

Saima Malik Moraleda

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EDUCATION AND TRAINING

Massachusetts Institute of Technology , Cambridge, MA, USA Postdoctoral Associate	2024-now
Harvard University , Cambridge, MA, USA Graduate School of Arts and Sciences, Division of Medical Sciences PhD Candidate in Speech and Hearing Bioscience and Technology (SHBT)	2018-2024
Basque Center on Cognition, Brain and Language , San Sebastián, Spain Master in the Cognitive Neuroscience of Language	2014-2015
Autonomous University of Barcelona , Barcelona, Spain B.Sc. in Psychology	2010-2014
University of California, San Diego , San Diego, CA, USA Study abroad program	2012- 2013

FELLOWSHIPS AND AWARDS

CSHL Genetics & Neurobiology of Language Tuition Award	2026
McGovern Institute Travel & Technology Award	2025
Harvard Horizons Finalist	2025
Society for Neuroscience Professional Development Award	2024
Harvard Horizons Finalist	2023
MIT BCS Diversity, Equity, Inclusion & Justice Award	2023
McGovern Institute Graduate Fellowship	2021-2022
Dingwall Foundation Dissertation Fellowship	2021-2022
Cognitive Neuroscience Society: Graduate Student Award	2020
‘La Caixa’ Fellowship for Postgraduate Studies in North America	2018-2020
Fulbright Fellowship for Postgraduate Studies in the United States (<i>declined</i>)	2018-2020
UPV/EHU Scholarship for Master Students	2014-2015
BCBL Academic Scholarship Waiver of M.Sc. Tuition Fees	2014-2015
Spanish Ministry of Education, Collaboration in Investigation Grant	2013-2014
Autonomous University of Barcelona, Study Abroad Scholarship	2012-2013

PUBLICATIONS

* denotes co-first authorship

^ denotes student mentee

† denotes co-senior authors

In prep:

Malik-Moraleda, S., Vemuri, M. ^, Fedorenko, E. (in prep) *Language proficiency, not age of acquisition, drives response in the language network: evidence from heritage speakers.*

Forgey, M.[^], Blasi, D., **Malik-Moraleda, S.** (in prep) *Quantifying the lack of linguistic diversity in fMRI studies.*

Malik-Moraleda, S., Wolna, A., Cucu, T.[^], & Fedorenko, E. (in prep) *The language and executive functions networks are distinct in bilinguals.*

Wolna, A., **Malik-Moraleda, S.**, & Fedorenko, E. (in prep) *The near-identical brain responses to first vs. second language processing in unbalanced bilinguals.*

Pre-prints:

de Varda, A. G., **Malik-Moraleda, S.**, Tuckute, G., Fedorenko, E. (2025) Multilingual Computational Models Reveal Shared Brain Responses to 21 Languages. *bioRxiv*. Doi: <https://doi.org/10.1101/2025.02.01.636044>

Published:

Poliak, M., **Malik-Moraleda, S.**, Gibson, E. (2026) *Structural and meaning priors shape language comprehension in flexible-word-order languages.* *Journal of Experimental Psychology: Learning, Memory, and Cognition*

Malik-Moraleda, S., Taliaferro, M. [^], Shannon, S., Jhingan, N., Swords, S., Peterson, D. J., Frommer, P., Okrand, M., Sams, J., Cardwell, R., Freeman, C., Fedorenko, E. (2025). *Constructed languages are processed by the same brain mechanisms as natural languages.* *Proceedings of the National Academy of Sciences.*

Malik-Moraleda, S. *, Jouravlev, O. *, Mineroff, Z., Cucu, T. [^], Taliaferro, M. [^], Mahowald, K., Blank, I. A., et al. (2024). *Functional characterization of the language network of polyglots and hyperpolyglots with precision fMRI.* *Cerebral Cortex.* <https://doi.org/0.1101/2023.01.19.524657>

Malik-Moraleda, S., Mahowald, K., Conway, B., & Gibson, E. (2023). *Concepts are restructured during language contact: the birth of “blue” and other color concepts in Tsimane’-Spanish bilinguals.* *Psychological Science.* <https://doi.org/10.1177/09567976231199742>

Conway, B. R., **Malik-Moraleda, S.**, & Gibson, E. (2023). *Color appearance and the end of Hering’s Opponent-Colors Theory.* *Trends in Cognitive Science.* doi: <https://doi.org/10.1016/j.tics.2023.06.003>

