Jieun Song, PhD

Associate Professor

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Education

2018	**PhD** in Speech, Hearing and Phonetic Sciences University College London, London, UK Thesis: *The effects of adverse conditions on speech recognition by non-native listeners: Electrophysiological and behavioural evidence* Supervisors: Prof. Paul Iverson (primary), Prof. Valerie Hazan (secondary)
2011	**MA** in Linguistics Seoul National University, Seoul, South Korea Supervisor: Prof. Ho-Young Lee
2008	**BA** in Linguistics (Summa cum laude) Seoul National University, Seoul, South Korea

Employment

Sept 2024 - Present	**Associate Professor** School of Digital Humanities and Computational Social Sciences, Korea Advanced Institute of Science and Technology (KAIST), South Korea
May 2021 - Aug 2024	**Assistant Professor** School of Digital Humanities and Computational Social Sciences, Korea Advanced Institute of Science and Technology (KAIST), South Korea
Sept 2020 - Dec 2020	**Lecturer** Dept. of Linguistics, Seoul National University, South Korea
Oct 2017 - Aug 2020	**Postdoctoral Research Associate** Dept. of Speech, Hearing and Phonetic Sciences, University College London, UK

Research Interests

Speech perception and production, Interface between speech and cognition, Neural signatures of speech recognition processes, Child language development, Speech prosody, Perception of synthetic speech, Second-language speech learning

Grants

2023 - 2024   Research Grant (Lead Global Partner)
Global Engagement Funds (GEF) 2023/24, University College London, UK
Project: *"A community within a community: Talk and identity in the North Korean refugee diaspora"*
Award Amount:£5,000 PI: Dr. Bronwen Evans

2023 - 2024   Research Grant (Principal Investigator)
KT Corporation (Grant of the KAIST-KT Joint Research Project), South Korea
Project: *"Toward naturalistic and attractive sound in AI: acoustical and cognitive approaches"*
Award Amount: ₩100,000,000

2022 - 2023   Research Grant (Principal Investigator)
KT Corporation (Grant of the KAIST-KT Joint Research Project), South Korea
Project: *"Toward naturalistic and attractive sound in AI: acoustical and cognitive approaches"*
Award Amount: ₩100,000,000

2022 - 2023   Research Grant (Co-Investigator)
UK Research and Innovation, UK
Project: *"UK-South Korea Prosody Research Network"*
Award Amount: £50,000, PI: Dr. Hae-Sung Jeon

2021 - 2022   Research Grant (Co-Investigator of the whole grant, Principal Investigator of the Speech team)
KT Corporation (Grant of the KAIST-KT Joint Research Project), South Korea
Project: *"Toward naturalistic and attractive sound in AI: acoustical and cognitive approaches"*
Award Amount: ₩100,000,000

2020 - 2021   Research Grant (Principal Investigator)
National Research Foundation of Korea, South Korea
Project: *"Investigating listening effort using electroencephalography: the perception of second-language sounds"*
Award Amount: ₩14,000,000

2017 - 2020   Research Grant (named Research Associate)
Economic and Social Research Council, UK
Project: *"Listening effort and multilingual speech communication: Neural measures of auditory and lexical processing by adults and older children"*
Award Amount: £570,625; PI: Prof. Paul Iverson

Peer-reviewed Publications

13. Iverson P. & **Song**, J. (2024). Neural Tracking of Speech Acoustics in Noise Is Coupled with Lexical Predictability as Estimated by Large Language Models, *eNeuro, 11*(8), 1-21.

12. **Song**, J., Kim, M., & Park, J. (2023). Acoustic correlates of perceived personality from Korean utterances in a formal communicative setting, *PLoS ONE, 18*(10), 1-20.

11. **Song**, J., Kim, B., Kim, M. & Iverson, P. (2023). The Korean Speech Recognition sentences: A large corpus for evaluating semantic context and language experience in speech perception, *Journal of Speech, Language, and Hearing Research, 66*(9), 3399-3412.

