio:

Dr. Fedorenko is a cognitive neuroscientist who studies the human language system. She received her bachelor's degree from Harvard in 2002, and her Ph.D. from MIT in 2007. She was then awarded a K99R00 career development award from NIH. In 2014, she joined the faculty at MGH/HMS, and in 2019 she returned to MIT where she is currently the Frederick A. (1971) and Carole J. Middleton Career Development Associate Professor of Neuroscience in the BCS Department and the McGovern Institute for Brain Research. Dr. Fedorenko uses fMRI, intracranial recordings and stimulation, EEG, MEG, and computational modeling, to study adults and children, including those with developmental and acquired brain disorders, and otherwise atypical brains.

## POSITIONS:

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| <b><u>CURRENT:</u></b>   |   |
| <b>Department of Brain and Cognitive Sciences, MIT (Cambridge, MA)</b> |   |
| <b>07/20 – present</b>   | <i>Frederick A. (1971) and Carole J. Middleton Career Development Associate Professor of Neuroscience</i> |
| 01/20 – 06/20  | <i>Associate Professor</i>  |
| 07/19 – 12/19  | <i>Assistant Professor</i>  |
| <b>McGovern Institute for Brain Research, MIT (Cambridge, MA)</b>      |   |
| <b>07/20 – present</b>   | <i>Member</i>   |
| 07/19 – 06/20  | <i>Associate Member</i>   |

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|---|---------------------------------|
| <b><u>PAST:</u></b>   |                                 |
| MGH / HMS / Athinoula A. Martinos Center for Biomedical Imaging (Charlestown, MA)                       |                                 |
| 01/14 – 01/21   | <i>Research Affiliate, MGH</i>  |
| 01/14 – 06/19   | <i>Assistant Professor, HMS</i> |
| Department of Brain and Cognitive Sciences / McGovern Institute for Brain Research, MIT (Cambridge, MA) |                                 |
| 07/11 – 12/13   | <i>Research Scientist</i>       |

## EDUCATION AND TRAINING:

- 09/07 – 06/11: Postdoctoral Researcher // **MIT** (Cambridge, MA)
- 09/02 – 08/07: Ph.D. Cognitive Science // **MIT** (Cambridge, MA)
- 09/98 – 06/02: A.B. (Magna Cum Laude) Linguistics/Psychology // **Harvard University** (Cambridge, MA)



## CURRENT GRANT FUNDING:

### CURRENT:

#### Extramural:

***Computational neuroscience of language processing in the human brain***

Funding agency: NIH, NINDS (type: U01; NS121471)

Award period: April 2021 – March 2026 // Role: MPI (2nd PI: Mark Richardson, MGH)

***Functional reorganization of the language and domain-general multiple demand systems in aphasia***

Funding agency: NIH, NIDCD (type: R01, DC016950)

Award period: April 2019 – March 2024 // Role: MPI (2nd PI: Swathi Kiran, BU)

***The neural architecture of pragmatic processing***

Funding agency: NIH, NIDCD (type: R01, DC016607)

Award period: May 2018 – April 2023 // Role: PI

***The neural architecture of pragmatic processing – Administrative Supplement to Support Enhancement of Software Tools for Open Science***

Funding agency: NIH, NIDCD (type: R01-Supplement, DC016607)

Award period: September 2021 – April 2022 // Role: PI

#### MIT-internal:

***Cognitive, neural, and computational foundations of conversation***

Funding agency: The Simons Foundation via the Simons Center for the Social Brain at MIT

Dates: April 2022 – March 2024 // Role: Lead PI

***Deriving meaning from natural language in minds and machines***

Quest Pilot Award

Award period: June 2021 – May 2022 // Role: Co-PI (PI: Jacob Andreas)

***Towards a Neural Marker of Complex Meaning Construction***

MISTI Global Seed Funds (MIT-Belgium)

Award period: January 2020 – August 2021 (no cost extension to August 2022) // Role: PI

### COMPLETED (select):

- ***Language in the Mosaic of Social Cognition***  
Paul and Lilah Newton Brain Science Award  
Award period: September 2020 – August 2021 // Role: PI
- ***The neural architecture of pragmatic processing – Research Supplement to Promote Diversity in Health-Related Research***  
Funding agency: NIH, NIDCD (type: R01-Supplement, DC016607)  
Award period: November 2018 – April 2020 // Role: PI
- ***EAGER: The cognitive and neural mechanisms of computer programming in young children: storytelling or solving puzzles?***  
Funding agency: NSF (type: EAGER, 1744809)  
Award period: August 2017 – July 2019 // Role: Co-PI (PI: Marina Bers, Tufts University)
- ***The nature of the pragmatic impairment in autism spectrum disorders***  
Funding agency: The Simons Foundation via the Simons Center for the Social Brain at MIT  
Dates: April 2015 – March 2018 // Role: Lead PI



- ***fMRI investigations of the functional architecture of the language system***  
Funding agency: NIH, NICHD (type: Pathway to Independence K99R00 award)  
Award period: K99: July 2009 – June 2011; R00: February 2014 – September 2017 // Role: PI
- ***A Modern Approach to Compositional Knowledge Employment and Representation, Enhanced by Learning***  
Funding agency: IARPA  
Award period: September 2013 – April 2017 // Role: Co-PI (PI: Francisco Pereira)
- ***Neural correlates of mental time travel: Evaluating the distinct modalities of prospection hypothesis***  
Funding agency: The John Templeton Foundation  
Award period: October 2014 – August 2016 // Role: PI

## SELECT AWARDS AND FELLOWSHIPS:

- BCS Award for Excellence in Undergraduate Advising (2021)
- Paul and Lilah Newton Brain Science Award (2020-2021)
- Frederick A. (1971) and Carole J. Middleton Career Development Chair (2020-2023)
- Mercator Fellow at University of Potsdam (2018-2020)
- U.S. Kavli Fellow (2014, 2015)
- *Pathway to Independence* Career Development Award from NIH (2009-2011; 2014-2017)

**JOURNAL PUBLICATIONS (in reverse chronological order):****Summary:**

**Google Scholar statistics** as of March 5, 2022: total: 9,086; h-index: 47; i10-index: 92

**Profile link:** <https://scholar.google.com/citations?user=1CgET20AAAAJ&hl=en>

**Total peer-reviewed journal articles:** 93.

**My primary line of work – investigations of the neural and genetic architecture of language:**

(most significant empirical papers are marked with !!'s)

**Published papers (see below for a list of preprints):**

66. Tuckute, G., Paunov, A., Kean, H., Small, H., Mineroff, Z., Blank, I., & **Fedorenko, E.** (2021). Frontal language areas do not emerge in the absence of temporal language areas: A case study of an individual born without a left temporal lobe. *Neuropsychologia*, 108184.  
DOI: 10.106/j.neuropsychologia.2022.108184
- !! 65. Grand, G.\*, Blank, I.\*, Pereira, F.^ & **Fedorenko, E.**^ (in press). Semantic projection: recovering human knowledge of multiple, distinct object features from word embeddings. *Nature Human Behavior*.
64. Malik-Moraleda, S., Cucu, T., Lipkin, B. & **Fedorenko, E.** (2021). The Domain-General Multiple Demand network is More Active in Early Balanced Bilinguals than Monolinguals During Executive Processing. *Neurobiology of Language*, 2(4), 647-664.  
DOI: 10.1162/nol\_a\_00058
- !! 63. Schrimpf, M., Blank, I.\*, Tuckute, G.\*, Kauf, C.\*, Hosseini, E., Kanwisher, N., Tenenbaum, J.^ & **Fedorenko, E.**^ (2021). Artificial Neural Networks Accurately Predict Language Processing in the Brain. *Proceedings of the National Academy of Sciences*, 118(45), e2105646118.  
DOI: 10.1073/pnas.2105646118
62. **Fedorenko, E.** & Shain, C. (2021). Similarity of computations across domains does not imply shared implementation: The case of language comprehension. *Current Directions in Psychological Science*, 30(6), 526-534.  
DOI: 10.1177/09637214211046955
61. Ryskin, R., Stearns, L., Bergen, L., Eddy, M., **Fedorenko, E.** & Gibson, E. (2021). An ERP index of real-time error correction within a noisy-channel framework of human communication. *Neuropsychologia*, 158, 107855.  
DOI: 10.1016/j.neuropsychologia.2021.107855 PMID: 33865848
60. **Fedorenko, E.** (2021). The early origins and the growing popularity of the individual-subject analytic approach in human neuroscience. *Current Opinion in Behavioral Sciences*, 40, 105-112.  
DOI: 10.1016/j.cobeha.2021.02.023
59. Wehbe, L., Blank, I. A., Shain, C., Futrell, R., Levy, R., von der Malsburg, T., Smith, N., Gibson, E. & **Fedorenko, E.** (2021). Incremental language comprehension difficulty predicts activity in the language network but not the multiple demand network. *Cerebral Cortex*, 31(9), 4006-4023.  
DOI: 10.1093/cercor/bhab065 PMID: 33895807 PMID: PMC8328211
58. Gallée, J., Cordella, C., **Fedorenko, E.**, Hochberg, D., Touroutoglou, A., Quimby, A. & Dickerson, B. (2021). Breakdowns in informativeness of naturalistic speech production in primary progressive aphasia. *Brain Sciences*, 11(2), 130.  
DOI: 10.3390/brainsci11020130 PMID: 33498260 PMID: PMC7909266
- !! 57. Ivanova, A., Mineroff, Z., Zimmerer, V., Kanwisher, N., Varley, R. & **Fedorenko, E.** (2021). The language network is recruited but not required for non-verbal semantic processing. *Neurobiology of Language*, 2(2), 176-201.

