

# Amilleah Rodriguez

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## Education

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**Doctor of Philosophy** in Linguistics, University of Michigan, Ann Arbor, MI 2026 –

**Bachelor of Arts** in Language and Mind, New York University, New York, NY 2019 – 2024

*Relevant Coursework:* Neural Bases of Language, Language, First Language Acquisition, Cognitive Neuroscience, Grammatical Analysis I & II, Experimental Syntax & Semantics, Linguistics as Cognitive Science, Logic, Computational Neuroscience, Calculus I

## Awards and Funding

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**Rackham Merit Fellowship**, University of Michigan 2026-2031

**Dean's Undergraduate Research Fund**, New York University Spring 2024

- \$1,000 for travel to LREC-COLING 2024

**Dean's Undergraduate Research Fund**, New York University Spring 2023

- James A. Shea Research Scholar Award
- \$900 for online behavioral data collection

## Publications and Manuscripts

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**Rodriguez, A.**, Wang, S., & Pykkänen, L. (2024). *Do neural language models inferentially compose concepts the way humans can?* In Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024) (pp. 5309–5314). ELRA and ICCL. [\[Link\]](#).

Parrish, A., **Rodriguez, A.**, & Pykkänen, L. (in preparation). *Non-local conceptual combination*. [\[Preprint\]](#).

**Rodriguez, A.**, Flower, N., & Pykkänen, L. (in preparation). *Backward surprisal in serial and parallel reading*.

## Conference Presentations

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**Rodriguez, A.**, Flower, N., & Pykkänen, L. (2025, September). *Backward surprisal in serial and parallel reading*. Poster presented at the 17th Annual Meeting of the Society for the Neurobiology of Language, Washington, DC. [\[Abstract\]](#).

Li, B., **Rodriguez, A.**, & Pykkänen, L. (2025, September). *An MEG investigation of adjective order preferences as a syntactic constraint in English*. Poster presented at the 17th Annual Meeting of the Society for the Neurobiology of Language, Washington, DC. [\[Abstract\]](#).

Cataldo, J., **Rodriguez, A.**, & Pykkänen, L. (2025, September). *Structural priming in comprehension with RPVP*. Poster presented at the 17th Annual Meeting of the Society for the Neurobiology of Language, Washington, DC. [\[Abstract\]](#).

**Rodriguez, A.**, Flower, N., & Pykkänen, L. (2024, October). *Backward surprisal can reverse effects of forward surprisal*. Poster presented at the 2nd Annual Minds, Brains, Machines Symposium, New York University, New York, NY.

**Rodriguez, A.**, Wang, S., & Pykkänen, L. (2024, May). *Do neural language models inferentially compose concepts the way humans can?* Poster presented at LREC-COLING 2024, Turin, Italy.

**Rodriguez, A. & Pykkänen, L. (2023, April).** *Non-local phrasal composition in large language models*. Invited talk at UC Berkeley's 7th Annual Society of Linguistics Undergraduate Students Symposium, Berkeley, CA.

Parrish, A., **Rodriguez, A.**, & Pykkänen, L. (2022, October). *Conceptual combination in non-local dependencies*. Poster presented at the 14th Annual Meeting of the Society for the Neurobiology of Language, Philadelphia, PA.

## Research Experience

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- **Junior Laboratory Associate**, Neurolinguistics Lab, New York University Jul. 2024 – Aug. 2025  
Principal Investigator: Liina Pykkänen  
Developed and standardized experimental protocols across MEG, online behavioral studies. Created preprocessing and analysis scripts for dual-experiment dataset. Mentored 1 undergraduate student and 2 graduate students in MEG data collection, and neural data analysis.
- **Assistant Research Scholar**, Neurolinguistics Lab, New York University Jan. 2024 – Jul. 2024  
Principal Investigator: Liina Pykkänen  
Coordinated multi-site MEG data acquisition between NYU and NJIT for faculty research project investigating linguistic computations in the brain. Generated preliminary results from MEG pilot study mapping regions of interest for TMS study investigating causal relationships between brain stimulation and linguistic processing.
- **Lab Manager**, Neurolinguistics Lab, New York University Apr. 2023 – Jan. 2024  
Principal Investigator: Liina Pykkänen  
Designed IRB protocols for MEG neuroimaging and online behavioral data collection. MEG processing and analysis pipeline for RPVP studies, now used across ongoing lab projects under NSF BCS grant.
- **Undergraduate Research Assistant**, Neurolinguistics Lab, New York University Apr. 2022 – Apr. 2023  
Supervisor: Alicia Parrish, Principal Investigator: Liina Pykkänen  
Applied preprocessing methods (filtering, ICA) and artifact rejection to MEG dataset of N = 25 subjects. Conducted spatiotemporal cluster-based permutation tests (rmANOVA) for statistical modeling of compositional semantic effects

## Skills

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- Python, R, JavaScript, HTML/CSS, Go
- MEG (acquisition & analysis), MNE-Python, FreeSurfer
- PsychoPy, PCIBex, Prolific
- Linear mixed-effects models, cluster-based permutation tests
- Git, MATLAB

## Mentorship

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- **Research Mentor**, Neurolinguistics Lab, New York University 2023 – 2025  
Mentored and trained 2 undergraduate students, 2 graduate students, 1 high schooler in experimental design, data collection, and analysis.