10. **Song**, J., Jeon, H-S. & Kiaer, J. (2022). Use of prosodic and lexical cues for disambiguating wh-words in Korean, *Interspeech 2022*, 81-85.

9. Cho, H.J., Kiaer, J.*, Choi, N. & **Song**, J. (2022). The role of prosodic and visual information in disambiguating wh-indeterminates: The case of Korean three-year-olds, *Journal of Child Language* 49, 326-348.

8. **Song**, J., Martin, L. & Iverson, P. (2020). Auditory neural tracking and lexical processing of speech in noise: masker type, spatial location, and language experience, *Journal of the Acoustical Society of America, 148*(1), 253-264.

7. Lee, H-Y. & **Song**, J.* (2019). Evaluating Korean learners' English rhythm proficiency with measures of sentence stress, *Applied Psycholinguistics, 40*(6), 1363-1376.

6. **Song**, J., Martin, L. & Iverson, P. (2019). Native and non-native speech recognition in noise: neural measures of auditory and lexical processing, *Proceedings of the 19th International Congress of Phonetic Sciences (ICPhS 2019)*, Melbourne.

5. **Song**, J. & Iverson, P. (2018). Listening effort during speech perception enhances auditory and lexical processing for non-native listeners and accents, *Cognition, 179*, 163-170.

4. Lee, G. G., Lee, H-Y., **Song**, J., Kim, B., Kang, S., Lee, J. & Hwang, H. (2017). Automatic sentence stress feedback for non-native English learners, *Computer Speech and Language, 41*, 29-42.

3. **Song**, J. & Iverson, P. (2015). Measuring speech-in-noise intelligibility for spontaneous speech: The effect of native and non-native accents, *Proceedings of the 18th International Congress of Phonetic Sciences (ICPhS 2015)*, Glasgow.

2. **Song**, J.(2013). Variable Schwa Deletion in English: A Corpus Study, *Studies in Phonetics, Phonology and Morphology, 19*(1), 33-52.

1. **Song**, J.(2011). The interlanguage speech intelligibility benefit for experienced nonnative listeners: perception of English lexical stress produced by Korean native speakers, *Proceedings of the 17th International Congress of Phonetic Sciences (ICPhS 2011)*, Hong Kong.

   *corresponding author (marked when the first author was not the corresponding author)

Books

1. Kiaer, J. & **Song**, J. (2019). *언어의 아이들: 아이들은 도대체 어떻게 언어를 배울까?* ['How children learn language'] , Seoul: Science Books. Selected as 2019 Sejong Academic Book

Conference Presentations

20. Jeong, M., Oh, H., Park, J., & **Song**, J. (2024). Listening effort under different rates of speech, The 186th meeting of the Acoustical Society of America (ASA), Ottawa.

19. Kim, M., Park, J., Jeong, M., & **Song**, J. (2024). Personality Perception in Synthetic vs. Natural Speech: The Effects of Voice Quality and Prosody, The 186th meeting of the Acoustical Society of America (ASA), Ottawa.

18. Evans, B. G., Shin, R., **Song**, J. & Lo, J. J. H. (2024). A community within a community: Talk and identity in the North Korean refugee diaspora, Colloquium of the British Association of Academic Phoneticians 2024, Cardiff.

17. Jeong, M., Oh, H., Park, J. & **Song**, J. (2023). 발화속도에 따른 듣기 노력에 대한 연구 ['Listening effort under different rates of speech'], The 2023 Winter Conference of the Linguistic Society of Korea, Seoul.

16. Kim, M., Park, J., Jeong, M., Kang, M. & **Song**, J. (2023). What determines personality impressions of synthetic and natural speech? - an acoustical investigation, Speech Prosody and Beyond (SPaB) 2023, Seoul.

15. **Song**, J., Kim, M. & Park, J. (2023). Judgements of a customer service agent's personality based on acoustic properties of their speech, The 184th meeting of the Acoustical Society of America (ASA), Chicago.

14. **Song**, J. & Iverson, P. (2021). Investigating listening effort using neural speech tracking and alpha oscillations: the effects of acoustic distortion and language of materials, Society for the Neurobiology of Language (SNL) 2021.