DOI: doi.org/10.1162/nol\_a\_00030

56. Ivanova, A., Srikant, S., Sueoka, Y., Kean, H., Dhamala, R., O'Reilly, U. M., Bers M. & **Fedorenko, E.** (2020). Comprehension of computer code relies primarily on domain-general executive brain regions. *eLife*, 9, e58906.  
DOI: 10.7554/eLife.58906 PMID: 33319744 PMCID: PMC7738192
55. Jouravlev, O., Kell, A., Mineroff, Z., Haskins, AJ, Ayyash, D., Kanwisher, N. & **Fedorenko, E.** (2020). Reduced language lateralization is a robust marker of the broader autism phenotype. *Autism Research*, 13(10), 1746-1761.  
DOI: 10.1002/aur.2393
54. Jouravlev, O., Mineroff, Z., Blank, I. & **Fedorenko, E.** (2020). The small and efficient language network of polyglots and hyperpolyglots. *Cerebral Cortex*, 31(1), 62-76.  
DOI: 10.1093/cercor/bhaa205
53. Assem, M., Blank, I., Mineroff, Z., Ademoglu, A. & **Fedorenko, E.** (2020). Activity in the fronto-parietal Multiple-Demand network is robustly associated with individual differences in working memory and fluid intelligence. *Cortex*, 131, 1-16.  
DOI: 10.1016/j.cortex.2020.06.013 PMID: 32777623
- !! 52. **Fedorenko, E.**, Blank, I., Siegelman, M. & Mineroff, Z. (2020). Lack of selectivity for syntax relative to word meanings throughout the language network. *Cognition*, 203, 104348.  
DOI: 10.1016/j.cognition.2020.104348 PMID: 32569894
51. Blank, I. & **Fedorenko, E.** (2020). No evidence for differences among language regions in their temporal receptive windows. *NeuroImage*, 219, 116925.  
DOI: 10.1016/j.neuroimage.2020.116925 PMID: 32407994
- !! 50. Diachek, E.\*, Blank, I.\*, Siegelman, M.\*, Affourtit J. & **Fedorenko, E.** (2020). The domain-general multiple demand (MD) network does not support core aspects of language comprehension: a large-scale fMRI investigation. *Journal of Neuroscience*, 40(23), 4536-4550.  
DOI: 10.1523/JNEUROSCI.2036-19.2020
49. **Fedorenko, E.** & Blank, I. (2020). Broca's area is not a natural kind. *Trends in Cognitive Sciences*, 24(4), 270-284.  
DOI: 10.1016/j.tics.2020.01.001 PMID: 32160565, PMCID: PMC7211504
- !! 48. Shain, C.\*, Blank, I.\*, Van Shijndel, M., Schuler, W. & **Fedorenko, E.** (2020). fMRI reveals language-specific predictive coding during naturalistic sentence comprehension. *Neuropsychologia*, 138, 107307.  
DOI: 10.1016/j.neuropsychologia.2019.107307 PMID: 31874149, PMCID: PMC7140726
- !! 47. Mollica, F.\*, Siegelman, M.\*, Diachek, E., Piantadosi, S., Mineroff, Z., Futrell, R., Kean H., Qian, P. & **Fedorenko, E.** (2020). Composition is the core driver of the language-selective network. *Neurobiology of Language*.  
DOI: 10.1162/nol\_a\_00005
46. Kong, X., Tzourio-Mazoyer, M., Joliot, M., **Fedorenko, E.**, Liu, J., Fisher, S.E. & Francks, C. (2020). Gene expression correlates of the cortical network underlying sentence processing. *Neurobiology of Language*, 1(1), 77-103.  
DOI: 10.1162/nol\_a\_00004
45. Ryskin, R., Levy, R & **Fedorenko, E.** (2020). Do domain-general executive resources play a role in linguistic prediction? Re-evaluation of the evidence and a path forward. *Neuropsychologia*, 136, 107258.  
DOI: 10.1016/j.neuropsychologia.2019.107258 PMID: 31730774
44. Uddén, J., Hultén, A., Bendtz, K., Mineroff, Z., Kucera, K.S., VINO, A., **Fedorenko, E.**, Hagoort, P. & Fisher, S. (2019). Towards robust functional neuroimaging genetics of cognition. *Journal of Neuroscience*.  
DOI: 10.1523/JNEUROSCI.0888-19.2019 PMID: 31570534, PMCID: PMC6820208
43. Jouravlev, O., Zheng, D., Balewski, Z., Pongos, A., Levan, Z., Goldin-Meadow, S. & **Fedorenko, E.** (2019). Speech-accompanying gestures are not processed by the language processing mechanisms. *Neuropsychologia*, 132, 107132.  
DOI: 10.1016/j.neuropsychologia.2019.107132 PMID: 31276684, PMCID: PMC6708375

