

# Curriculum Vitae

## Hakyung Sung

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### CONTACT

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### EDUCATIONS

Jun. 2025	University of Oregon <i>Ph.D. Linguistics</i>
Dec. 2024	University of Oregon <i>M.S. Computer Science</i>
Feb. 2018	Seoul National University <i>M.A. English Education</i>
Feb. 2016	Ewha Womans University <i>B.A. English Language and Literature</i>

### PROFESSIONAL APPOINTMENTS

Aug. 2025 -	Assistant Professor, Department of Psychology, Rochester Institute of Technology <ul style="list-style-type: none"><li>▪ Joint appointment with the Department of Modern Languages and Cultures</li><li>▪ Affiliated with Cognitive Science PhD program, Computing and Information Sciences PhD Program (NLP area), Artificial Intelligence MS program, Center for Human-aware AI</li></ul>
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### HONORS / AWARDS / SELECTED INTERNAL FUNDING

- *College of Liberal Arts Faculty Research Fund* (2025). Rochester Institute of Technology
- *College of Liberal Arts JumpStart Fund* (2025). Rochester Institute of Technology
- *Professional Development Graduate Scholarship* (2023). University of Oregon
- *Raymund Fellowship* (2021). University of Oregon
- *Promising Scholar Award* (2021). University of Oregon
- *Lockey Graduate Science Award* (2021). University of Oregon
- *Top-off Award in Linguistics Department* (2021). University of Oregon
- *Excellence of Academics* (2017), Seoul National University
- *Scholarship of Graduate Student Instructor* (2017), Seoul National University

### EXTERNAL FELLOWSHIP

- PI (2024.9 - 2025.6). *Evaluating argument structure construction-based indices for construct validity in assessing second language grammatical proficiency.* Supervisor: Kristopher Kyle (University of Oregon); Mikyung K. Wolf & Ikkyu Choi (ETS). Harold Gulliksen Psychometric Research Fellowship sponsored by ETS (\$33,000)

## GRANTS

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- PI (2026.2 - 2027.1). *Corpus-based benchmarks to measuring second language Korean sophistication in speaking and writing tasks*. Sponsored by the Academy of Korean Studies (\$23,966)
- Co-researcher (2024.2 - 2025.1). *Towards inclusive NLP research: Developing language models on second language Korean*. PI: Gyu-Ho Shin (University of Illinois Chicago). Sponsored by the Academy of Korean Studies (\$13,200)

## PEER-REVIEWED PUBLICATIONS

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### *Journal articles*

- [J6] Sung, H., & Shin, G-H. (2025). Towards robust morphosyntactic analysis of L2 Korean: Evaluating and fine-tuning a Korean language model. *Transactions on Asian and Low-Resource Language Information Processing*. <https://dl.acm.org/doi/10.1145/3767330>
- [J5] Sung, H., Wolf, MK. Suhan, M, & Kyle, K. (2025). Lexical richness in young English learners' writing: A focus on Opinion and Listen-Write task types. *Assessing Writing*. <https://doi.org/10.1016/j.asw.2025.100975>
- [J4] Sung, H., & Kyle, K. (2025). Usage-based analysis of L2 oral proficiency: Characteristics of argument structure construction use. *Studies in Second Language Acquisition*. <https://doi.org/10.1017/S0272263125100995>
- [J3] Sung, H., Cho, S., & Kyle, K. (2024). An empirical evaluation of lexical diversity indices in L2 Korean writing assessment. *Language Assessment Quarterly*, 1-22. <https://doi.org/10.1080/15434303.2024.2311728>
- [J2] Kyle, K., Sung, H., Eguchi, M., & Zenker, F. (2024). Evaluating evidence for the reliability and validity of lexical diversity indices in L2 oral task responses. *Studies in Second Language Acquisition*, 1-22. <https://doi.org/10.1017/S0272263123000402>
- [J1] Sung, H. (2019). Korean EFL learners' processing of English caused-motion construction. *English Teaching*, 74(1), 49-73.