Chen, X., Affourtit, J., Ryskin R., Regev, T.I., Norman-Haignere, S. , Jouravlev, O., **Malik-Moraleda, S.**, Kean, H., McDermott, J., †, Varley, R., †, Fedorenko, E. † (2023) *The human language system, including its inferior frontal component in “Broca’s area,” does not support music perception.* *Cerebral Cortex.* doi: <https://doi.org/10.1093/cercor/bhad087>

Malik-Moraleda, S.*, Ayyash, D*, Gallée, J., Mineroff, Z., Jouravlev, O., & Fedorenko, E. (2022) *The universal language network: A cross-linguistic investigation spanning 41 languages and 10 language families.* *Nature Neuroscience.* doi: <https://doi.org/10.1038/s41593-022-01114-5>

Conway, B., **Malik-Moraleda, S.**, Gibson, E. (2022). *Hering’s opponent-colors theory fails a key test in a non-Western culture.* *Proceedings of the Annual Meeting of the Cognitive Science Society.* <https://escholarship.org/uc/item/15j5h368>

Malik-Moraleda, S., Roca, M., Gibson, E. (2022). *Color naming in Tsimane’-Spanish bilinguals indicates that differential experience with content domains affects lexical access.* *Scientific Reports.* doi: <https://doi.org/10.1038/s41598-022-18461-9>

Malik-Moraleda, S., Cucu, T.[^], Lipkin, B., & Fedorenko, E. (2021) *The domain-general Multiple Demand network is more active in bilinguals than monolinguals during executive processing*. *Neurobiology of Language*. doi: https://doi.org/10.1162/nol_a_00058

Malik-Moraleda, S., Orihuela, K., Carreiras, M., & Duñabeitia, J.A. (2017). *The consequences of literacy and schooling for parsing strings*. *Language, Cognition and Neuroscience*. doi: 10.1080/23273798.2017.1313436

INVITED TALKS

Malik-Moraleda, S. (2025) El processament del llenguatge en el cervell, *Keynote Speaker for Col·legi Oficial de Psicologia de Catalunya*, Barcelona, Spain. *(Delivered online due to travel restrictions)*

Malik-Moraleda, S. (2024) Language processing in diverse languages and speakers, *Harvard Horizons Finalists Presentation*, Harvard University, Cambridge, MA, USA.

Malik-Moraleda, S. (2024) Functional characterization of the language network of polyglots and hyperpolyglots, Seminars, *PoLar Lab Lab Meeting*, The Arctic University of Norway, Tromsø, Norway. *(delivered online)*

Malik-Moraleda, S. (2023) Towards a comprehensive understanding of language processing: what we can learn from studying diverse languages, *Harvard Horizons Finalists Presentation*, Harvard University, Cambridge, MA, USA.

Malik-Moraleda, S. (2023) Functional characterization of the language network of polyglots and hyperpolyglots, Seminars, *Bristol Center for Linguistics Seminar*, University of West England, Bristol, UK. *(delivered online)*

Malik-Moraleda, S. (2023) The brains of polyglots and hyperpolyglots, *Polyglot Conference*, Budapest, Hungary.

CONFERENCES

Peer-Reviewed Oral Presentation:

Malik-Moraleda, S., Mahowald, K., Conway, B., & Gibson, E. (2022). Concepts are restructured during language contact: color concepts in Tsimane'-Spanish bilinguals. *AMLAP 2022* (Delivered virtually)

Malik-Moraleda, S., Ayyash, D., Gallée, J., Mineroff, Z., Jouravlev, O., & Fedorenko, E. (2019) The universal language network. *Neuroscience of Language Conference NYU Abu Dhabi*, April 22, 2018

Malik-Moraleda, S., Tillman, K., Barner, D. (2013) Time Words Acquisition in Children. *3rd Berkeley Interdisciplinary Research Conference*, May 4, 2013

Malik-Moraleda, S., Tillman, K., Barner, D. The Acquisition of Time Words in Children. *23rd Psychology Undergraduate Research Conference (UCLA)*, May 10, 2013

Peer-Reviewed Poster Presentation:

Malik-Moraleda, S., Taliaferro, M. [^], Shannon, S., Jhingan, N., Swords, S., Peterson, D. J., Frommer, P., Okrand, M., Sams, J., Cardwell, R., Freeman, C., Fedorenko, E. (2023). Constructed languages are processed by the same brain mechanisms as natural languages. (2023). *Society for the Neurobiology of Language*, October 25, 2023

Malik-Moraleda, S, & Gibson, E (2023) Bilingualism increases noise estimation during sentence processing. Human Sentence Processing, March 10, 2023