42. Siegelman, M., Blank, I., Mineroff, Z. & **Fedorenko, E.** (2019). An attempt to conceptually replicate the dissociation between syntax and semantics during sentence comprehension. *Neuroscience*, 413, 219-229. DOI: 10.1016/j.neuroscience.2019.06.003 PMID: 31200104, PMCID: PMC6661197
41. **Fedorenko, E.**, Ivanova, A., Dhamala, R. & Bers, M. (2019). The language of programming: A cognitive perspective. *Trends in Cognitive Sciences*, 23(7), 525-528. DOI: 10.1016/j.tics.2019.04.010 PMID: 31153775
40. Paunov, A., Blank, I. & **Fedorenko, E.** (2019). Functionally distinct language and Theory and Mind networks are synchronized at rest and during language comprehension. *Journal of Neurophysiology*, 121(4), 1244-1265. DOI: 10.1152/jn.00619.2018 PMID: 30601693, PMCID: PMC6485726
39. Mineroff, Z. \*, Blank, I. \*, Mahowald, K. & **Fedorenko, E.** (2018). A robust dissociation among the language, multiple demand, and default mode networks: evidence from inter-region correlations in effect size. *Neuropsychologia*, 119, 501-511. DOI: 10.1016/j.neuropsychologia.2018.09.011 PMID: 30243926, PMCID: PMC6191329
38. **Fedorenko, E.**, Williams, Z.M. & Ferreira, V.S. (2018). Remaining puzzles about morpheme production in the posterior temporal lobe. *Neuroscience*, 392, 160-163. DOI: 10.1016/j.neuroscience.2018.09.032 PMID: 30278250
37. Jacoby, N. & **Fedorenko, E.** (2018; came out in 2020). Discourse-level comprehension engages medial frontal Theory of Mind brain regions even for expository texts. *Language, Cognition and Neuroscience*, 35(6), 780-796. DOI: 10.1080/23273798.2018.1525494
36. Pritchett, B., Hoeflin, C., Koldewyn, K., Dechter, E. & **Fedorenko, E.** (2018). High-level language processing regions are not engaged in action observation or imitation. *Journal of Neurophysiology*, 120(5), 2555-2570. DOI: 10.1152/jn.00222.2018 PMID: 30156457, PMCID: PMC6295536
35. Jouravlev, O., Schwarz, R., Ayaash, D., Mineroff, Z., Gibson, E. & **Fedorenko, E.** (2019). Tracking co-listeners' knowledge states during language comprehension. *Psychological Science*, 30(1), 3-19. DOI: 10.1177/0956797618807674 PMID: 30444681, PMCID: PMC6344950
34. Mei, C., **Fedorenko, E.**, Amor, D., Boys, A., Hoeflin, C., Carew, P., Burgess, T., Fisher, S. & Morgan, A. (2018). Deep phenotyping of speech and language skills in 16p11.2 deletion syndrome. *EJHG*, 26(5), 676-686. DOI: 10.1038/s41431-018-0102-x PMID: 29445122, PMCID: PMC5945616
- !! 33. Pereira, F., Lou, B., Pritchett, B., Ritter, S., Gershman, S.J., Kanwisher, N., Botvinick, M. & **Fedorenko, E.** (2018). Toward a universal decoder of linguistic meaning from brain activation. *Nature Communications*, 9, article 963. DOI:10.1038/s41467-018-03068-4 PMID: 29511192, PMCID: PMC5840373
32. Woolgar, A., Duncan, J., Manes, F. & **Fedorenko, E.** (2018). The multiple-demand, but not language, system supports fluid intelligence. *Nature Human Behavior*, 2, 200-204. DOI:10.1038/s41562-017-0282-3 PMID: 31620646, PMCID: PMC6795543
31. Blank, I., Kiran, S. & **Fedorenko, E.** (2017). Can neuroimaging help aphasia researchers? Addressing generalizability, idiosyncrasy, and interpretability. *Cognitive Neuropsychology*, 34(6), 377-393. DOI: 10.1080/02643294.2017.1402756 PMID: 29188746, PMCID: PMC6157596
- !! 30. Blank, I. & **Fedorenko, E.** (2017). Domain-general brain regions do not track linguistic input as closely as language-selective regions. *Journal of Neuroscience*, 37(41), 9999-10011. DOI: 10.1523/JNEUROSCI.3642-16.2017 PMID: 28871034, PMCID: PMC5637122
29. Basilakos, A., Smith, K., Fillmore, P., Fridriksson, J. & **Fedorenko, E.** (2017). Functional characterization of the human speech articulation network. *Cerebral Cortex*, 28(5), 1816-1830. DOI: 10.1093/cercor/bhx100 PMID: 28453613, PMCID: PMC5907347
28. Amit, E., Hoeflin, C., Hamzah, N. & **Fedorenko, E.** (2017). An asymmetrical relationship between verbal and visual thinking: converging evidence from behavior and fMRI. *NeuroImage*, 152, 619-627.



- DOI: 10.1016/j.neuroimage.2017.03.029 PMID: 28323162, PMCID: PMC5448978
- !! 27. **Fedorenko, E.**, Scott, T., Brunner, P., Coon, W.G., Pritchett, B., Schalk, G. & Kanwisher, N. (2016). A neural correlate of the construction of sentence meaning. *PNAS*, 113(41), E6256-E6262.  
DOI: 10.1073/pnas.1612132113 PMID: 27671642, PMCID: PMC5068329
26. Chai, L., Mattar, M., Blank, I., **Fedorenko, E.** & Bassett, D. (2016). Functional Network Dynamics of the Language System. *Cerebral Cortex*, 26(11), 4148-4159.  
DOI: 10.1093/cercor/bhw238 PMID: 27550868, PMCID: PMC5066829
25. Jouravlev, O., Stearns, L., Bergen, L., Eddy, M., Gibson, E. & **Fedorenko, E.** (2016). Processing Temporal Presuppositions: an ERP study. *Language, Cognition & Neuroscience*, 31(10), 1245-1256.  
DOI: 10.1080/23273798.2016.1209531
- !! 24. Mahowald, K. & **Fedorenko, E.** (2016). Reliable individual-level neural markers of language activity: A necessary precursor for relating neural variability to genetic and behavioral variability. *NeuroImage*, 139, 74-93.  
DOI: 10.1016/j.neuroimage.2016.05.073 PMID: 27261158
23. Scott, T., Gallée, J. & **Fedorenko, E.** (2017). A new fun and robust version of an fMRI localizer for the fronto-temporal language system. *Cognitive Neuroscience*, 8(3), 167-176.  
DOI:10.1080/17588928.2016.1201466 PMID: 27386919
22. **Fedorenko, E.** & Varley, R. (2016). Language and thought are not the same thing: Evidence from neuroimaging and neurological patients. *Annals of the NY Academy of Sciences*, 1369(1), 132-153.  
DOI: 10.1111/nyas.13046 PMID: 27096882, PMCID: PMC4874898
- !! 21. Blank, I., Balewski, Z., Mahowald, K. & **Fedorenko, E.** (2016). Syntactic processing is distributed across the language system. *NeuroImage*, 127, 307-323.  
DOI: 10.1016/j.neuroimage.2015.11.069 PMID: 26666896, PMCID: PMC4755877
20. Gibson, E., Sandberg, C., Bergen, L., **Fedorenko, E.** & Kiran, S. (2016). A rational inference approach to aphasic language comprehension. *Aphasiology*, 30(11), 1341-1360.  
DOI: 10.1080/02687038.2015.1111994 PMID: 28391038, PMCID: PMC5485413
19. **Fedorenko, E.\***, Morgan, A.\*, Murray, E., Cardinaux, A., Mei, C., Tager-Flusberg, H., Fisher, S. & Kanwisher, N. (2016). A highly penetrant form of childhood apraxia of speech due to deletion of 16p11.2. *European Journal of Human Genetics*, 24(2), 302-306.  
DOI: 10.1038/ejhg.2015.149 PMID: 26763793, PMCID: PMC4717201
18. **Fedorenko, E.**, Fillmore, P., Smith, K., Bonilha, L. & Fridriksson, J. (2015). The superior precentral gyrus of the insula does not appear to be functionally specialized for articulation. *Journal of Neurophysiology*, 113(7), 2376-2382.  
DOI: 10.1152/jn.00214.2014 PMID: 25632073, PMCID: PMC4416598
17. **Fedorenko, E.**, Hsieh, P.-J. & Balewski, Z. (2015). A possible functional localizer for identifying brain regions sensitive to sentence-level prosody. *Language, Cognition and Neuroscience (formerly Language and Cognitive Processes)*, 30(1-2), 120-148.  
DOI: 10.1080/01690965.2013.861917 PMID: 25642425, PMCID: PMC4306436
16. **Fedorenko, E.** (2014). The role of domain-general cognitive control in language comprehension. *Frontiers in Psychology*, 5:335.  
DOI: 10.3389/fpsyg.2014.00335 PMID: 24803909, PMCID: PMC4009428
15. **Fedorenko, E.** & Thompson-Schill, S.L. (2014). Reworking the language network. *Trends in Cognitive Sciences*, 18(3), 120-126.  
DOI: 10.1016/j.tics.2013.12.006 PMID: 24440115, PMCID: PMC4091770
14. Blank, I., Kanwisher, N. & **Fedorenko, E.** (2014). A functional dissociation between language and multiple-demand systems revealed in patterns of BOLD signal fluctuations. *Journal of Neurophysiology*, 112(5), 1105-1118.  
DOI: 10.1152/jn.00884.2013 PMID: 24872535, PMCID: PMC4122731
- !! 13. **Fedorenko, E.**, Duncan, J. & Kanwisher, N. (2013). Broad domain-generality in focal regions of frontal and parietal cortex. *PNAS*, 110(41), 16616-16621.