### *Conference proceedings*

- [C10] Sung, H., & Kyle, K. (2025). ASC analyzer: A Python package for measuring argument structure construction usage in English texts. In *Proceedings of the 2nd Workshop on Construction Grammars and NLP (CxGs+NLP)*. <https://aclanthology.org/2025.cxgsnlp-1.5/>
- [C9] Sung, H., Csuros, K., & Sung, M-C (2025). Comparing human and LLM proofreading in L2 writing: Impact on lexical and syntactic features. In *Proceedings of the 20th Workshop on Innovative Use of NLP for Building Educational Applications*. <https://aclanthology.org/2025.bea-1.2/>
- [C8] Sung, H., Shin, G-H., Lee C., Sung, Y-K., & Jung, B-K (2025). UD-KSL Treebank v1.3: A semi-automated framework for aligning XPOS-extracted units with UPOS tags. In *Proceedings of the 19th Linguistic Annotation Workshop (LAW-XIX)*. <https://aclanthology.org/2025.law-1.9/>
- [C7] Sung, H., & Shin, G-H. (2025). Second language Korean Universal Dependency treebank v1.2: Focus on data augmentation and annotation scheme refinement. In *Proceedings of the Workshop on Resources and Representations for Under-Resourced Languages and Domains (RESOURCEFUL-2025)*. <https://aclanthology.org/2025.resourceful-1.4/>
- [C6] Sung, H., & Kyle, K. (2024). Leveraging pre-trained language models for linguistic analysis: A case of argument structure constructions. In *the Association for Computational Linguistics: EMNLP 2024*. <https://aclanthology.org/2024.emnlp-main.415/>

- [C5] **Sung, H.**, & Shin, G-H. (2024). Constructing a dependency treebank for second language learners of Korean. In *Proceedings of the International Conference on Language Resources and Evaluation (LREC-COLING 2024)*. <https://aclanthology.org/2024.lrec-main.332/>
- [C4] **Sung, H.**, & Kyle, K. (2024). Annotation scheme for English argument structure constructions treebank. In *Proceedings of the 18th Linguistic Annotation Workshop (LAW-XVIII)*. <https://aclanthology.org/2024.law-1.2/>
- [C3] **Sung, H.**, & Shin, G-H. (2023). Diversifying language models for lesser-studied languages and language-usage contexts: A case of second language Korean. In *Findings of the Association for Computational Linguistics: EMNLP 2023*. <https://aclanthology.org/2023.findings-emnlp.767/>
- [C2] **Sung, H.**, & Shin, G-H. (2023). Towards L2-friendly pipelines for learner corpora: A case of written production by L2-Korean learners. In *Proceedings of the 18th Workshop on Innovative Use of NLP for Building Educational Application*, 72-82, Association for Computational Linguistics. <https://aclanthology.org/2023.bea-1.6/>
- [C1] Kyle, K., & **Sung, H.** (2023). An argument structure construction treebank. In *Proceedings of the Workshop on Construction Grammars and NLP (CxGs+NLP, GURT)*, 51–62, Association for Computational Linguistics. <https://aclanthology.org/2023.cxgsnlp-1.7/>

### **Book chapter**

- [B1] Kyle, K., **Sung, H.**, (To appear). *Tagging and Parsing*. International Encyclopedia of Language and Linguistics, 3rd Edition.

### **WORKSHOP**

- Shin, G-H. & **Sung, H.** (Aug. 2026, planned). *Working title: Corpus linguistics with Korean data: Annotation and computational approaches*. Pre-conference workshop at the 33rd Japanese/Korean Linguistics Conference. University of Illinois Urbana–Champaign. Urbana, IL.
- **Sung, H.** & Kyle, K. (Sep. 2024). *The construction of high-quality manually annotated datasets for fine-tuning LLMs for automatic linguistics analyses*. Workshop at 16<sup>th</sup> American Association for Corpus Linguistics Conference (AACL 2024). University of Oregon. Eugene, OR.

