Forrest Davis

Curriculum Vitae

Employment

- 2023- **Assistant Professor**, Department of Computer Science, Colgate University, Hamilton, NY.
- 2022-2023 **Postdoctoral Associate**, Department of Linguistics and Philosophy, Massachusetts Institute of Technology, Cambridge, MA.

Education

2022 **PhD**, Department of Linguistics, Cornell University, Ithaca, NY.

Advisor: Marten van Schijndel

Committee Members: Dorit Abusch, Miloje Despić, John Whitman

Dissertation - On the Limitations of Data: Mismatches between Neural Models of Language and Humans

- 2020 MA, Linguistics, Cornell University, Ithaca, NY.
- 2017 BA, Computer Science and Mathematics, Columbia University, New York, NY.

Awards

- 2022 Sage Fellowship, Cornell University
- 2021 ACL 2021 Outstanding Reviewer
- 2020 President's Travel Fund for the Humanities, Cornell University
- 2019 Graduate School Conference Travel Grant, Cornell University
- 2019, 2018 Linguistics Department Conference Travel Grant, Cornell University
 - 2018 Sage Fellowship, Cornell University
- 2017, 2016 Work Exemption Program Grant, Columbia University

Publications

Journal Articles

2021 Finding Event Structure in Time: What Recurrent Neural Networks can tell us about Event Structure in Mind

Forrest Davis and Gerry T.M. Altmann

In Cognition, 213. 2021.

Conference Proceedings

2024 What Language Models Can Tell Us About Learning Adjectives

Megan Gotowski and Forrest Davis (equal contribution)

Proceedings of the Linguistic Society of America, Vol. 9, No. 1.

Peer-Reviewed Proceedings

2024 Training an NLP Scholar at a Small Liberal Arts College: A Backwards Designed Course Proposal

Grusha Prasad and Forrest Davis (equal contribution)

Proceedings of the Sixth Workshop on Teaching NLP (collocated with ACL 2024)

2023 Can Language Models Be Tricked by Language Illusions? Easier with Syntax, Harder with Semantics

Yuhan Zhang, Edward Gibson and Forrest Davis

Proceedings of the 2023 Conference on Computational Natural Language Learning (CoNLL 2023)

2022 Incremental Processing of Principle B: Mismatches Between Neural Models and Humans Forrest Davis

Proceedings of the 2022 Conference on Computational Natural Language Learning (CoNLL 2022; 26%)

2021 Uncovering Constraint-Based Behavior in Neural Models via Targeted Fine-Tuning Forrest Davis and Marten van Schijndel

Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics (ACL 2021; 21.3%)

2020 Discourse structure interacts with reference but not syntax in neural language models Forrest Davis and Marten van Schijndel

Proceedings of the 2020 Conference on Computational Natural Language Learning (CoNLL; 23.3%)

2020 Interaction with Context During Recurrent Neural Network Sentence Processing Forrest Davis and Marten van Schijndel

Proceedings of the 42nd Annual Meeting of the Cognitive Science Society (CogSci 2020)

2020 Recurrent Neural Network Language Models Always Learn English-Like Relative Clause Attachment

Forrest Davis and Marten van Schijndel

Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL 2020; 22.7%)

2017 Linguistically Rich Vector Representations of Supertags for TAG Parsing Dan Friedman, Jungo Kasai, R Thomas McCoy, Robert Frank, Forrest Davis, Owen Rambow Proceedings of the 13th International Workshop on Tree Adjoining Grammars and Related Formalisms

Presentations (reviewed by abstract)

2025 Humans vs. Machines: Comparing Adjective Learning Performance
 Megan Gotowski and Forrest Davis (equal contribution)
 2025 Linguistic Society of America Annual Meeting, Philadelphia, Pennsylvania

2024 Rage Against the Machine: Comparing Human and Model Performance with Adjective Learning

Megan Gotowski and Forrest Davis (equal contribution)

49 Boston University Conference on Language Development, Boston, Massachusetts

2024 What Language Models Can Tell Us About Learning Adjectives

Megan Gotowski and Forrest Davis (equal contribution)

Talk at 2024 Linguistic Society of America (LSA) Annual Meeting, New York, New York

2020 Recurrent neural networks use discourse context in human-like garden path alleviation

Forrest Davis and Marten van Schijndel

33rd Annual CUNY Conference on Human Sentence Processing (CUNY 2020), Amherst, Massachusetts

2020 Categorical and gradient dimensions of stress in English compounds

Forrest Davis and Abigail C. Cohn

2020 Workshop of the Berkeley Linguistics Society (BLSW 2020), Berkeley, California

2020 The relationship between lexical frequency, compositionality, and phonological reduction in English compounds

Forrest Davis and Abigail C. Cohn

94th Annual Meeting of the Linguistic Society of America (LSA 2020), New Orleans, Lousianna

