

Yiyun Zhao
Ph.D. Candidate · NLP · Psycholinguist

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RESEARCH INTEREST	Natural Language Processing: Neural Network Probing, Transfer Learning. Language Evolution: Harmonic Word Ordering, Dependency Length Minimization.		
EDUCATION BACKGROUND	Ph.D. in Computational Linguistics, minor in Cognitive Science <i>University of Arizona</i> , Tucson, U.S.		since 2017
	M.Sc. in Evolution of Language & Cognition (with distinction) <i>University of Edinburgh</i> , Edinburgh, U.K.		2016
	B.A. in English & Linguistics <i>Beijing Foreign Studies University</i> , Beijing, China		2015
PRESENTATION PUBLICATION	Conference Presentation (<i>abstract reviewed</i>) <ul style="list-style-type: none">• 2020 Jan Yiyun Zhao, Masha Fedzechkina. Learners' harmonic preferences in head ordering are modulated by lexical retrieval difficulty. The 94th Annual Meeting of the Linguistic Society of America, New Orleans, LA. (This talk was also presented in Arizona Linguistics Circle 13, Tucson, AZ.)• 2018 Feb Yiyun Zhao. Synonyms are lost during cultural transmission without an explicit bias against synonyms. Workshop on Emergence of Universals at The Ohio State University. Columbus, OH.• 2013 Oct Yiyun Zhao. The distinctive characteristics of Chinese neologisms. The First Boya Undergraduate Research Forum at Beijing Foreign Studies University. Beijing. Articles <ul style="list-style-type: none">• Yiyun Zhao, Steven Bethard (April 2020). "How does BERTs attention change when you fine-tune? An analysis methodology and a case study in negation scope". In: <i>Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics</i>.• Bethard, Steven, Egoitz Laparra, Sophia Wang, Yiyun Zhao, Ragheb Al-Ghezi, Aaron Lien, and Laura Lopez-Hoffman (June 2019). "Inferring missing metadata from environmental policy texts". In: <i>Proceedings of the Third Joint SIGHUM Workshop on Computational Linguistics for Cultural Heritage, Social Sciences, Humanities and Literature</i>. Work in Progress <ul style="list-style-type: none">• w/ Zeyu Zhang and Steven Bethard. Injecting temporal knowledge into pre-trained models (on-going).• w/ Lucy Hall Hartley, Jian Gang Ngui and Steven Bethard. Probing telicity knowledge in humans and neural networks. (on-going).		

- w/ Masha Fedzechkina and Charlie Torres. Dependency length minimization using the artificial language learning paradigm. (on-going).

ACADEMIC WORKING EXPERIENCE

Research Assistant
University of Arizona

Computational Language Understanding Lab

since 2019 Feb

- [eNEPA Harnessing the Power of Big Data Project](#)
 - Wrote rule-based models for title-matching and lead agency detection tasks.
 - Built the annotation dataset for title-matching using tf-idf, which was used for the search algorithm in the eNEPA database.
- Temporal Histories of Your Medical Event (THYME) project
 - Probed the negation knowledge before and after fine-tuning the large pre-trained contextualized embedding.
 - Explored the self-attention scores to select substitute words.

Language Evolution, Acquisition & Processing Lab

2018 Aug - 2019 Jun

- Dependency Length Minimization Project
 - designed and implemented artificial language learning experiments
 - wrote python scripts to automatically generate experimental code on FindingFive (json style)
 - wrote python scripts to auto-annotate participants production data
 - analyzed experimental results using linear mixed effect model in r

Instructor & Teaching Assistant
University of Arizona

- LING/PHIL/PSY 432 Psychology of Language. *Teaching Assistant* 2018F
- LING/PSY/SLHS 341 Language Development. *Instructor* 2017F
- LING 150 Language in the World. *Teaching Assistant* 2017F, 2018S

INDUSTRIAL WORKING EXPERIENCE

Data Scientist
[FindingFive](#)

- Optimized the queries to retrieve users records in MongoDB database
- Built statistical models to predict online participants behavior using logistic regression, rule-based sentiment analysis and topic modeling in Python and R
- Summarized the results and wrote up an analysis report

AWARDS GRANTS

University of Arizona, *GPSC travel grant* \$655 2019
 University of Arizona, Linguistics Department *travel grant* \$200 2018, 2020
 The First Boya Undergraduate Research Forum, *2nd Prize for the Best Presentation of the Linguistics Section* 2013
 Beijing Foreign Studies University, *Liu Shimu Scholarship* 2012

**LANGUAGE
SKILLS**

Programming Languages: Python, R.
Natural Languages: Mandarin(native), English(fluent), Spanish(basics)

REFERENCES

Dr. Steven Bethard, *Assistant Professor of Information*

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Dr. Masha Fedzechkina, *Assistant Professor of Linguistics*

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Dr. Mike Hammond, *Professor of Linguistics*

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