Malik-Moraleda, S, Ayyash, D, Gallée, J, Mineroff, Z, Jouravlev, O, & Fedorenko, E (2019) The universal language network. Cognitive Neuroscience Society, May 3, 2020

Malik-Moraleda, S, Orihuela, K, Carreiras, M, Duñabeitia, J.A. (2016) The Impact of Literacy on Character Processing. 22nd Architectures and Mechanisms for Language Processing (AMLAP), June 1, 2016

Outreach:

Malik-Moraleda, S (2023). How does the brain process conlangs? Preliminary results. Brains on Conlangs Event MIT, November 11, 2023

Malik-Moraleda, S (2017). ¿Cómo aprende el cerebro a leer? Brain Awareness Week (BCBL) San Sebastián, Spain, March 17, 2016

Other:

Malik-Moraleda, S. (2014). *Neural Correlates of Language and Task Switching*. Congrés Psicologia i Logopèdia 2014, Autonomous University of Barcelona (UAB), May 18, 2014

ADVISING

Megha Vemuri (National Brain Research Center, co-advised with Arpan Banerjee), Fulbright Fellow 2025

Myles Forgey (Universitat Pompeu Fabra; co-advised with Damián Blasi), Master Thesis. 2024

TEACHING EXPERIENCE

Instructor & Course Developer:

Psychology in the news, Harvard Summer Pre-College Program Summer 2025, 2026

Language in the brain, Harvard Summer Pre-College Program Summer 2025, 2026

Invited Guest Lecturer:

Invited Guest Lecturer. *Bilinguals & Polyglots*. Course: “PSYC2760: Human Language Processing”, Georgia Institute of Technology, March 19, 2026

Invited Guest Lecturer. *Bilinguals & Polyglots*. Course: “PSYC2760: Human Language Processing”, Georgia Institute of Technology, October 28, 2025

Invited Guest Lecturer. *Bilinguals & Polyglots*. Course: “PSYC2760: Human Language Processing”, Georgia Institute of Technology, March 11, 2025

Invited Guest Lecturer. *Bilinguals & Polyglots*. Course: “PSYC2760: Human Language Processing”, Georgia Institute of Technology, October 8, 2024

Invited Guest Lecturer. *Bilingualism, Multilingualism and Polyglotism*. Course: “9.S52: Language in the Mind and Brain”, Massachusetts Institute of Technology, April 19, 2022

Invited Guest Lecturer. *Bilingualism, Multilingualism and Polyglotism*. Course: “Intro to Language”, University of California, Merced, April 27, 2022

Invited Guest Lecturer. *Bilingualism, Multilingualism and Polyglotism*. Course: “9.S52: Language in the Mind and Brain”, Massachusetts Institute of Technology, May 4, 2021

Invited Guest Lecturer. *Theories on Language Acquisition*. Course: “Psychological Processes: Language and Thought”, Autonomous University of Barcelona, March 4, 2014

LEADERSHIP EXPERIENCE

The Pamposh Festival, Kashmir, *Founder and Organizer* 2013 – *present*
Organized an annual literary competition that seeks to promote the use of written Kashmiri among children and young adults in the Anantnag district of Kashmir.

Harvard Student Parent & Caregiver Network, Harvard, *Board Member* 2023 – *present*
Aided with the launch of the organization, which aims to support student parents and caregivers.

Harvard Graduate Women in Science and Engineering, Harvard, *Board Member* 2020 – 2023
Coordinated the HGWISE mentorship program, which pairs ~200 graduate students with mentors.

Biomedical Graduate Student Organization, Harvard, *Board Member* 2019 – 2020
Organized events to build community among the Division of Medical Sciences students at Harvard University.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Society for the Neurobiology of Language	2016-present
Society for Neuroscience	2016-present

TECHNICAL SKILLS

Computational: MATLAB, R, Python

Imaging: fMRI (SPM, CONN, Psychtoolbox), electroencephalography (Vision Analyzer)

LANGUAGES

Spanish – Native Speaker. Complete oral and written production and comprehension.

Kashmiri – Native Speaker. Complete oral production and comprehension.

Catalan – Complete oral and written production and comprehension. Schooling in Catalan until high school.

English – Complete oral and written production and comprehension. Cambridge Certificate of Proficiency.

French – Fluent oral and written production and comprehension (B2 European Framework of Reference).

Urdu – Good oral and written production and comprehension.

Hindi – Good oral production and comprehension.

Arabic – Beginner oral and written production and comprehension.