13. Cho, H.J., Kiaer, J., Choi, N. & **Song**, J. (2019). Young children's use of prosody and contextual cues in disambiguating wh-specific/indefinite question: The case of Korean, The 14th Generative Approaches to Language Acquisition (GALA), Milan.

12. **Song**, J., Martin, L. & Iverson, P. (2019). Coping with noise at multiple levels: Auditory cortical and lexical effects of maskers for native and non-native listeners, Speech in noise workshop (SpiN), Ghent.

11. **Song**, J., Martin, L. & Iverson, P. (2018). Neural processing of attended speech in multi-talker environments: Effects of talker number and spatial cues, Attention to Sound, Milton Keynes.

10. **Song**, J. & Iverson, P. (2018). Exploring cortical and subcortical responses to continuous speech, Auditory EEG Signal Processing symposium (AESoP), Leuven.

9. **Song**, J. & Kiaer, J. (2018). The role of semantic cues in prosodic disambiguation of wh-phrases in Korean, The 2018 Colloquium of the British Association of Academic Phoneticians (BAAP), Kent.

8. Lee, H-Y. & **Song**, J. (2017). Features for evaluating Korean learners' English rhythm proficiency, The 5th International Conference on English Pronunciation: Issues & Practices (EPIP5), Caen.

7. **Song**, J. & Iverson, P. (2016). Cross-linguistic perception of continuous speech: Neural entrainment to the speech amplitude envelope, The 172nd meeting of the Acoustical Society of America (ASA 2016 Fall meeting), Hawaii.

6. Iverson, P., Brint, E., **Song**, J. & Wu, M. (2016). Listening effort and accent in competing-talker speech recognition by native and non-native listeners: Electrophysiological measures of auditory and lexical processing, The 172nd meeting of the Acoustical Society of America (ASA 2016 Fall meeting), Hawaii.

5. **Song**, J. & Iverson, P. (2016). An ERP study of speech recognition by native and non-native listeners: The effects of a competing-talker background and accent, The 3rd Conference on Experimental Approaches to Perception and Production of Language Variation (ExAPP 2016), Vienna.

4. **Song**, J. & Iverson, P. (2016). Is cortical entrainment to speech a neural correlate of listening effort?, The 8th Annual Meeting for the Neurobiology of Language (SNL 2016), London.

3. **Song**, J. & Iverson, P. (2016). Speech recognition by native and non-native listeners with a competing-talker background: An ERP study, The 8th International Conference on Second-Language Speech (New Sounds 2016), Aarhus.

2. **Song**, J. & Iverson, P. (2016). The effect of accent on speech recognition in a competing-talker background: Neural oscillations and the N400, Speech Processing in Realistic Environments (SPIRE) workshop, Groningen.

1. **Song**, J. (2010). Durational characteristics of English sentences produced by Korean speakers and their role in the degree of perceived foreign accent, Proceedings of the 2010 Fall Conference of the Korean Society of Speech Sciences, Seoul.

Invited Talks

14. Speech comprehension under cognitive load: behavioral and electrophysiological findings. *The Korean Society of Cognitive Science, 2024 Conference, Mind, Brain & Data*, Seoul. May 24, 2024.

13. Attractive voices and ease of speech comprehension in the age of AI. *LML Research Seminar*, The Education University of Hong Kong, Hong Kong. Jan 26, 2024.

12. Robust speech perception in the presence of variability in speech signals. *2023 Fall Colloquium Series*, Department of Brain and Cognitive Sciences, KAIST, Daejeon, South Korea. Dec 6, 2023.

11. Using neurophysiological data to understand speech-recognition difficulties. *Fall Conference of the Korean Society of Speech Sciences*, South Korea. Nov 25, 2022.

10. New approaches for investigating speech processing using electroencephalography. *Progress in Psycholinguistics Workshop*, Konkuk University, Seoul, South Korea. Sept 2, 2022.