2019 Effects of lexical frequency and compositionality on phonological reduction in English compounds

Forrest Davis and Abigail C. Cohn

The 25th Architectures and Mechanisms of Language Processing Conference (AMLaP 2019), Moscow, Russia

2019 The pragmatics of single wh-in situ questions in English

Forrest Davis

93rd Annual Meeting of the Linguistic Society of America (LSA 2019), New York, NY

Invited Talks

- 2024 Neural Language Models are not Models of Human Linguistic Knowledge CSoL, University of Toronto
- 2023 Neural Language Models are not Modeling Human Linguistic Behavior FALCoN Lab, University of Georgia
- 2023 Principle B, Processing, and Neural Models of Language UMass Amherst
- 2023 Principle B, Processing, and Neural Models of Language Language and Cognition Group, Harvard University
- 2022 What do Neural Models of Language Actually Model? University of Sheffield
- 2021 Investigating Competing Training Signals in Language Stanford University
- 2019 Recurrent Neural Network Syntactic Representations in Linguistic Contexts
 University of Connecticut
- 2019 Language as a science Peddie School

Teaching

Spring 2025	COSC 482 - Independent Research: Music Recommendation	Colgate
Spring 2025	COSC 482 - Independent Research: Mass Personalization	Colgate
Spring 2025	COSC 492 - Independent Research: Using Machine Learning Models to Delineate Tree	
	Crowns in Aerial Imagery of Forests in Siberia	Colgate
Spring 2025	COSC 410 - Applied Machine Learning	Colgate
Fall 2024	COSC 482 - Independent Research: Spanish Dialect Identification	Colgate
Fall 2024	COSC 482 - Independent Research: Modeling Agreement Errors	Colgate
Fall 2024	COSC 426 - Natural Language Processing	Colgate
Fall 2024	COSC 101 - Introduction to Computing I	Colgate
Spring 2024	COSC 482 - Independent Research: Semantic Composition in Chinese L	.LMs Colgate
Spring 2024	COSC 101 - Introduction to Computing I	Colgate
Spring 2024	COSC 410 - Applied Machine Learning	Colgate
Fall 2023	COSC 101 - Introduction to Computing I	Colgate
Fall 2023	COSC 480 - Topics in Computer Science: Natural Language Processing	Colgate
Spring 2023	Special Seminar: Topics in Computational Linguistics	MIT
Fall 2022	Special Seminar: Methods in Computational Linguistics	MIT
Spring 2022	Superlinguistics: Comics, Signs and Other Sequential Images	Cornell University
Spring 2021	Introduction to Cognitive Science	Cornell University
Spring 2021	Pragmatics	Cornell University
Fall 2020	Language and Law	Cornell University
Spring 2020	Computational Linguistics	Cornell University
Fall 2019	Guest Lecture, Phonology I: Prosodic representation of English compounds	Cornell University
Fall 2019	Introduction to Syntax and Semantics	Cornell University
Spring 2019	Pragmatics	Cornell University
Spring 2019	Computational Linguistics	Cornell University
Fall 2018	Introduction to Linguistics	Cornell University
	Montoring	

Mentoring

Undergraduate Research at Colgate University

- Spring 2025 Erika Heng '25, Saran Duncan '25, Sophia Goffe '25
 - Fall 2024 Jaanhvi Agarwal '25, Kayla Mistica '25
- Spring 2024 Shafi Islam '24

Service

- 2024-2025 Mind, Brain and Behavior Initiative committee member
 - 2024 NAACL 2024 Student Research Workshop Mentor
 - 2023- CS Bytes Coordinator, Colgate University
 - 2023- Academic Liaison for Women and Men's Swimming and Diving, Colgate University
 - 2019 Senior Editor of Semantics and Linguistic Theory (SALT 29)
- 2018–2019 Graduate Student Representative on New Faculty Hiring Committee

- 2018 Junior Editor of Semantics and Linguistic Theory (SALT 28)
- 2018 Annual Meeting for the North East Linguistics Society (NELS 49) Committee Member
- 2017–2019 Cornell Linguistics Circle web admin

Reviewing

Area CogSci 2024, 2025

Chair/Metareviewer

Conferences**ACL** 2019, 2020, 2021, 2022, 2023 **CoNLL** 2019, 2020, 2021, 2022, 2023, 2024 **EMNLP** 2021, 2022, 2023 **HSP** 2023 **Penn Linguistics Conference** 2023, 2024, 2025 **LSA** 2023, **COLM** 2024, **NAACL SRW** 2024 Journals Cognition, Glossa Psycholinguistics, Computational Linguistics

Technical Skills

Programming Python, C, C++, Matlab, R, Java, AWK, HTML Languages

 $\begin{array}{ll} \text{Human} & \text{English, French (Intermediate), Hindi/Urdu (Intermediate)} \\ \text{Languages} & \end{array}$

Updated

Last Updated March 13, 2025