

# Shiva Upadhye

---

## CONTACT INFORMATION

Email: shiva.upadhye@uci.edu  
Phone: (650) 484-7171  
3151 Social Sciences Plaza B, Irvine, CA 92617

## Education

<b>University of California, Irvine</b>	Ph.D. in Language Science (Cognitive Psychology & Psycholinguistics)	2026
<b>Advisor:</b> Dr. Richard Futrell		
<b>Research interests:</b> Computational Psycholinguistics; Cognitive Modeling; Language Production; LLM interpretability;		

  

<b>University of California, San Diego</b>		
B.S. in Cognitive Science, Machine Learning & Neural Computation		2020
Minor: Mathematics		

## Peer-Reviewed and Working Papers

- Upadhye S.** & Futrell, R. (2025). Back to the Future: The Role of Past and Future Context Predictability in Incremental Language Production. *Under Review*.
- Upadhye S.\*** Li Y.\*, Li J.\* Attali, N. & Scontras G. (2025). GPT-2's Production and Comprehension of Scope Ambiguity (2025). *PragLM @ Conference on Language Modeling*.
- Upadhye S.** & Futrell, R. (2025). Examining Future Context Predictability Effects in Word-form Variation and Word Choice. *The Proceedings of the 47th Annual Meeting of the Cognitive Science Society*.
- Upadhye S.,\*** Li J.,\* & Futrell, R. (2025). SPACER: A Parallel Dataset of Speech Production And Comprehension of Error Repairs. *The 14th edition of the Workshop on Cognitive Modeling and Computational Linguistics*.
- Upadhye S.** & Futrell, R. (2023). Typing time PWI: A scalable paradigm for studying lexical production. *Proceedings of the 45th Annual Meeting of the Cognitive Science Society*.
- Upadhye S.,** Bergen L., & Kehler, A (2020). Predicting Reference: What do Language Models learn about Discourse Models? *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing*.

## Conference Presentations

- Yeaton, JD.\*, **Upadhye S.\***, Yi, E., & Hickok, G. (2025). Speakers and typers adapt their planning strategies to meet sentence production demands. *17th Annual Meeting of the Neurobiology of Language*. Washington DC, USA. (**Poster**)
- Upadhye S.\*** Li Y.\*, Li J.\* Attali, N. & Scontras G. (2025). GPT-2's Production and Comprehension of Scope Ambiguity (2025). *PragLM @ Conference on Language Modeling*. Montreal, Quebec, Canada. (**Poster**)
- Upadhye S.** & Futrell, R. (2025). Examining Future Context Predictability Effects in Word-form Variation and Word Choice (2025). *47th Annual Meeting of the Cognitive Science Society*. San Francisco, CA, USA. (**Talk**)

**Upadhye S.**, Yeaton, JD., Yi, E., & Hickok, G. (2025). Typing Fluency reveals Psycholinguistic Dynamics of Sentence Production. *The 38th Annual Conference on Human Sentence Processing*. College Park, MD, USA. (**Poster**)

**Upadhye S.\***, Li J.\* & Futrell, R. (2025). SPACER: A Parallel Dataset of Speech Production And Comprehension of Error Repairs. *The 38th Annual Conference on Human Sentence Processing*. College Park, MD, USA. (**Poster**)

Li Y., Li J., **Upadhye S.**, & Scontras, G. (2025). Language models prefer ambiguous utterances following informative contexts. *The 38th Annual Conference on Human Sentence Processing*. College Park, MD, USA. (**Poster**)

Yeaton, JD, **Upadhye, S.**, Futrell, R., & Hickok, G. (2024). The (Non-)Sentence Repetition Task: A novel assessment of expressive and receptive syntactic competence. *16th Annual Meeting of the Society for the Neurobiology of Language*. Brisbane, Australia. (**Poster**)

**Upadhye S.**, Attali N. & Scontras, G. (2023). The role of world knowledge for interpreting aspect ambiguity. *Tenth Biennial Meeting of Experimental Pragmatics*. Paris, France. (**Poster**)

Li, J.\* , **Upadhye, S.\*** & Futrell, R. (2023) Bridging production and comprehension: A computational model of error generation and correction. *The 36th Annual Conference on Human Sentence Processing*. Pittsburgh, PA, USA. (**Poster**)

**Upadhye S.** & Futrell R. (2022). Information-theoretic analysis of disfluencies in speech. *NeurIPS 2022 Workshop on Information Theoretic Principles in Cognitive Systems*. New Orleans, LA, USA. (**Poster**)

#### Other Experience

**Data Analyst** Oct 2020 - July 2021

#### Intelligent Fiber Optic Systems Corporation

- Developed signal processing and calibration solutions for fiber optic sensing systems.
- Assisted in the development and writing of Small Business Innovation Research (SBIR) grants focusing on renewable energy applications of fiber-optic sensing.
- Co-inventor on issued US Patent "Dual cavity interferometer sensor system" (US20250224295A1).

**Computational Neurosciences Intern** Oct 2019 - Jan 2020

#### National Center for Microscopy and Imaging Research

- Developed software for automated segmentation of 3-D neuronal images for CDeep3m (Haberl et al. 2018)

#### Pedagogy & Mentorship

**UC IRVINE** 2025

#### Instructor

Introduction to Linguistics (*Summer Session I*)

#### Teaching Assistant

2022 - Current

Introduction to Linguistics, Research methods in Psychology,  
Psychology of Language, Public Policy

#### DTEI Graduate Summer Fellow

2022

Fellowship awarded by the Division of Teaching Excellence and Innovation (DTEI) for development and improvement of hybrid pedagogy.

#### Graduate Mentor

2024 - Current

Mentees: Mackenzie Leigh Maxwell, Frankie Boren  
**UC SAN DIEGO**  
**Instructional Assistant** in Computational Linguistics

2020

**Service and  
Awards**

**Program Chair and Organizer**

Society for Computation in Linguistics (2024)

**Reviewer**

Society for Computation in Linguistics (SCiL 2024)

California Meeting on Psycholinguistics (CAMP 2023-2025)

SoCal NLP (2022)

**Awards**

UCI Center for Theoretical Behavioral Sciences (CTBS) Travel Award (2025)

NeurIPS InfoCog Travel Award (2022)

Graduate Dean's Fellowship, University of California, Irvine (2021 -)

**Skills**

**Programming and Software:** Python, R, MATLAB, Clojure, Julia, SQL, STAN, PCIBex, PsychoPy