9. Using Electroencephalography for investigating auditory and language processing (with Philipp Ruhnau). *Methodological Advances in Prosody Research*, Seoul National University, Seoul, South Korea. July 2, 2022.

8. How we cope with speech recognition difficulties: electrophysiological indices of speech processing and listening effort. *Departmental Seminar Series*, Dept. of Korean Language & Literature, Korea University, Seoul, South Korea. Jan 27, 2022.

7. Speech communication in everyday life. *2021 Fall Colloquium Series*, Graduate School of Software, KAIST, Seoul, South Korea. Dec 9, 2021.

6. Metaverse and Spoken Language. *Deep Thoughts on Post Metaverse Forum: Various perspectives on Metaverse*, Graduate School of Culture Technology, KAIST, Dajeon, South Korea. Nov 19, 2021.

5. Electrophysiological investigation of speech processing in realistic environments: methodological and theoretical contributions. *2021 ALAK International Symposium for Young Researchers in Applied Linguistics & International Conference (Language Learning, the Brain and Computers)*, Hankuk University of Foreign Studies, Seoul, South Korea. Oct 2, 2021.

4. How we cope with speech recognition difficulties: electrophysiological indices of speech processing and listening effort. *Research Meeting at the Centre for Autism*, University of Reading, Reading, UK. Sept 1, 2021.

3. The role of listening effort in second-language speech processing. *The SNU Linguistics Colloquium Series*, Department of Linguistics, Seoul National University, Seoul, South Korea. Dec 3, 2019.

2. Interaction of semantic and prosodic cues in the disambiguation of wh-words in Korean (with J. Kiaer). *Departmental Seminar Series*, Oriental Studies, University of Oxford. Jan 29, 2019.

1. Second language speech processing in realistic environments: an electrophysiological investigation. *The SNU Linguistics Colloquium Series*, Department of Linguistics, Seoul National University, Seoul, South Korea. Sept 4, 2017.

Awards & Scholarships

2017	First Place Award in the poster competition (area: Speech Communication) The 172nd meeting of the Acoustical Society of America 2016
2013 - 2017	Kwanjeong Overseas Scholarship (full stipend) Kwanjeong Educational Foundation, South Korea
2013 - 2016	Overseas Research Scholarship (full tuition fee waiver) University College London (UCL)
2010	Best Presentation Paper Award The 2010 Fall Conference of the Korean Society of Speech Sciences
2010	Teaching Assistant Scholarship (1st Semester) Dept. of Linguistics, Seoul National University (SNU)
2010	Superior Academic Performance Scholarship (1st Semester) Dept. of Linguistics, SNU
2009 - 2010	Graduate Student Scholarship Woosan Educational Foundation, South Korea
2009	Lecture & Research Scholarship Dept. of Linguistics, SNU
2006 - 2007	Kwanjeong Domestic Scholarship (one of the two recipients in the College of Humanities) Kwanjeong Educational Foundation, South Korea
2004 - 2005	Merit-based Scholarship (full tuition fee waiver), SNU
2004	Superior Academic Performance Scholarship, SNU (2nd Semester)

Teaching Experience

Teaching at KAIST

Course: HSS210 Language, Mind & Brain (Undergraduate)

Course: HSS228 Child Language Acquisition (Undergraduate)

Course: HSS/CTP402 Spoken Language and Computers (Undergraduate)

Course: HSS106 Introduction to Linguistics (Undergraduate)

Course: HSS610 Introduction to the Digital Humanities and Computational Social Sciences (Postgraduate)

Lecturer

2020   Course: Language Acquisition (Undergraduate), SNU (Fall Semester)

Module Development

2019   Course: Language Acquisition, SNU
Role: Providing the module outline and detailed content for lectures, tutorials & assessment

Guest Lecturer

2017 - 2020   Course: Second Language Speech Learning (MSc), UCL (Term 2)
Lecture: Listening effort during second language speech perception

2019   Course: Development of Communication and Cognition (BSc), UCL (Term 1)
Lecture: Using the ERP technique to explore phonological development

