Zoey (Ying) Liu

CONTACT INFORMATION	Department of Linguistics 4131 Turlington Hall University of Florida Gainesville, FL 32611-5454	*Email:* liu.ying@ufl.edu *Website:* https://zoeyliu18.github.io *Lab:* https://ufcompling.github.io

<small>RESEARCH INTERESTS</small>

Computational linguistics; multilingual low-resource natural language processing.

<small>ACADEMIC EMPLOYMENT</small>

Tenure-Track Assistant Professor   Jan 2023 -
Department of Linguistics, University of Florida, Gainesville, FL USA

Courtesy Assistant Professor   2022 June - Dec
Department of Linguistics, University of Florida, Gainesville, FL USA

Postdoctoral Research Fellow   2020 - 2022
Department of Computer Science, Boston College, Chestnut Hill, MA USA

<small>EXPERIENCE</small>

Software Development Research Intern   Summer 2019
Cognitive Computing Lab, Baidu, PRC

<small>EDUCATION</small>

Ph.D., Linguistics   2016 - 2020
University of California, Davis, CA USA

M.A., Linguistics   2014 - 2016
University of California, Davis, CA USA

B.A., Translation   2010 - 2014
Nankai University, Tianjin PRC

<small>AWARDS</small>

Computing Innovation Fellowship   2021 - 2023
National Science Foundation / Computing Research Association /
Computing Community Consortium
Research Project: Data-driven Evaluation for Crosslinguistic Low-resource NLP
Total Cost: $265,515

Graduate Travel Award   2018
University of California, Davis, CA USA

Combined Summer Awards   2015
University of California, Davis, CA USA

Secondary Scholarship   2011 - 2013
Nankai University, Tianjin PRC

First Prize of Shandong Provincial Mathematics Competition   2009
Shandong Province, PRC

For all publications and presentations, * indicates students, advisees, or mentees

JOURNAL ARTICLES 2022. **Zoey Liu**. A Multifactorial Approach to Crosslinguistic Constituent Orderings. In *Linguistics Vanguard*.

2022. **Zoey Liu** and Emily Prud'hommeaux. Data-driven Model Generalizability in Crosslinguistic Low-resource Morphological Segmentation. *Transactions of the Association for Computational Linguistics (TACL)* 10:393-413.

Natalia Levshina, Savithry Namboodiripad ...... **Zoey Liu** ...... Anastasia Panova and Natalia Stoynova. Why we need a gradient approach to word order. In *Linguistics: An Interdisciplinary Journal of the Language Sciences*.

2020. **Zoey Liu**. Mixed Evidence for Crosslinguistic Dependency Length Minimization. *STUF-Language Typology and Universals* 73(4), 605-633.

2018. Santiago Barreda and **Zoey Liu**. Apparent-Talker Height is Influenced by Mandarin Lexical Tone. *The Journal of the Acoustical Society of America, EL* 143(2), EL61-EL66.

PEER-REVIEWED PROCEEDING PAPERS 2023. Jordan Kodner, Sarah Payne*, Salam Khalifa* and **Zoey Liu**. Morphological Inflection: A Reality Check. To appear in *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (ACL)*.

2023. Robbie Jimerson*, **Zoey Liu** and Emily Prud'hommeaux. An (unhelpful) guide to selecting the best ASR architecture for your under-resourced language. To appear in *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (ACL)*.

2023. **Zoey Liu**, Lauren Lamdar*, Stefanie Wulff and Kenji Sagae. Double PP Constituent Ordering Preferences in English Early Child Language. To appear in *Proceedings of the 45th Annual Conference of the Cognitive Science Society (CogSci)*.

2023. Jordan Kodner, Salam Khalifa*, Sarah Payne* and **Zoey Liu**. Re-Evaluating the Evaluation of Neural Morphological Inflection Models. To appear in *Proceedings of the 45th Annual Conference of the Cognitive Science Society (CogSci)*.

2023. **Zoey Liu**, Justin Spence and Emily Prud'hommeaux. Investigating data partitioning strategies for crosslinguistic low-resource ASR evaluation. In *Proceedings of the 17th Conference of the European Chapter of the Association for Computational Linguistics (EACL)*, 123-131.