- DOI: 10.1073/pnas.1315235110 PMID: 24062451, PMCID: PMC3799302
12. **Fedorenko E.**, McDermott, J., Norman-Haignere, S. & Kanwisher, N. (2012). Sensitivity to musical structure in the human brain. *Journal of Neurophysiology*, 108(12), 3289-3300.  
DOI: 10.1152/jn.00209.2012 PMID: 23019005, PMCID: PMC3544885
  - !! 11. **Fedorenko, E.**, Duncan, J. & Kanwisher, N. (2012). Language-selective and domain-general regions lie side by side within Broca's area. *Current Biology*, 22(21), 2059-2062.  
DOI: 10.1016/j.cub.2012.09.011 PMID: 23063434, PMCID: PMC3494832
  10. Nieto-Castañon, A. & **Fedorenko, E.** (2012). Subject-specific functional localizers increase sensitivity and functional resolution of multi-subject analyses. *NeuroImage*, 63(3), 1646-1669.  
DOI: 10.1016/j.neuroimage.2012.06.065 PMID: 22784644, PMCID: PMC3477490
  9. Julian, J., **Fedorenko, E.**, Webster, J. & Kanwisher, N. (2012). An algorithmic method for functionally defining regions of interest in the ventral visual pathway. *NeuroImage*, 60(4), 2357-2364.  
DOI: 10.1016/j.neuroimage.2012.02.055 PMID: 22398396
  8. **Fedorenko, E.**, Nieto-Castañon, A. & Kanwisher, N. (2012). Lexical and syntactic representations in the brain: An fMRI investigation with multi-voxel pattern analyses. *Neuropsychologia*, 50(4), 499-513.  
DOI: 10.1016/j.neuropsychologia.2011.09.014 PMID: 21945850, PMCID: PMC3292791
  7. **Fedorenko, E.**, Nieto-Castañon, A. & Kanwisher, N. (2012). Syntactic processing in the human brain: What we know, what we don't know, and a suggestion for how to proceed. *Brain and Language*, 120(2), 187-207.  
DOI: 10.1016/j.bandl.2011.01.001 PMID: 21334056, PMCID: PMC3108014
  - !! 6. **Fedorenko, E.**, Behr, M. & Kanwisher, N. (2011). Functional specificity for high-level linguistic processing in the human brain. *PNAS*, 108(39), 16428-16433.  
DOI: 10.1073/pnas.1112937108 PMID: 21885736, PMCID: PMC3182706
  5. Bedny, M., Pascual-Leone, A., Dodell-Feder, D., **Fedorenko, E.** & Saxe, R. (2011). Language processing in the occipital cortex of congenitally blind adults. *PNAS*, 108(11), 4429-4434.  
DOI: 10.1073/pnas.1014818108 PMID: 21368161, PMCID: PMC3060248
  4. **Fedorenko, E.** & Kanwisher, N. (2011). Some regions within Broca's area *do* respond more strongly to sentences than to linguistically degraded stimuli: A comment on Rogalsky & Hickok (2010). *Journal of Cognitive Neuroscience*, 23(10), 2632-2635.  
DOI: 10.1162/jocn\_a\_00043
  3. **Fedorenko, E.** & Kanwisher, N. (2011). Functionally localizing language-sensitive regions in individual subjects with fMRI: A reply to Grodzinsky's critique of Fedorenko & Kanwisher (2009). *Language and Linguistics Compass*, 5(2), 78-94.  
DOI: 10.1111/j.1749-818X.2010.00264.x
  - !! 2. **Fedorenko, E.**, Hsieh, P.-J., Nieto-Castañon, A., Whitfield-Gabrieli, S. & Kanwisher, N. (2010). A new method for fMRI investigations of language: Defining ROIs functionally in individual subjects. *Journal of Neurophysiology*, 104(2), 1177-1194.  
DOI: 10.1152/jn.00032.2010 PMID: 20410363, PMCID: PMC2934923
  1. **Fedorenko, E.** & Kanwisher, N. (2009). Neuroimaging of language: Why hasn't a clearer picture emerged? *Language and Linguistics Compass*, 3, 839-865.  
DOI: 10.1111/j.1749-818X.2009.00143.x

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| <b>My secondary line of work – behavioral investigations of language processing:</b> |
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27. Futrell, R., Gibson, E., Tily, H., Blank, I., Vishnevetsky, A., Piantadosi, S., & **Fedorenko, E.** (2021). The Natural Stories Corpus: A reading-time corpus of English texts containing rare syntactic constructions. *Language Resources and Evaluation*, 55, 63-77.
26. Piantadosi, S. & **Fedorenko, E.** (2017). Infinitely productive language can arise from chance under communicative pressure. *Journal of Language Evolution*, 2(2), 141-147.  
DOI: 10.1093/jole/lzw013 PMID: NA, PMCID: NA





25. Gibson, E., Tan, C., Futrell, R., Mahowald, K., Konieczny, L., Hemforth, B. & **Fedorenko, E.** (2017). Don't underestimate the benefits of being misunderstood. *Psychological Science*, 28(6), 703-712.  
DOI: 10.1177/0956797617690277 PMID: 28394708, PMCID: NA
24. Scontras, G., Badecker W. & **Fedorenko, E.** (2017). Syntactic complexity effects in sentence production: A reply to MacDonald et al. (2016). *Cognitive Science*, 1-8.  
DOI: 10.1111/cogs.12495 PMID: NA, PMCID: NAs
23. Singh, R., **Fedorenko, E.**, Mahowald, K. & Gibson, E. (2015). Accommodating presuppositions is inappropriate in implausible contexts. *Cognitive Science*, 40(3), 607-634.  
DOI: 10.1111/cogs.12260 PMID: 26153044, PMCID: NA
22. Scontras, G., Badecker, W., Shank, L., Lim, E. & **Fedorenko, E.** (2015). Syntactic complexity effects in sentence production. *Cognitive Science*, 39(3), 559-583.  
DOI: 10.1111/cogs.12168 PMID: 25256303, PMCID: NA
21. Grosz, P., Patel-Grosz, P., **Fedorenko, E.** & Gibson, E. (2015). Constraints on Donkey pronouns. *Journal of Semantics*, 32(4), 619-648.  
DOI: 10.1093/jos/ffu009 PMID: NA, PMCID: NA
20. Gibson, E., Jacobson, P., Graff, P., Mahowald, K., **Fedorenko, E.** & Piantadosi, S. (2015). A pragmatic account of complexity in definite Antecedent-Contained-Deletion relative clauses. *Journal of Semantics*, 32(4), 579-618.  
DOI: 10.1093/jos/ffu006 PMID: NA, PMCID: NA
19. Gibson, E., Piantadosi, S. & **Fedorenko, E.** (2013). Quantitative methods in syntax / semantics research: A response to Sprouse & Almeida (2013). *Language and Cognitive Processes*, 28(3), 229-240.  
DOI: 10.1080/01690965.2012.704385 PMID: NA, PMCID: NA
18. Gibson, E. & **Fedorenko, E.** (2013). The need for quantitative methods in syntax and semantics research. *Language and Cognitive Processes*, 28(1-2), 88-124.  
DOI: 10.1080/01690965.2010.515080 PMID: NA, PMCID: NA
17. Levy, R., **Fedorenko, E.** & Gibson, E. (2013). The syntactic complexity of Russian relative clauses. *Journal of Memory and Language*, 69(4), 461-495.  
DOI: 10.1016/j.jml.2012.10.005 PMID: 24711687, PMCID: PMC3975271
16. Perrachione, T., **Fedorenko, E.**, Vinke, L., Gibson, E. & Dilley, L. (2013). Pitch processing is shared between language and music. *PLoS ONE*, 8(8): e73372.  
DOI: 10.1371/journal.pone.0073372 PMID: 23977386, PMCID: PMC3744486
15. **Fedorenko, E.**, Woodbury, R. & Gibson, E. (2013). Direct evidence of memory retrieval as a source of difficulty in long-distance structural dependencies in language. *Cognitive Science*, 37(2), 378-394.  
DOI: 10.1111/cogs.12021 PMID: 23362990, PMCID: NA
14. Mahowald, K., **Fedorenko, E.**, Piantadosi, S. & Gibson, E. (2013). Info/information theory: speakers choose shorter words in predictive contexts. *Cognition*, 126(2), 313-318.  
DOI: 10.1016/j.cognition.2012.09.010 PMID: 23116925, PMCID: NA
13. **Fedorenko, E.**, Piantadosi, S. & Gibson, E. (2012). The interaction of syntactic and lexical information sources in language processing: The case of the noun-verb ambiguity. *Journal of Cognitive Science*, 13(3), 249-285.  
DOI: 10.17791/jcs.2012.13.3.249 PMID: NA, PMCID: NA
12. Levy, R., **Fedorenko, E.**, Breen, M. & Gibson, E. (2012). The processing of extraposed structures in English. *Cognition*, 122(1), 12-36.  
DOI: 10.1016/j.cognition.2011.07.012 PMID: 22035959, PMCID: PMC3857735
11. Frank, M., **Fedorenko, E.**, Lai, P., Saxe, R. & Gibson, E. (2012). Verbal interference suppresses exact numerical representation. *Cognitive Psychology*, 64(1-2), 74-92.  
DOI: 10.1016/j.cogpsych.2011.10.004 PMID: 22112644, PMCID: NA
10. **Fedorenko, E.**, Piantadosi, S. & Gibson, E. (2012). Processing relative clauses in supportive contexts. *Cognitive Science*, 36(3), 471-497.  
DOI: 10.1111/j.1551-6709.2011.01217.x PMID: 22256956, PMCID: NA



