

Benjamin Lipkin
Curriculum Vitae
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Contact:

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Education:

2022 – Present	Massachusetts Institute of Technology, Cambridge, MA Degree: Ph.D. Cognitive Science Advisors: Dr. Evelina Fedorenko, Dr. Roger Levy
2016 – 2020	University of Michigan, Ann Arbor, MI Degree: B.Sc. Computational Neuroscience Advisor: Dr. David Brang
2012 – 2016	Bronx High School of Science, Bronx, NY

Research:

2023 – Present	Ph.D. Student Researcher, MIT Advisors: Dr. Evelina Fedorenko, Dr. Roger Levy
2022 – 2023	Ph.D. Student Researcher (Rotational), MIT Advisors: Dr. Joshua Tenenbaum, Dr. Roger Levy
2020 – 2022	Technical Research Associate, MIT Advisor: Dr. Evelina Fedorenko
2018 – 2020	Research Assistant, University of Michigan, Ann Arbor, MI Advisor: Dr. David Brang
2016 – 2018	Research Assistant, University of Michigan, Ann Arbor, MI Advisor: Dr. Jill Becker
2014 – 2015	Research Assistant, Columbia University, New York, NY Advisor: Dr. Eric Kandel

Preprints:

- 2023 Bruffaerts R, Pongos A, Shain C, **Lipkin B**, Siegelman M, Wens V, Sjøgård M, Pantazis D, Blank I, Goldman S, De Tiège X, Fedorenko E. (preprint). Functional identification of language-responsive channels in individual participants in MEG investigations.
- 2023 Regev T*, **Lipkin B***, Boebinger D, Paunov A, Kean H, Norman-Haignere S, Fedorenko E. (preprint). Preserved functional organization of human auditory cortex in individuals missing one temporal lobe from infancy.
- 2021 Shain C, Kean H, **Lipkin B**, Affourtit J, Siegelman M, Mollica F, Fedorenko E. (preprint). Constituent length effects do not support syntactic abstraction in the human language network.

Conference Papers:

- 2023 **Lipkin B**, Wong L, Grand G, Tenenbaum J. (2023). Evaluating statistical language models as pragmatic reasoners. *Proceedings of the Annual Meeting of the Cognitive Science Society*.
- 2022 Srikant S*, **Lipkin B***, Ivanova A, Fedorenko E, O'Reilly UM. (2022). Convergent representations of computer programs in human and artificial neural networks. *Advances in Neural Information Processing Systems (NeurIPS)*.

Journal Papers:

- 2022 **Lipkin B**, Tuckute G, Affourtit J, Small H, Mineroff Z, Kean H, Jouravlev O, Rakocovic L, Pitchett B, Siegelman M, Hoeflin C, Pongos A, Blank I, Kline M, Ivanova A, Shannon S, Sathe A, Hoffman M, Nieto-Castañón A, Fedorenko E. (2022). Probabilistic atlas for the language network based on fMRI data from >800 individuals. *Nature Scientific Data*, 9(1), 1-10.
- 2022 Shain C*, Paunov A*, Chen X*, **Lipkin B**, Fedorenko E. (2022). No evidence of theory of mind reasoning in the human language network. *Cerebral Cortex*, bhac505.
- 2022 Aabedi A, **Lipkin B**, Young JS, Hinkley L, Findlay A, Daniel A, Krishna S, Umbach G, Kaur J, Berger MS, Molinaro A, Brang D, Nagarajan S, Hervey-Jumper SL. (2022). Electrophysiological patterns of glioma-induced neural network remodeling are conserved across tumor subtype. *Neuro-Oncology*, 24(7): vii22.
- 2021 Aabedi A*, **Lipkin B***, Kaur J, Kakaizada S, Reihl S, Young JS, Lee AT, Krishna S, Chang EF, Brang D, Hervey-Jumper SL. (2021). Functional alterations in cortical processing of speech in glioma-infiltrated cortex. *PNAS*, 118(46): e2108959118.
- 2021 Malik-Moraleda S, Cucu T, **Lipkin B**, Fedorenko, E. (2021). The domain-general Multiple Demand system is more active in bilinguals than monolinguals during executive processing. *Neurobiology of Language*, 2(4): 647-664.
- 2021 Aabedi A, **Lipkin B**, Young JS, Krishna S, Kakaizada S, Kaur J, Berger M, Brang D, Hervey-Jumper SL. (2021). Spectro-temporal encoding of speech responses in glioma-infiltrated cortex. *Journal of Neurosurgery*, 135(2): 15.

Conference Abstracts:

- 2023 Shain C*, Paunov A*, Chen X*, **Lipkin B**, Fedorenko E. No evidence of theory of mind reasoning in the human language network. *Human Sentence Processing*, Pittsburgh, PA.
- 2022 Ozernov-Palchik O*, O'Brien A*, Romeo R, Small H, **Lipkin B**, Capella J, Gabrieli J, Fedorenko E. A developmental investigation of the language network in the brain. *Society for Neurobiology of Language*, Philadelphia, PA.
- 2021 Small H*, **Lipkin B***, Affourtit J, Pongos A, Fedorenko E. Differential selectivity of the left and right hemisphere language regions for non-linguistic processing. *Society for Neurobiology of Language*, Virtual.
- 2019 **Lipkin B**, Plass J, Kakaizada S, Valdivia C, Sagher O, Hervey-Jumper SL, Brang D. Electrocorticographic recordings enable intraoperative language network mapping. *Society for Neuroscience*, Chicago, IL.

Invited Talks:

- 2022 Optimization pressures on the neural representational geometry of language. Cog Lunch, MIT, Cambridge, MA.
- 2022 Brain-behavior correlations: Low reliability and statistical power. TEvLab, MIT, Cambridge, MA.
- 2022 Probabilistic atlases of functional brain networks. Software Tools for Open Science Workshop, NIH Office of Data Science Strategy, Bethesda, MD.
- 2021 Human and artificial neural representations of computer programs. TEvLab, MIT, Cambridge, MA.
- 2020 The neural encoding of speech errors in patients with perisylvian brain tumors. Phonetics and Phonology Forum, UC Berkeley, Berkeley, CA.

Open-Source Software:

- 2023 ProbSem: framework for probabilistic semantic parsing. [50+ GitHub stars]

Awards & Fellowships:

- 2022 MIT Presidential Graduate Fellowship.
- 2022 Computationally Enabled Integrative Neuroscience Fellowship.
- 2019 MCubed Scholars Research Fellowship.

Media Coverage:

- 2022 “This is your brain. This is your brain on code.” *MIT News*. [Top 5 Dec. ‘22]

Ad Hoc Reviewing:

2023	Developmental Cognitive Neuroscience; Neural Information Processing Systems (NeurIPS)
2022	International Conference on Machine Learning (ICML) [Top 10%]; Nature Scientific Data; Neural Information Processing Systems (NeurIPS)

Mentorship:

2023 – Present	Sofie Chung (UROP).
2023 – Present	Carol Jiang (UROP).
2021	Elsa Engeriser (UROP).

Volunteer:

2022 – Present	MIT Graduate Application Assistance Program. Cambridge, MA.
2021 – Present	Greater Boston Food Bank. Boston, MA.
2018 – 2019	FEMMES Workshop. Ann Arbor, MI.
2017	Eisenhower Center for TBI. Ann Arbor, MI.