2023. **Zoey Liu**, Justin Spence and Emily Prud'hommeaux. Studying the impact of language model size for low-resource ASR. In *Proceedings of the 6th Workshop on the Use of Computational Methods in the Study of Endangered Languages (ComputEL-6)*, 77-83.

2023. **Zoey Liu** and Stefanie Wulff. The development of dependency length minimization in early child language: A case study of the dative alternation. In *Proceedings of the 2023 International Conference on Dependency Linguistics (Depling)*, 1-8.

2022. Duanchen Liu*, **Zoey Liu**, Qingyun Yang*, Yujing Huang and Emily Prud'hommeaux. Evaluating the Performance of Transformer-based Language Models for Neuroatypical Language. In *Proceedings of the 29th International Conference on Computational Linguistics*.

2022. **Zoey Liu**, Crystal Richardson*, Richard Hatcher and Emily Prud'hommeaux. *Not always about you:* Prioritizing community needs when developing endangered language technology. In

Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL), 3933-3944.

2022. **Zoey Liu**, Justin Spence and Emily Prud'hommeaux. Enhancing Documentation of Hupa with Automatic Speech Recognition. In *The 5th Workshop on the Use of Computational Methods in the Study of Endangered Languages (ComputEL-5)*, 187-192.

2022. **Zoey Liu**, Tiwa Eisape*, Emily Prud'hommeaux and Joshua Hartshorne. Data-driven Crosslinguistic Syntactic Transfer in Second Language Learning. In *Proceedings of the 44th Annual Conference of the Cognitive Science Society (CogSci)*, 1903-1911.

2022. **Zoey Liu**, Ria Upreti*, Mathew A. Kramer* and Savithry Namboodiripad. Does One Size Fit all in Crosslinguistic Dependency Length Minimization? In *Proceedings of the 44th Annual Conference of the Cognitive Science Society (CogSci)*, 2066-2073.

2022. Khuyagbaatar Batsuren, Omer Goldman ...... **Zoey Liu** ...... Reut Tsarfaty and Ekaterina Vylomova. UniMorph 4.0: Universal Morphology. In *The 13th Language Resources and Evaluation Conference (LREC)*, 840-855.

2021. **Zoey Liu**. The Crosslinguistic Relationship between Ordering Flexibility and Dependency Length Minimization: A Data-Driven Approach. In *Proceedings of The Society for Computation in Linguistics (SCiL)*, 264-274.

2021. **Zoey Liu**, Robbie Jimerson* and Emily Prud'hommeaux. Morphological Segmentation for Seneca. In *Proceedings of The First Workshop on NLP for Indigenous Languages of the Americas (AmericasNLP)*, 90-101.

2021. **Zoey Liu** and Emily Prud'hommeaux. Dependency Parsing Evaluation for Low-Resource Spontaneous Speech. In *Proceedings of The Second Workshop on Domain Adaptation for NLP (Adapt-NLP)*, 156-165.

2021. **Zoey Liu** and Masoud Jasbi. English Negative Constructions and Communicative Functions in Child Language. In *Proceedings of The 43rd Annual Conference of the Cognitive Science Society (CogSci)*, 2957-2963.

2021. William Dyer, Richard Futrell, **Zoey Liu** and Gregory Scontras. Predicting cross-linguistic adjective order with information gain. In *Findings of the Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (Findings of ACL)*, 957-967.

2021. Christine Yang*, Duanchen Liu*, Qingyun Yang*, **Zoey Liu** and Emily Prud'hommeaux. Predicting pragmatic discourse features in the language of adults with autism spectrum disorders. In *Proceedings of the Student Research Workshop at The Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP SRW)*, 284-291.

2021. Tiago Pimentel, Maria Ryskina ...... **Zoey Liu** ...... Ben Ambridge and Ekaterina Vylomova. SIGMORPHON 2021 Shared Task on Morphological Reinflection: Generalization Across Languages. In *Proceedings of the 18th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology (SIGMORPHON)*, 229-259.

2020. **Zoey Liu** and Emily Morgan. Frequency-dependent Regularization in Constituent Ordering Preferences. In *Proceedings of the 42nd Annual Conference of the Cognitive Science Society (CogSci)*, 2990-2996.