9. Breen, M., **Fedorenko, E.**, Wagner, M. & Gibson, E. (2010). Acoustic correlates of information structure. *Language and Cognitive Processes*, 25(7/8/9), 1044-1098.  
DOI: 10.1080/01690965.2010.504378 PMID: NA, PMCID: NA
8. Gibson, E. & **Fedorenko, E.** (2010). Weak quantitative standards in linguistics research. *Trends in Cognitive Sciences*, 14(6), 233-234.  
DOI: 10.1016/j.tics.2010.03.005 PMID: 20363175, PMCID: NA
7. Tily, H., **Fedorenko, E.** & Gibson, E. (2010). The time-course of lexical and structural processes in sentence comprehension. *Quarterly Journal of Experimental Psychology*, 63(5), 910-927.  
DOI: 10.1080/17470210903114866 PMID: 19746299, PMCID: NA
6. **Fedorenko, E.** & Gibson, E. (2010). Adding a third wh-element does not increase the acceptability of object-initial multiple-wh questions. *Syntax*, 13(3), 183-195.  
DOI: 10.1111/j.1467-9612.2010.00138.x PMID: NA, PMCID: NA
5. **Fedorenko, E.**, Patel, A., Casasanto, D., Winawer, J. & Gibson, E. (2009). Structural integration in language and music: Evidence for a shared system. *Memory and Cognition*, 37(1), 1-9. (*Recipient of the Best Article of the Year Award from the Psychonomic Society*)  
DOI: 10.3758/MC.37.1.1 PMID: 19103970, PMCID: NA
4. Frank, M., Everett, D., **Fedorenko, E.** & Gibson, E. (2008). Number as a cognitive technology: Evidence from Pirahã language and cognition. *Cognition*, 108(3), 819-824.  
DOI: 10.1016/j.cognition.2008.04.007 PMID: 18547557, PMCID: NA
3. **Fedorenko, E.**, Gibson, E. & Rohde, D. (2007). The nature of working memory in linguistic, arithmetic and spatial integration processes. *Journal of Memory and Language*, 56(2), 246-269.  
DOI: 10.1016/j.jml.2006.06.007 PMID: NA, PMCID: NA
2. **Fedorenko, E.**, Gibson, E. & Rohde, D. (2006). The nature of working memory capacity in sentence comprehension: Evidence against domain-specific resources. *Journal of Memory and Language*, 54(4), 541-553.  
DOI: 10.1016/j.jml.2005.12.006 PMID: NA, PMCID: NA
1. Costa, A., Kovacic, D., **Fedorenko, E.** & Caramazza, A. (2003). The gender congruency effect and the selection of freestanding and bound morphemes: Evidence from Croatian. *Journal of Experimental Psychology: LMC*, 29(6), 1270-1282.  
DOI: 10.1037/0278-7393.29.6.1270 PMID: 14622060, PMCID: NA

#### Other publications (select peer-reviewed conference proceedings and book chapters):

- Fedorenko, E.** (2020). The brain network that supports high-level language processing. In Gazzaniga, Ivry, Mangun (Ed.), *Cognitive Neuroscience: The Biology of the Mind* (5th edition). MIT Press, Cambridge, MA.
- Gibson, E., Tily, H. & **Fedorenko, E.** (2014). The processing complexity of English relative clauses. In Sanz, Laka & Tanenhaus (Eds.), *Language down the garden path: The cognitive and biological basis for linguistic structure*. Oxford University Press.
- Frank, M., **Fedorenko, E.** & Gibson, E. (2008). Language as a cognitive technology: English-speakers match like Pirahã when you don't let them count. *30th Annual Meeting of Cognitive Science Society Proceedings*. (*Recipient of the Marr Prize*)

#### Preprints (reverse chronological order):

- Shain, C., Blank, I., **Fedorenko, E.**, Gibson, E. & Schuler, W. (2021). Robust effects of working memory demand during naturalistic language comprehension in language-selective cortex.  
<https://www.biorxiv.org/content/10.1101/2021.09.18.460917v1>
- Li, J., **Fedorenko, E.** & Saygin, Z. (2021). Intact reading ability in spite of a spatially distributed visual word form 'area' in an individual born without the left superior temporal lobe.



- <https://www.biorxiv.org/content/10.1101/2021.09.15.460550v1>
- Hu, J.\* , Small, H.\* , Kean, H., Takahashi, A., Zekelman, L., Kleinman, D., Ryan, E., Ferreira, V. & **Fedorenko, E.** (2021). The language network supports both lexical access and sentence generation during language production. <https://www.biorxiv.org/content/10.1101/2021.09.10.459596v1.full>
- Malik-Moraleda, S.\* , Ayyash, D.\* , Gallée, J., Affourtit, J., Hoffmann, M., Mineroff, Z., Jouravlev, O. & Fedorenko, E. (2021). The universal language network: A cross-linguistic investigation spanning 45 languages and 11 language families. <https://www.biorxiv.org/content/10.1101/2021.07.28.454040v1>
- Ivanova, A. A., Schrimpf, M., Anzellotti, S., Zaslavsky, N., **Fedorenko, E.** & Isik, L. (2021). Is it that simple? Linear mapping models in cognitive neuroscience. <https://www.biorxiv.org/content/10.1101/2021.04.02.438248v1.full>
- Regev, T. I., Affourtit, J., Chen, X., Schipper, A. E., Bergen, L., Mahowald, K., & **Fedorenko, E.** (2021). High-level language brain regions are sensitive to sub-lexical regularities. <https://www.biorxiv.org/content/10.1101/2021.06.11.447786v1.full>
- Chen, X.\* , Affourtit, J.\* , Ryskin, R., Regev, T. I., Norman-Haignere, S., Jouravlev, O., Malik-Moraleda, S., Kean, H., Varley, R. & **Fedorenko, E.** (2021). The human language system does not support music processing. <https://www.biorxiv.org/content/10.1101/2021.06.01.446439v1.full>
- Paunov, A. M., Blank, I. A., Jouravlev, O., Mineroff, Z., Gallée, J., & **Fedorenko, E.** (2021). Differential tracking of linguistic vs. mental state content in naturalistic stimuli by language and Theory of Mind (ToM) brain networks. <https://www.biorxiv.org/content/10.1101/2021.04.28.441724v1.full>
- Benn, Y.\* , Ivanova, A. A.\* , Clark, O., Mineroff, Z., Seikus, C., Silva, J. S., Varley, R. & **Fedorenko, E.** (2021). No evidence for a special role of language in feature-based categorization. <https://www.biorxiv.org/content/10.1101/2021.03.18.436075v1.full>
- Mahowald, K.\* , Isola, P.\* , **Fedorenko, E.**, Oliva, A. & Gibson, E. (2018). Memorable words are monogamous: The role of synonymy and homonymy in word recognition memory. <https://psyarxiv.com/p6kv9/>
- Anzellotti, S., **Fedorenko, E.**, Caramazza, A. & Saxe, R. (2017). Measuring and modeling non-linear interactions between brain regions with fMRI. <https://www.biorxiv.org/content/10.1101/074856v2>
- Kline, M., Gallée, J., Balewski, Z. & **Fedorenko, E.** (2016). Understanding jokes relies on the Theory of Mind system. <https://osf.io/ke96q/>
- Blank, I., Duff, M., Brown-Schmidt, S. & **Fedorenko, E.** (2016). Expanding the language network: Hippocampal recruitment during high-level linguistic processing. <https://www.biorxiv.org/content/10.1101/091900v1>



## INVITED TALKS:

### Notation:

- Departmental colloquia and similar
- ❖ Workshops, symposia, and lecture series
- Conference keynotes

### Scheduled:

- ❖ *How minds and brains create language*. NIH. April 2022.
- ❖ *Title-TBD*. Symposium at the Edmond & Lily Safra Center for Brain Sciences “Brainy Days in Jerusalem: The Future of Neuroscience” (Jerusalem, Israel). 2022.
- The International Symposium on Clinical Neuroscience (ISCN) organized by the Carrick Institute (Orlando, Florida). May 2022.