2018   Course: Development of Speech Perception and Production (MSc), UCL (Term 1)
Lecture: Speech development in bilingual children

2016   Course: Introduction to Speech Sciences (MSc), UCL (Term 1)
Module: Speech Production and Perception (BSc), UCL (Term 1)
Lecture: The challenge of speech perception

2015   Course: Introduction to Speech Sciences (MSc), UCL (Term 1)
Lecture: Fricatives and spectrograms

Teaching Assistant

2015 - 2017   Course: Introduction to the Event-Related Potential Techniques (MSc, MRes), UCL (Term 2)

2015 - 2016   Course: Phonetics and Phonology (MSc), UCL (Term 1)

2010   Course: World of Languages (Undergraduate), SNU (Spring Semester)

2009   Course: Experimental Phonetics (Postgraduate), SNU (Spring Semester)

Electroencephalography (EEG) Demonstrator

2015 - 2020   Course: Second-Language Speech Learning (MSc), UCL (Term 2)

2020   Course: Development of Speech Perception and Production (MSc), UCL (Term 1)

Student Supervision

UCL	Minjeong Kim (MA Linguistics, 2018, with Prof Paul Iverson)
	Miguel Garcia Tarifa (MSc Language Sciences, 2018, with Prof Paul Iverson)
KAIST	Minhong Jeong (PhD, Graduate School of Culture Technology, 2022 -)
	Minjeong Kim (PhD, Graduate School of Culture Technology, 2023 -)
	Haeun Oh (Masters, Graduate School of Culture Technology, 2023 -)
	Changun Kim (Masters, Graduate School of Digital Humanities and Computational Social Sciences, 2023 -)

Thesis Examination

2022	Masters thesis, Jisu Shin, School of Computing, KAIST

Professional Service

University, College, and Departmental Services

2024 - Present	Institutional Review Board (IRB), KAIST
2022 - Present	The Vision Committee School of Digital Humanities & Computational Social Sciences, KAIST
2023 - Present	The Academic Affairs Committee School of Digital Humanities & Computational Social Sciences, KAIST
2023 - Present	The Management Committee The Center for Digital Humanities & Computational Social Sciences, KAIST
2023 Spring	Colloquium Organizer Graduate School of Culture Technology, KAIST
2022 Spring & Fall	Colloquium Organizer School of Digital Humanities & Computational Social Sciences, KAIST
2021 - 2023	The Best Paper Award Committee School of Digital Humanities & Computational Social Sciences, KAIST
2021 - 2022	The Task Force for the Establishment of the Graduate School School of Digital Humanities & Computational Social Sciences, KAIST
2022	The Academic Affairs Committee Graduate School of Culture Technology, KAIST
2018	Organising the Speech Science Forum seminars Dept. of Speech, Hearing & Phonetic Sciences, UCL

Other Services

2022	Organising *Methodological Advances in Prosody Research* workshop Seoul National University, Seoul UK-South Korea Prosody Research Network
2023	Organising *Speech Prosody and Beyond 2023* workshop KAIST, Seoul UK-South Korea Prosody Research Network

Reviewing

Journals	*Journal of the Acoustical Society of America, Bilingualism: Language and Cognition, Language Learning, Scientific Reports, Language Research, Journal of Psycholinguistic Research, International Review of Applied Linguistics in Language Teaching, PLOS ONE*
Conferences	The 9th International Symposium on the Acquisition of Second Language Speech 2019, The 19th International Congress of Phonetic Sciences, Speech Prosody and Beyond 2023

Public Engagement

2020	Event at the Royal Institution: *"Easy speaking and effortless listening"* Role: Leading the EEG demo session "EEG for speech perception research" for the general public
2014	Event at the Royal Institution: *"Good listeners and smooth talkers: Spoken communication in a challenging world"* Role: EEG demonstration & presenting our research to the general public

Other Skills

Languages	Korean (Native), English (Fluent)
Programming	Matlab, R, Praat
Statistics	R
EEG Analysis	Fieldtrip, EEG/ERPLab