2020. Mingming Sun, Wenyue Hua, **Zoey Liu**, Xin Wang, Kangjie Zheng and Ping Li. A Predicate-Function-Argument Annotation of Natural Language for Open-Domain Information eXpression. In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2140–2150.

2019. **Zoey Liu**. A Comparative Corpus Analysis of PP Ordering in English and Chinese. In *Proceedings of the First Workshop on Quantitative Syntax (Quasy, SyntaxFest)*, 33-45.

2018. Justin Spence, **Zoey Liu**, Kayla Palakurthy and Tyler Lee-Wynant. Syntactic Annotation of a Hupa Text Corpus. In Proceedings of *Working Papers in Athabaskan Languages: Alaska Native Language Center Working Papers*.

PEER-REVIEWED PROCEEDING ABSTRACTS

2021. **Zoey Liu** and Emily Morgan. Frequency-dependent Regularization in Syntactic Constructions. In *Proceedings of The Society for Computation in Linguistics (SCiL)*, 387-389.

2021. Alex Kramer* and **Zoey Liu**. A Data-driven Approach to Crosslinguistic Structural Biases. In *Proceedings of The Society for Computation in Linguistics (SCiL)*, 344-346.

2019. **Zoey Liu**. Quantifying Structural and Lexical Constraints in PP Ordering Typology. In *Proceedings of The Society for Computation in Linguistics (SCiL)*, 306-309.

2018. **Zoey Liu** and Kenji Sagae. Dependency Length Minimization and Lexical Frequency in Prepositional Phrase Ordering in English. In *Proceedings of The Society for Computation in Linguistics (SCiL)*, 189-192.

INVITED TALKS

2021. **Zoey Liu.** Data-driven Approach to Gradience in Languages and Machines. Language and Cognition, Harvard University, November 9th.

2021. **Zoey Liu.** A Data-driven Approach to Structural Variation. Department of Linguistics, University of California, Davis, January 11th.

2020. **Zoey Liu.** Data-driven Crosslinguistic Modeling of Constituent Ordering Preferences. Ted-Lab, Department of Brain and Cognitive Sciences, MIT, October 6th.

2020. **Zoey Liu.** Frequency-dependent Regularization in Constituent Ordering Preferences. NERT, Department of Linguistics, Georgetown University, March 31st.

CONFERENCE AND WORKSHOP PRESENTATIONS

2023. **Zoey Liu**, Ria Upreti*, Mathew A. Kramer* and Savithry Namboodiripad. Does One Size Fit all in Crosslinguistic Dependency Length Minimization? Oral presentation at *The 16th International Cognitive Linguistics Conference*.

2023. **Zoey Liu**, Justin Spence and Emily Prud'hommeaux. Studying the impact of language model size for low-resource ASR. Oral presentation at *The 6th Workshop on the Use of Computational Methods in the Study of Endangered Languages (ComputEL-6)*.

2023. **Zoey Liu** and Stefanie Wulff. The development of dependency length minimization in early child language: A case study of the dative alternation. Poster presentation at *The Seventh International Conference on Dependency Linguistics (Depling, GURT/SyntaxFest 2023)*.

2022. **Zoey Liu**, Tiwa Eisape*, Emily Prud'hommeaux and Joshua Hartshorne. Data-driven Crosslinguistic Syntactic Transfer in Second Language Learning. Poster presentation at *Architectures and Mechanisms of Language Processing (AMLaP)*.

2022. **Zoey Liu** and Emily Prud'hommeaux. Data-driven Model Generalizability in Crosslinguistic Low-resource Morphological Segmentation. Oral presentation at *The 2022 Conference of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL)*.

2022. **Zoey Liu**, Tiwa Eisape*, Emily Prud'hommeaux and Joshua Hartshorne. Data-driven Crosslinguistic Syntactic Transfer in Second Language Learning. Poster presentation at *The 44th Annual Conference of the Cognitive Science Society (CogSci)*.