### 2020-present:

- Moss Research Rehabilitation Institute (virtual). February 2022.
- Higher School of Economics, Linguistics Department (virtual). February 2022.
- Penn State University, Center for Language Sciences (virtual). November 2021.
- Institute of Language, Communications and the Brain (ILCB; Aix-en-Provence/Marseille) (virtual). October 2021.
- University College London, Department of Experimental Psychology (virtual). October 2021.
- Columbia University, Center for Theoretical Neuroscience (New York, NY). October 2021.
- Harvard University, Cognition, Brain & Behavior Seminar Series (virtual). September 2021.
- MGH Brain Map Seminar Series (virtual). May 2021.
- MRC CBU Chaucer Club Seminar Series (virtual). February 2021.
- Royal Holloway University of London, Department of Psychology (virtual). January 2021.
- UCLA, Behavior, Evolution, and Culture (BEC) Seminar Series (virtual). January 2021.
- UC Irvine, Linguistics Department (virtual). December 2020.
- CMU, Language Technologies Institute (virtual). November 2020.
- OSU, Psychology Department and the CCBBI Imaging Center (virtual). October 2020.
- Georgetown University, Interdisciplinary Program in Neuroscience (virtual). March 2020.
- ❖ *The human language system in the mind and brain*. Innovators in Cognitive Neuroscience Seminar Series. December 2021.
- ❖ *The human language system in the mind and brain*. Talk series “Construction grammar explorations” at the Interdisciplinary Centre for Research on Lexicography, Valency and Collocation at the University of Erlangen-Nürnberg (virtual). November 2021.
- ❖ *The human language system in the mind and brain*. A conference jointly organized by the Tianqiao and Chrissy Chen Institute and AAAS/Science (Virtual). October 2021.
- ❖ *Language in the mosaic of social cognition*. Workshop “Dialogue, memory, and emotion” (Virtual). May 2021.
- ❖ *Efficient communication—not enabling complex thought—is the computational goal of the language system*. MPI for Psycholinguistics 40<sup>th</sup> Anniversary event “The Neurobiology of Language: Key Issues and Ways Forward” (virtual due to COVID19). April 2021. <https://www.mpi.nl/events/neurobiology-language-key-issues-and-ways-forward/videos>



- ❖ **Artificial neural networks as models of language processing in the human brain.** Columbia University seminar “When Machines Speak: Language Processing in Computers and Humans”. (virtual due to COVID19). March 2021.
- ❖ **Broca’s area is not a natural kind.** International Brain Mapping Symposium. (virtual due to COVID19). March 2021.
- ❖ **The neural mechanisms of language processing and their relationship to executive function mechanisms.** C-STAR Lecture Series (<https://cstar.sc.edu/lecture-series/>) (virtual due to COVID19). September 2020. <https://www.youtube.com/watch?v=p6cM8R4roEg>
- ❖ **Artificial Neural Networks as models of language comprehension in the human brain.** RepL4NLP Workshop at ACL (virtual due to COVID19). July 2020.
- ❖ **The language system in the human mind and brain.** Abralino ao Vivo, the talk series of the Brazilian Linguistics Association (<https://www.abralin.org/site/en/evento/abralin-ao-vivo-2020/>) (virtual). May 2020. <https://www.youtube.com/watch?v=hqrsHmherSQ>
- ❖ Cancelled due to COVID19: University of Tübingen Workshop “Grounded and Symbolic Representations in Language Processing” (Tübingen, Germany). May 2020.
- ❖ Cancelled due to COVID19: EvoLang Workshop “Evolution of the Extended Language System” (Brussels, Belgium). April 2020.
- ❖ Cancelled due to COVID10: BU Symposium “Language and Domain General Cognitive Processing in Stroke and Dementia” (Boston, US). April 2020.
- The 20th International Conference of the Italian Association for Artificial Intelligence (AIxIA2021) (virtual). December 2021.
- The 2021 Conference on Empirical Methods in Natural Language Processing (EMNLP) (virtual). November 2021.
- The 11<sup>th</sup> International Conference on Construction Grammar (ICCG11) (virtual). August 2021.
- The 5<sup>th</sup> Usage-Based Linguistics Conference (virtual). July 2021.

**2015-2019:**

- Northwestern University, NUIN (Chicago, IL). November 2019.
- Tufts University, Cognitive and Brain Science (Medford, MA). October 2019.
- Salzburg Mind Brain Annual (SAMBA) Meeting (Salzburg, Austria). July 2019.
- University of Potsdam (Potsdam, Germany). April 2019.
- University of Toronto (Toronto, Canada). March 2019.
- Ecole Normale Supérieure (Paris, France). September 2018.
- University of Connecticut, Brain Imaging Research Center (BIRC) BOLD Seminar Series (Storrs, CT). March 2018.
- Yale-NUS (Singapore). April 2017.
- Mass Eye and Ear Infirmary (Boston, MA). February 2017.
- University of Iowa (Iowa City, IA). December 2016.
- Harvard University, Cognition, Brain & Behavior Seminar Series (Cambridge, MA). December 2016.
- Gothenburg University (Gothenburg, Sweden). September 2016.
- Bogazici University (Istanbul, Turkey). June 2016.
- University College London (London, U.K.). May 2016.
- University of Barcelona (Barcelona, Spain). May 2016.
- University of Iowa (Iowa City, IA). April 2016.
- Brown University, Department of Cognitive, Linguistic and Psychological Sciences (Providence, RI). November 2015.
- National Research University, Higher School of Economics, Center for Cognition and Decision Making



- (Moscow, Russia). September 2015.
- University of Delaware, Psychology Department (Newark, DE). March 2015.
- ❖ **Composition is the core driver of the human language system.** NeurIPS Workshop “Context and compositionality in biological & artificial neural systems” (Vancouver, Canada). December 2019. <https://slideslive.com/38922795/composition-as-the-core-driver-of-the-human-language-system>
- ❖ **How to study language?** Neurobiology of Language Symposium “Windows into Language: Benefits and Challenges of Combining Methods” (Helsinki, Finland). August 2019.
- ❖ **Language processing in autism spectrum disorders.** SPECTRUM Webinar. April 2019. <https://www.spectrumnews.org/features/multimedia/webinars/webinar-evelina-fedorenko-discusses-language-processing-autism-2/>
- ❖ **Semantic composition in the language network.** SfN Symposium “Language Networks Derived from Direct Intracranial Recordings in Humans” (San Diego, CA). November 2018.
- ❖ **Language phenotypes in Autism Spectrum Disorder** (with Helen Tager-Flusberg and Howard Shane). Symposium “New Directions in Neurodevelopmental Disorders” (Cambridge, MA). October 2017.
- ❖ **The roles of language-specific vs. domain-general cognitive resources in language processing and language recovery.** BU Symposium “Language Processing and Recovery in Aphasia” (Boston, MA). April 2017.
- ❖ **Human language as a code for thought.** MIT CompLang group (Cambridge, MA). April 2017.
- ❖ **The language network and its place within the broader architecture of the human mind and brain.** SHBT Interview Day keynote talk (Cambridge, MA). January 2017.
- ❖ **A novel framework for a neural architecture of language.** Brain and Language Research Institute, LPL-CNRS & Université d'Aix-Marseille Language Workshop (Aix-en-Provence, France). July 2016.
- ❖ **Evolution of the human language system.** EvoLang Conference plenary debate with Sharon Thompson-Schill (New Orleans, LA). March 2016.
- ❖ **The language network and its place within the broader architecture of the human mind and brain.** A FENS-Lundbeck Foundation Brain Conference, “Bridging neural mechanisms and cognition” (Rungstedgaard, Denmark). April 2015.
- ❖ **Specialization for language in the human brain.** Center for Academic Research & Training in Anthropogeny (CARTA) symposium “How Language Evolves” (San Diego, CA). February 2015. [https://www.youtube.com/watch?v=jsKXA5icy\\_A](https://www.youtube.com/watch?v=jsKXA5icy_A)
- ❖ **The language network and its place within the broader architecture of the human mind and brain.** Schultink lecture at the LOT Winter School (Amsterdam, Netherlands). January 2015.
- The Architectures and Mechanisms of Language Processing (AMLaP) Conference (Moscow, Russia). September 2019.
- Psycholinguistics in Flanders, PiF (Antwerp, Belgium). May 2016.