### **PRESENTATIONS**

#### **Main presenter**

- [14] **Sung, H.**, & Shin, G-H. (Jun. 2026). *Compositionality of morphological constructions as a window to second language writing proficiency: Evidence from Korean*. Poster presenting at ICCG 14, Princeton, NJ.
- [13] **Sung, H.**, & Kyle, K. (Apr. 2026). *Leveraging masked language models to measure association strength in contiguous and dependency bigrams*. Poster presenting at AACL 2026. Gainesville, FL.
- [12] **Sung, H.**, & Shin, G-H. (Apr. 2026). *Measuring lexical complexity in L2-Korean writing through a morpheme-aware approach*. Paper presenting at AACL 2026. Gainesville, FL.
- [11] **Sung, H.**, & Kyle, K. (Sep. 2025). *Evaluating grammatical complexity in L2 writing: Introducing the Argument Structure Construction Analyzer*, Paper presenting at SLRF 2025, Flagstaff, AZ.
- [10] **Sung, H.**, & Shin, G-H. (Jun. 2025). *To what extent do lexical richness indices explain learner proficiency? An example from L2-Korean writing*. Paper presenting at EuroSLA 34, Tromsø, Norway.
- [9] **Sung, H.**, & Wolf, M., Suhan, M., & Kyle, K. (Mar. 2025). *Investigating the lexical characteristics of*

- young EFL students' writing across different test tasks.* Paper presenting at AAAL 2025. Denver, CO.
- [8] **Sung, H.**, & Kyle, K. (Sep. 2024). *Building a robust argument structure construction (ASC) treebank and an automatic ASC tagger.* Paper presenting at ACL 2024. Eugene, OR.
  - [7] **Sung, H.** (Apr. 2024). *Exploring the relationship between argument structure construction usage and L2 English proficiency.* Paper presenting at LARC 2024. Provo, UT.
  - [6] **Sung, H.**, & Kyle, K. (Mar. 2024). *The relationship between L2 oral proficiency interview scores and characteristics of argument structure construction use.* Paper presenting at AAAL 2024. Houston, TX.
  - [5] **Sung, H.**, & Shin, G-H. (Sep. 2023). *Comparison of morphological analyzers for L2-Korean written corpora.* Poster presenting at EuroSLA 32, Birmingham, UK.
  - [4] **Sung, H.**, & Kyle, K. (May. 2023). *Automatic identification of motion constructions in L1 and L2 English spoken corpora.* Paper presenting at ICCG12. Prague, Czech Republic.
  - [3] **Sung, H.**, & Kyle, K. (Mar. 2023). *Exploring evenness lexical diversity indices in L2 written and spoken corpora.* Paper presenting at AAAL 2023. Portland, OR.
  - [2] **Sung, H.** (Sep. 2022). *On the development of motion constructions of Korean L2 English learners: A cross-sectional spoken corpus-based study.* Paper presenting at ACL 2022. Flagstaff, AZ.
  - [1] **Sung, H.**, & Cho, S. (Aug. 2022). *Evaluating lexical diversity of Korean as a second language learners' writing using NLP tool.* Paper presenting at EuroSLA 31. Fribourg, Switzerland.