2022. **Zoey Liu**, Ria Upreti*, Mathew A. Kramer* and Savithry Namboodiripad. Does One Size Fit all in Crosslinguistic Dependency Length Minimization? Poster presentation at *The 44th Annual Conference of the Cognitive Science Society (CogSci)*.

2022. **Zoey Liu**. Data-driven Evaluation for Crosslinguistic Low-resource NLP. Poster presentation at *The Networking and Information Technology Research and Development 30th Anniversary & CIFellows Symposium*.

2022. **Zoey Liu**, Justin Spence and Emily Prud'hommeaux. Enhancing Documentation of Hupa with Automatic Speech Recognition. Poster presentation at *The 5th Workshop on the Use of Computational Methods in the Study of Endangered Languages (ComputEL-5)*.

2022. **Zoey Liu**, Crystal Richardson*, Richard Hatcher and Emily Prud'hommeaux. *Not always about you:* Prioritizing community needs when developing endangered language technology. To be presented at *The 60th Annual Meeting of the Association for Computational Linguistics (ACL)*.

2022. Gwendolyn Rehrig, Madison Barker, Beverly Cotter, **Zoey Liu**, Harvey Qiu and Fernanda Ferreira. Trade-offs between memory retrieval and planning in language production. Poster presentation at *The 35th Annual Conference on Human Sentence Processing (HSP)*.

2022. **Zoey Liu**, Emily Prud'hommeaux and Justin Spence. Automated Morphological Analysis of Hupa. Oral presentation at *The Society for the Study of the Indigenous Languages of the Americas (SSILA)*.

2022. **Zoey Liu**, Ria Upreti*, Mathew A. Kramer* and Savithry Namboodiripad. Dependency length minimization does not affect acceptability of PP ordering in Hindi and English. Oral presentation at *The 96th Annual Meeting of the Linguistic Society of America (LSA)*.

2021. **Zoey Liu** and Emily Prud'hommeaux. Dependency Parsing Evaluation for Low-Resource Spontaneous Speech. Oral presentation at *The Second Workshop on Domain Adaptation for NLP (Adapt-NLP)*.

2021. **Zoey Liu** and Masoud Jasbi. English Negative Constructions and Communicative Functions in Child Language. Poster presentation at *The 43rd Annual Conference of the Cognitive Science Society (CogSci)*, 2957-2963.

2021. **Zoey Liu**. A multifactorial approach to constituent orderings. Oral presentation at *The 34th Annual CUNY Human Sentence Processing Conference*.

2021. **Zoey Liu**. The Crosslinguistic Relationship between Ordering Flexibility and Dependency Length Minimization: A Data-Driven Approach. Poster presentation at *The Society for Computation in Linguistics (SCiL)*.

2021. **Zoey Liu** and Emily Morgan. Frequency-dependent Regularization in Syntactic Constructions. Poster presentation at *The Society for Computation in Linguistics (SCiL)*.

2021. Alex Kramer* and **Zoey Liu**. A Data-driven Approach to Crosslinguistic Structural Biases. Poster presentation at *The Society for Computation in Linguistics (SCiL)*.

2020. **Zoey Liu**. The Relationship between Word Order Flexibility and Dependency Length Minimization. Oral presentation at *53rd Annual Meeting of the Societas Linguistica Europaea (SLE)*.

2020. **Zoey Liu** and Emily Morgan. Frequency-dependent Regularization in Constituent Ordering Preferences. Poster presentation at *The 42nd Annual Conference of the Cognitive Science Society (CogSci)*.

2020. **Zoey Liu** and Emily Morgan. Item-specific Regularization in Word Order Preferences. Poster presentation at *The 11th International Conference on Construction Grammar* (postponed due to COVID-19).

2020. **Zoey Liu** and Emily Morgan. Frequency-dependent Regularization in Abstract Syntactic Structures. Oral presentation at *The 33rd Annual CUNY Human Sentence Processing Conference*.

2020. **Zoey Liu**. Crosslinguistic Extent of Dependency Length Minimization. Poster presentation at *The 33rd Annual CUNY Human Sentence Processing Conference*.

2020. **Zoey Liu**. Do Arguments Appear Closer Crosslinguistically? Poster presentation at *The 33rd Annual CUNY Human Sentence Processing Conference*.