#### Before 2015:

- Bangor University, Psychology Department (Bangor, Wales). December 2014.  
[DECLINED INVITATIONS FROM SEPT 2013 TO SEPT 2014 DUE TO ILLNESSES + DEATHS IN THE FAMILY]
- California Institute of Technology (Los Angeles, CA). August 2013.
- Boston Children’s Hospital (Boston, MA). June 2013.
- Massachusetts General Hospital (Boston, MA). May 2013.
- University of Montreal, International Laboratory for Brain, Music, and Sound Research (Montreal, Canada). April 2013.
- University of Pittsburgh (Pittsburgh, PA). April 2013.
- McMaster University (Hamilton, Canada). March 2013.



- Université Paris Descartes, L'Institut de Psychologie (Paris, France). December 2012.
- Université de Lyon (Lyon, France). December 2012.
- University of Potsdam (Potsdam, Germany). December 2012.
- CNRS and Université Aix-Marseille (Marseille, France). November 2012.
- Radboud University and Donders Institute for Brain, Cognition and Behavior (Nijmegen, Netherlands). October 2012.
- INSERM-CEA Cognitive Neuroimaging Unit, Neurospin (Paris, France). October 2012.
- Max Planck Institute for Psycholinguistics (Nijmegen, Netherlands). September 2012.
- SUNY Buffalo, Psychology Department (Buffalo, NY). September 2012.
- Haskins Labs (New Haven, CT). May 2012.
- University of Oregon (Eugene, OR). January 2012.
- Princeton University, Program in Linguistics (Princeton, NJ). October 2011.
- Max Planck Institute for Human Cognitive and Brain Sciences (Leipzig, Germany). October 2011.
- Tufts University (Medford, MA). March 2011.
- New York University, Cognition and Perception Area Meeting (New York, NY). March 2011.
- University of South Carolina (Columbia, SC). February 2011.
- MRC CBU, Attention Group Meeting (Cambridge, U.K.). November 2010.
- INSERM-CEA Cognitive Neuroimaging Unit, Neurospin (Paris, France). November 2010.
- Northeastern University, Language and Cognition Area Meeting (Boston, MA). October 2010.
- Harvard University, Cognition, Brain & Behavior Seminar Series (Cambridge, MA). October 2010.
- Dartmouth College, Cognitive Brown Bag Seminar Series (Hanover, NH). May 2010.
- Ghent University, Psychology Department (Ghent, Belgium). December 2009.
- Université Paris Descartes, L'Institut de Psychologie (Paris, France). November 2009.
- University of Freiburg, Center for Cognitive Science (Freiburg, Germany). November 2009.
- McGill University, Center for Research on Language, Mind and Brain (Montreal, Canada). February 2009.
- Stanford University, Symbolic Systems Program and Department of Linguistics (Stanford, CA). March 2006.
  
- ❖ ***The language network and its place within the broader architecture of the human mind and brain.*** Harvard University Language Workshop (Cambridge, MA). December 2014.
  - [DECLINED INVITATIONS FROM ~ JAN THROUGH SEPT 2014 DUE TO ILLNESSES + DEATHS IN THE FAMILY]
- ❖ ***The neural architecture of language and executive functions in adults with autism spectrum disorders.*** Workshop at the Simons Center for the Social Brain at MIT (Cambridge, MA). September 2013.
- ❖ ***Syntactic processing in language and music: Existence of overlapping circuits does not imply lack of specialized ones.*** International Workshop "Language, Music and Cognition". University of Cologne (Cologne, Germany). September 2012.
  
- The 26th CUNY Conference on Human Sentence Processing (Columbia, SC). March 2013.



## TEACHING:

### Classes taught / co-taught:

Instructor, BCS MIT, “**9.39: Language in the mind and brain**”, Spring 2022.

Instructor, BCS MIT, “**9.S52: Language in the mind and brain**”, Spring 2021.

Instructor, LOT Winter School at UvA (Amsterdam, Netherlands), “*Language and Music*”, January 2015.

Co-Instructor (with Ted Gibson), BCS MIT, “*9.591: Language processing: An introduction to the experimental investigation of language, above the word level*”, Fall 2008.

Co-Instructor (with Ted Gibson), LSA Summer Institute at Stanford University, “*Working memory and informational constraints in language processing*”, Summer 2007.

### Invited external lectures:

[scheduled] Lecturer, Cold Spring Harbor Laboratory, “Genetics and Neurobiology of Language” (Cold Spring Harbor, NY), July 2022 (postponed from 2020 due COVID19).

Lecturer, The 9th IMPRS NeuroCom Summer School at MPI CBS (Leipzig, Germany), June 2019.

Lecturer, The Brains, Minds, and Machines Summer Course (Woods Hole, MA), August 2018.

Lecturer, Cold Spring Harbor Laboratory, “Genetics and Neurobiology of Language” (Cold Spring Harbor, NY), July 2018.

Lecturer, Kavli Summer Institute in Cognitive Neuroscience, July 2018.

Lecturer, Cold Spring Harbor Laboratory, “Genetics and Neurobiology of Language” (Cold Spring Harbor, NY), July-August 2014, July 2016.

### Select invited lectures at MIT/Harvard:

- “*The neural basis of language*”
  - SHBT 205 (Audition: Neural Mechanisms, Perception, and Cognition, graduate class): Spring 2017, 2018, 2019, 2020, 2021, 2022.
  - 9.011 (Systems Neuroscience Core I, graduate class): Fall 2020, 2021
  - 9.10 (Behavioral Neuroscience, undergraduate class): Spring 2012, 2013, 2014
  - 9.59 (Psycholinguistics, undergraduate class): Spring 2007, 2008, 2009, 2010, 2011, 2012
  - 9.71 (fMRI of High-Level Vision, undergraduate class): Fall 2006, 2007, 2009
  - 9.591 (Language Processing, graduate seminar): Fall 2006
- “*Language deficits in autism spectrum disorders*”
  - 9.24 (Disorders and diseases of the nervous system, undergraduate class): Spring 2015, 2016, 2017, 2018, 2019, 2020
- “*White Matter Connectivity of the Language Network*”
  - 9.S916 (White Matter: The Wiring of the Human Brain): Spring 2017



**ADVISING:**

NB: **bold** = current advisees.

**Postdoc advising:**

- **Samantha Floyd** (MIT), September 2021 – present.
- **Cory Shain** (MIT), May 2021 – present.
- **Tamar Regev** (MIT), November 2019 – present.
- Alexander Paunov (MIT), June 2019 – September 2020 (next career stage: Postdoctoral Fellow at NeuroSpin in Paris).
- Rachel Ryskin, postdoc (MIT), June 2016 – July 2019 (co-advising with Ted Gibson), July 2019 – July 2020 (primary advisor) (next career stage: Asst Prof at UC Merced).
- Jayden Ziegler (MIT), June-August 2019 (next career stage: Apple, Inc.).
- Idan Blank (MIT), August 2016 – July 2019 (next career stage: Asst Prof at UCLA).
- Melissa Kline (MIT/Harvard), March 2016 – December 2017 (next career stage: Center for Open Science).
- Olessia Jouravlev (MIT), April 2015 – August 2017 (next career stage: Asst Prof at Carleton University).