#### ***Not main presenter***

- [11] Egbert, J., & **Sung, H.** (Apr. 2026). *Register as a predictor of argument structure construction use.* Paper presenting at ACL 2026. Gainesville, FL.
- [10] Egbert, J., & **Sung, H.** (Mar. 2026). *Register as a predictor of argument structure construction use.* Paper presenting at AAAL 2026. Chicago, IL.
- [9] Kyle, K., **Sung, H.**, Biber, D., Reppen, R., & Egbert, J. (Mar. 2025). *The development and evaluation of an open-source lexicogrammatical complexity analysis tool: The Lexicogrammatical Tagger.* Paper presenting at AAAL 2025. Denver, CO.
- [8] Diantoro, C., **Sung, H.**, & Baese-Berk, M. (May. 2024). *Differences in prominence-related acoustic measurements in L2 read speech as a function of L1 framing typology.* Poster presenting at ASA. Ottawa, Canada.
- [7] Kyle, K., **Sung, H.**, & Eguchi, M. (Mar. 2024). *Identifying lexico-grammatically ambiguous language features using large language models.* Invited colloquium at AAAL 2024. Houston, TX.
- [6] Kyle, K., & **Sung, H.** (Mar. 2024). *The relationship between L2 holistic writing proficiency scores and characteristics of argument structure construction use.* Paper presenting at AAAL 2024. Houston, TX.
- [5] Kyle, K., & **Sung, H.** (May. 2023). *Robust automatic annotation of argument structure constructions.* Paper presenting at ICCG12. Prague, Czech Republic.
- [4] Kyle, K., **Sung, H.**, Eguchi, M., & Zenker, F. (Mar. 2023). *The reliability and validity of lexical diversity indices in second language oral productions.* Paper presenting at AAAL 2023. Portland, OR.
- [3] Diantoro, C., **Sung, H.**, & Baese-Berk, M. (Mar. 2023). *Comparing stress patterns of verbs and satellites in L1/L2 spoken corpora based on framing typology.* Poster presenting at AAAL 2023. Portland, OR.
- [2] Kyle, K., **Sung, H.**, Eguchi, M., & Zenker, F. (Sep. 2022). *Evaluating the reliability and validity of lexical diversity indices in second language oral corpora.* Paper presenting at ACL 2022. Flagstaff, AZ.

- [1] Cho, S., & Sung, H. (Sep. 2022). *Investigating lexical diversity in L2 Korean writing: Focusing on multiple indices and Korean tokenizers*. Paper presenting at AACL 2022. Flagstaff, AZ.

## THESIS

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- Sung, H. (2025). *Measuring lexicogrammatical complexity and sophistication in second language English production: Development and validation of argument structure construction-based indices*. (Unpublished doctoral dissertation). University of Oregon. Advisor: Dr. Kristopher Kyle. <https://scholarsbank.uoregon.edu/items/d762cf19-f3c8-47a0-9357-73f1b5f549d8>
- Sung, H. (2018). *Korean EFL learners' processing of English caused-motion construction*. (Unpublished master's thesis). Seoul National University. Advisor: Dr. Hyun-Kwon Yang. <https://s-space.snu.ac.kr/handle/10371/142034>

## OTHER RESEARCH PRODUCTS

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- *English ASC treebank*: The ASC Treebank is a linguistically annotated dataset of argument structure constructions (ASCs), informed by research in the usage-based constructionist approach to language learning. The latest version includes 22,069 gold-annotated ASC tokens. Developed in collaboration with Kris Kyle (University of Oregon). <https://github.com/LCR-ADS-Lab/ASC-Treebank>
- *English ASC analyzer*: The ASC analyzer is a publicly available Python package designed to automatically tags ASCs and computes 50 indices that capture diversity, proportion, frequency, and ASC-verb lemma association strength. Developed in collaboration with Kris Kyle (University of Oregon). <https://github.com/hksung/ASC-analyzer>
- *UD Korean-KSL*: This UD Korean-KSL is a dependency treebank of L2 Korean, featuring morpheme and Universal Dependency manual annotations. The latest version includes ~15K manually annotated sentences from the written data produced by L2-Korean learners at various proficiency levels, with the dataset continuing to grow. Developed in collaboration with Gyu-Ho Shin (University of Illinois Chicago). [https://github.com/UniversalDependencies/UD\\_Korean-KSL/tree/dev](https://github.com/UniversalDependencies/UD_Korean-KSL/tree/dev)
- *Korean lexical diversity python package*: The Korean lexical diversity python package extended the TAALED (Tool for the Automatic Analysis of Lexical Diversity; Kyle et al., 2021) to calculate a variety of lexical diversity indices for Korean. As an agglutinative language, Korean requires morpheme-level parsing, so we provide parsers that segment text at both the word and morpheme levels. Developed in collaboration with Sooyeon Cho (Zurich University of Applied Sciences). <https://github.com/NLPxL2Korean/Korean-Lexical-Diversity>

