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:

2023	Krishna S, Choudhury A, Keough MB, Seo K, Ni L, Kakaizada S, Lee A, Aabedi A, Popova G, **Lipkin B**, Cao C, Gonzalez CN, Sudharshan R, Egladyous A, Almeida N, Zhang Y, Molinaro AM, Venkatesh HS, Daniel AGS, Shamardani K, Hyer J, Chang EF, Findlay A, Phillips JJ, Nagarajan S, Raleigh DR, Brang D, Monje M, Hurvey-Jumper SL. (2023). Glioblastoma remodelling of human neural circuits decreases survival. *Nature.*
2022	**Lipkin B**, Tuckute G, Affourtit J, Small H, Mineroff Z, Kean H, Jouravlev O, Rakocevic 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.*
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.*
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.*
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.*
2021	Malik-Moraleda S, Cucu T, **Lipkin B**, Fedorenko, E. (2021). The domain-general Multiple Demand system is more active in bilinguals than mono-linguals during executive processing. *Neurobiology of Language.*
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.*

Technical Reports:

2023   Li R, Ben Allal L, Zi Y, Muennighoff N, Kocetkov D, Mou C, Marone M, Akiki C, Li J, Chim J, Liu Q, Zheltonozhskii E, Zhou TY, Wang T, Dehaene O, Davaadorj M, Lamy-Poirier J, Monteiro J, Shliazhko O, Gontier N, Meade N, Zebaze A, Yee MH, Umapathi LK, Zhu J, **Lipkin B**, Oblokulov M, Wang Z, Murthy R, Stillerman J, Patel SS, Abulkhanov D, Zocca M, Dey M, Zhang Z, Fahmy N, Bhattacharyya U, Yu W, Singh S, Luccioni S, Villegas P, Kunakov M, Zhdanov F, Romero M, Lee T, Timor N, Ding J, Schlesinger C, Schoelkopf H, Ebert J, Dao T, Mishra M, Gu A, Robinson J, Anderson CJ, Dolan-Gavitt B, Contractor D, Reddy S, Fried D, Bahdanau D, Jernite Y, Ferrandis CM, Hughes S, Wolf T, Guha A, von Werra L, de Vries H. StarCoder: may the source be with you! *HuggingFace & ServiceNow Research.*

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.*

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.*

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.*

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.*

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:

2023	Santa Fe Institute Complexity GAINs Summer Fellowship.
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.