**Graduate (PhD and Masters) advising:**

- **Hope Kean** (MIT), PhD, Fall 2020 – present.
- **Greta Tuckute** (MIT), PhD, Fall 2020 – present.
- **Carina Kauf** (MIT; co-advised with Roger Levy), PhD, Spring 2020 – present.
- Lara Rakocevic (MIT; co-advised with Noga Zaslavsky), MEng, Summer 2020 – Fall 2020.
- Jeanne Gallée (SHBT; co-advised with Brad Dickerson), PhD, Fall 2019 – Fall 2020.
- **Eghbal Hosseini** (MIT), PhD, Summer 2019 – present.
- **Saima Malik Moraleda** (SHBT), PhD, Fall 2018 – present.
- **Anna Ivanova** (MIT), PhD, Fall 2017 – present.
- Jayden Ziegler (Harvard; co-advised with Jesse Snedeker), PhD, Fall 2016 – Spring 2019 (next career stage: postdoc at MIT).
- Alex Paunov (MIT; co-advised with Ted Gibson), PhD, Spring 2015 – Fall 2016, Fall 2018 (next career stage: postdoc at MIT).
- Moataz Assem (Bogazici University, Turkey; co-advised with Ahmet Ademoglu), Masters, 2015-2016 (next career stage: PhD student at MRC CBU).
- Idan Blank (MIT; co-advised with Nancy Kanwisher), PhD, Fall 2011 – Spring 2016 (next career stage: postdoc at MIT).

**Dissertation committees:**

- Jennifer Hu (MIT, committee member).
- Jon Gauthier (MIT, committee member).
- Steven Meisler (SHBT, committee member).
- Amanda O'Brien (SHBT, committee member).
- Micha Heilbron (Donders, external examiner), Summer 2022.
- Martin Schrimpf (MIT, committee member), Fall 2021.
- Jayden Lee (BU, committee member), Fall 2021.
- Leyla Tarhan (Harvard, external examiner), Spring 2021.
- Dana Boebinger (SHBT, committee member), PhD, Fall 2021.



- Terri Scott (BU, committee member), PhD, Spring 2020.
- Kyle Mahowald (MIT, committee member), PhD, Spring 2016.

#### Graduate student rotations:

- Thomas Clark (MIT), Spring 2022.
- Bryan Medina (MIT), Spring 2022.
- Eric Martinez (MIT), Spring 2021.
- Sihan Chen (MIT), Spring 2021.
- Carina Kauf (MIT), Spring 2020.
- Tiwa Eisape (MIT), Fall 2019 – Spring 2020.
- Yuan Bian (MIT), Summer 2019 – Spring 2020.
- Jenn Hu (MIT), Spring-Fall 2019.
- Leo Zekelman (SHBT), PhD, Fall 2018 – Summer 2019.
- Halie Olson (MIT), Spring 2018.
- Wendy Georgan (SHBT), Spring-Summer 2018.
- Jeanne Gallee (SHBT), Spring 2016 – Spring 2017.
- Meilin Zhan (MIT), Fall 2016 – Spring 2017.

#### Post-bac advising (full-time RAs):

- **Colton Casto**, Summer 2021 – present.
- **Niharika Jinghan**, Summer 2021 – present.
- **Aalok Sathe**, Summer 2021 – present.
- **Maya Taliaferro**, Summer 2021 – present.
- **Ben Lipkin**, Summer 2020 – present.
- Francis Mulligan, Fall 2021 – Spring 2022.
- Hannah Small, Summer 2019 – Summer 2021 (next career stage: PhD student at JHU).
- Josef Affourtit, Summer 2019 – Summer 2021.
- Alvince Al Pongos, January 2019 – Summer 2021 (next career stage: PhD student at Berkeley/UCSF).
- Hope Kean, Summer 2018 – Summer 2020 (next career stage: PhD student at MIT).
- Nafisa Syed, Summer 2019 (next career stage: Masters student at MIT).
- Greta Tuckute, Summer 2018 (next career stage: Masters student at MIT).
- Matt Siegelman, Summer 2016 – Summer 2018 (next career stage: PhD student at Columbia University).
- Evgeniia Diachek, Fall 2016 – Summer 2018 (next career stage: PhD student at Vanderbilt University).
- Dima Ayyash, Spring 2016 – Summer 2017.
- Caitlyn Hoeflin, Summer 2015 – Fall 2016.
- Brianna Pritchett, Summer 2015 – Summer 2017 (next career stage: Masters student at Georgia Tech).
- Zach Mineroff, Summer 2015 – Summer 2017 (next career stage: Masters student at CMU).

#### Undergraduate advising:

Over the years, I have supervised numerous undergraduate students from MIT, Harvard, Wellesley, Tufts, BU, and other schools in the US (e.g., CalTech, Stanford, RPI, Rice) and Europe. Many of them have gone on to pursue academic careers in Cognitive Science / Neuroscience or related fields (see the Alumni section here: <https://evlab.mit.edu/family/>).



## SERVICE:

### *Committees MIT:*

- MIT Broad Faculty Search Committee, Spring 2021.
- MIT COUHES Committee, Fall 2020 – present.
- BCS Council, Fall 2019 – present.
- BCS Seminars Committee, Fall 2019 – present.

### *Committees – other:*

- Secretary, Society for the Neurobiology of Language, Summer 2019 – present.
- Harvard Program in Speech and Hearing Bioscience and Technology Admissions Committee, 2017 – present.

### *Conference / workshop organization (select):*

- Symposium “Genetics and cognitive neuroscience: What does the future hold?” (CNS; San Francisco, CA). 2017. Organizer.
- Workshop “The Relationship between Executive Functions and Language Processing” (MIT; Cambridge, MA). 2017. Cambridge, MA. Organizer.
- CUNY Conference on Sentence Processing (MIT; Cambridge, MA). 2017. Organizing Committee.

### *NIH reviewing:*

- NICHD Learning Disabilities Innovation Hubs initiative, April 2022
- NINDS Neurological Sciences and Disorders Panel, June 2021.
- NINDS Special Emphasis Panel, February 2020.

### *NSF reviewing:*

- NSF Panel on Cognitive Neuroscience, December 2020.

*Ad-hoc grant reviewer:* NSF; Simons Foundation.

*Senior Editor* at Neurobiology of Language: Summer 2019 – present.

*Ad-hoc journal reviewer:* Behavioral & Brain Sciences; Cell; Cerebral Cortex; Cognition; Cognitive Science; Current Biology; eLife; Human Brain Mapping; Journal of Experimental Psychology: LMC; Journal of Memory & Language; Journal of Cognitive Neuroscience; Journal of Neurophysiology; Journal of Neuroscience; Nature; Nature Communications; Nature Human Behavior; Nature Neuroscience; NeuroImage; PLOS Biology; PLOS Computational Biology; PLOS One; PNAS; Psychological Science; Science; Science Advances; Trends in Cognitive Sciences, among others.

## PROFESSIONAL SOCIETY MEMBERSHIP:

- American Physiological Association
- Association for Psychological Science
- Cognitive Neuroscience Society
- Society for the Neurobiology of Language
- Society for Neuroscience



## PUBLIC OUTREACH (select):

- 2021: World Science Festival, “Mind Your Language: Thought, Metaphor, and Imagination” (a panel discussion with Brian Greene; other participants: Noam Chomsky, Daniel Dor, and Steven Pinker). <https://www.youtube.com/watch?v=6LXHtDUXkS0>
- 2021: Science/AAAS Custom Publishing Office Webinar “The shrinking distance between human and machine: Computing where we end and the technologies begin”. <https://www.sciencemag.org/custom-publishing/webinars/shrinking-distance-between-human-and-machine-computing-where-we-end-and>
- 2021: Alan Alda’s “Science Clear and Vivid” podcast. <https://podcasts.apple.com/us/podcast/how-your-mind-creates-language/id1535702219?i=1000521539107>
- 2021: Stephen Wilson’s “Language Neuroscience” podcast. <https://www.listennotes.com/podcasts/the-language-a-conversation-with-ev-KMSmRzpngiB/>
- 2020: subtitlepod.com, podcast with Patrick Cox, “Is a polyglot’s brain different?” <https://subtitlepod.com/is-a-polyglots-brain-different/>
- 2019: CangaroEnglish, interview with Christian Saunders for “Language and the brain.” <https://youtu.be/d8YM7gy0OmU>
- 2019: BBC, interview with Simon Calder for “The Polyglots. The superlinguists.” <https://www.bbc.co.uk/programmes/w3csz4pt>
- 2018: Science for the Public, interview with Yvonne Stapp for “Language acquisition: How many languages can you learn?” <http://www.scienceforthepublic.org/life/language-acquisition-how-many-languages-can-you-learn>
- 2018: New Yorker, interview with Judith Thurman for “The mystery of people who speak dozens of languages.” <https://www.newyorker.com/magazine/2018/09/03/the-mystery-of-people-who-speak-dozens-of-languages>