2019. **Zoey Liu**. A Comparative Corpus Analysis of PP Ordering in English and Chinese. Oral presentation at *First Workshop on Quantitative Syntax (Quasy, SyntaxFest)*.

2019. **Zoey Liu**. Quantifying Structural and Lexical Constraints in PP Ordering Typology. Poster presentation at *The Society for Computation in Linguistics (SCiL)*.

2019. Santiago Barreda and **Zoey Liu**. The Effect of Linguistic Experience on the Perception of Talker Height from Speech. Poster presentation at *The 93rd Annual Meeting of the Linguistic Society of America (LSA)*.

2018. **Zoey Liu**. Quantifying Structural and Lexical Constraints in PP Ordering Typology. Oral presentation at *California Meeting on Psycholinguistics*.

2018. **Zoey Liu** and Kenji Sagae. Dependency Length Minimization and Lexical Frequency in Prepositional Phrase Ordering in English. Oral presentation at *The Society for Computation in Linguistics (SCiL)*.

2017. Justin Spence, **Zoey Liu**, Kayla Palakurthy, & Tyler Lee-Wynant. Syntactic Annotation of a Hupa Text Corpus. Oral presentation at *Dene/Athabaskan Language Conference*.

2017, **Zoey Liu**, Tyler Lee-Wynant and Justin Spence. Building for the Future: Developing a Hupa Dependency Treebank. Oral presented at *UC Davis Symposium on Language Research*.

2017. Justin Spence, **Zoey Liu.** Building for the Future: Adopting TEI Standards in a Text of Hupa. Oral presentation at *The Society of the Study of the Indigenous Languages of the Americas (SSILA)*.

2016. **Zoey Liu.** The Story of Collocation & Dispersion. Oral presentation at *UC Davis Symposium on Language Research*.

2016. Carole E. Chaski, Elizabeth A. Smith, Cristina Aggazzotti, & **Zoey Liu.** Confirmation Bias

and Metalinguistic Awareness. Oral presentation at *American Academy of Forensic Sciences*.

2016. **Zoey Liu.** The Role of Function Words: An Empirical Study of Text Distance Measure Performance. Oral presentation at *The Association for Linguistic Evidence*.

2015. **Zoey Liu.** Rethinking Collocation: Directional Association Measure and its Potential Role in Semantic Similarity Computation. Oral presentation at *California Universities Semantics and Pragmatics Work 8*.

TEACHING EXPERIENCES

Instructor

University of Florida, Gainesville, FL USA

Introduction to Computational Linguistics (Spring 2023)

University of California, Davis, CA USA

Introduction to Linguistics (Winter 2019, Summer 2018)

ESL (Summer 2016)

Teaching Assistant

University of California, Davis, CA USA

Computational Linguistics
(Winter 2020, Fall 2019, Fall 2018, Spring 2018, Winter 2018, Spring 2017).

Corpus Linguistcs & Text Analysis (Winter 2017).

Linguistic Analysis I (Fall 2016).

Introduction to Linguistics
(Spring 2020, Spring 2019, Summer 2017, Spring 2016, Winter 2016, Fall 2015,
Spring 2015, Winter 2015).

SERVICE

Area chair

ACL 2023

Conference reviewing

EMNLP, AmericasNLP, SIGTYP, ACL, CoNLL, SSILA, SCiL, SLPAT, ComputEL, CogSci, Interspeech, EACL, BAE, NLP for Field Linguistics, ACL Rolling Review, HSP

Journal reviewing

Linguistics Vanguard, Glossa, Language Resources and Evaluation

Leadership Training Development, Advocates for Indigenous California Language Survival

Technical advisor & Planning committee member   2020 -

Breath of Life Archival Institute for Indigenous California Languages, Berkeley, CA USA

Linguistic partner & Technical service   June - July, 2020

Linguistic partner (Patwin)   June 3-9, 2018

LANGUAGES

Mandarin Chinese (native), English (fluent),

PROGRAMMING LANGUAGES	Python, R, Shell scripting, Prolog

OTHER EDUCATION   **LSA Linguistic Summer Institute**

University of California, Davis	2019
University of Chicago	2015