## TEACHING EXPERIENCE

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UG: Undergraduate, G: Graduate

- Rochester Institute of Technology
  - PSYC-681 *Natural Language Processing and Large Language Models I* (G, Spring 26)
  - LING-351 *Language Technology and Large Language Models* (UG, Fall 25)
  - LING-581 *Natural Language Processing I* (UG, Fall 25)
- University of Oregon
  - LING-150 *The Structure of English Words* (UG, Fall 24)

## MENTORING EXPERIENCE

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- Rochester Institute of Technology
  - Moll, Sam (UG, BS/MS in Computer Science; Sep. 2025-). Honors option research.

## PROFESSIONAL EXPERIENCE

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Jun. 2024 - Summer Intern, ETS

Jul. 2024

Jun. 2022 - Summer Intern, The American Council on the Teaching of Foreign Languages (ACTFL)  
Aug. 2022

Oct. 2021 - Electronic Resources Student Assistant, University of Oregon Library  
Sep. 2022

Mar. 2020 - English Teacher, Daewon Foreign Language High School, South Korea  
Feb. 2021

Mar. 2018 - English Teacher, Gyeonggi Academy of Foreign Languages, South Korea  
Feb. 2021

## PROFESSIONAL SERVICES

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Upon request Ad-hoc Reviewer (Journal manuscript; <sup>†</sup>Conference proceeding; <sup>††</sup>Conference abstract)

- *Bilingualism: Language and Cognition*
- *Cognitive Computation*
- *Corpus Pragmatics*
- *Educational Assessment*
- *Language Assessment Quarterly*
- *Language Learning*
- *Language Resources and Evaluation*
- *Language Teaching Research*
- *International Review of Applied Linguistics in Language Teaching*
- *Journal of Second Language Writing*
- *Research Methods in Applied Linguistics*
- *Studies in Second Language Acquisition*
- *System*
- *Transactions on Asian and Low-Resource Language Information Processing*
- <sup>†</sup>*ASSOCIATION FOR COMPUTATIONAL LINGUISTICS Rolling Review*
- <sup>†</sup>*Linguistic Annotation Workshop*
- <sup>†</sup>*Midwest Association of Language Testers (MwALT) Best Student Paper*
- <sup>†</sup>*Workshop on Innovative Use of NLP for Building Educational Application*
- <sup>††</sup>*International American Association for Corpus Linguistics (AACL) Conference*
- <sup>††</sup>*The Second Language Research Forum (SLRF)*

Jan. 2026 - Mar. 2027 Guest Editor (co-editor with Gyu-Ho Shin). Corpus-based approaches to Lx morphosyntactic acquisition in underrepresented languages and usage contexts. *Applied Corpus Linguistics*.

- Dec. 2024 - Student Editorial Board Member, *Journal of Second Language Writing*
- Sep. 2024 Conference Committee, the 16<sup>th</sup> *American Association for Corpus Linguistics Conference*
- Jan. 2022 - Graduate Student Faculty Representative Liaison, Linguistics, University of Oregon  
Jun. 2023
- Mar. 2017 - Graduate Student Instructor, Seoul National University  
Feb. 2018

#### **OTHER SKILLS**

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- Languages: Korean (Native), English (Advanced), Spanish (Basic)
- Programming Languages: Python, R
- Documentation/Typesetting: LaTeX, Markdown