

Motoki Saito

Curriculum Vitae

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Contact Information

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Current position

05/2025 - present Postdoctoral research staff
Institut für Niederlandistik, Fakultät III - Sprach- und Kulturwissenschaften
Carl von Ossietzky Universität Oldenburg (University of Oldenburg)

Employment

05/2025 - present Postdoctoral research staff
- University of Oldenburg, Germany (with Prof. Dr. Esther Ruigendijk)
- Investigate effects of degraded acoustic signals in the contexts of hearing loss and second language learning

06/2024 - 04.2025 Postdoctoral research staff
- University of Tübingen, Germany (with Prof. Dr. R. Harald Baayen)
- Investigate the isomorphy (covarying structure) between semantics and word-forms (sound/tongue positions)

02/2024 - 09/2024 Lecturer
- University of Tübingen, Germany
- Teaching of several courses and seminars
- See below (section “Teaching”) for more detail

02/2019 - 01/2024 Doctoral research assistant & Lecturer
- with Prof. Dr. R. Harald Baayen, University of Tübingen, Germany
- Experiment using ultrasound to record tongue movements for German words
- Corpus analysis with a computational model to investigate morphological and semantic effects on phonetics

08/2018 - 01/2019 Visiting doctoral research assistant
- with Prof. Dr. R. Harald Baayen, University of Tübingen, Germany
- Data processing and statistical analysis on language performance data
- Work on mathematical implementation of language processing

05/2018 - 07/2018 Visiting doctoral research assistant
- with Prof. Dr. R. Harald Baayen, University of Tübingen, Germany

- Data processing and statistical analysis on English lexical decision data
- Literature survey
- 01/2018 - 03/2018 Honorary research associate
 - with Prof. Ben Ambridge, University of Liverpool, the UK
 - Data processing of Japanese child-directed corpora with python
 - Setup of the experiment with a programming language called Processing.
- 06/2017 - 12/2017 Visiting doctoral research assistant
 - with Prof. Dr. R. Harald Baayen, University of Tübingen, Germany
 - Data processing and statistical analysis on English eye-tracking data
- 11/2016 - 01/2017 Visiting postgraduate researcher
 - with Dr. Dagmar Divjak, University of Sheffield, the UK
 - Data collection for acceptability judgment ratings
- 04/2016 - 07/2016 Teaching assistant in Japanese language as a second language
 - Kyoto University, Japan
 - Lecture of Japanese for exchange students and visiting scholars.
 - Responsible for teaching and preparing classes.

Education

- 02/2019 - 01/2024 Ph.D. (Summa cum laude)
 Quantitative Linguistics, Seminar für Sprachwissenschaft, Philosophische Fakultät
 Eberhard Karls Universität Tübingen (University of Tübingen), Germany
 Dissertation:
*“Enhancement effects of frequency:
 An explanation from the perspective of Discriminative Learning”*
- 04/2015 - 03/2018 Partial fulfillment
 PhD Program in Human and Environmental Studies (Language Sciences)
 Kyoto University, Japan
- 04/2013 - 03/2015 Master of Arts (M.A.), Human and Environmental Studies (Language Sciences)
 Kyoto University, Japan
 Thesis:
*“A Cognitive Linguistic Factor Affecting Acceptability Judgment:
 An Investigation from a perspective of Cognitive Grammar”* (In Japanese)
- 04/2009 - 03/2013 Bachelor of Arts (B.A.), Law, with a Minor in Linguistics
 Waseda University, Japan
 Thesis: *“Unified Cognitive Activation Model”*

Awards, Scholarships, and Grants

- 08/2018 - 01/2019 **DAAD Short-term Research Grant** (€7,875)
 DAAD: Deutscher Akademischer Austauschdienst; German Academic Exchange Service
- 04/2017 - 03/2018 **JSPS KAKENHI Grant** (900,000JPY ≈ €7,000)
 JSPS: Japan Society for the Promotion of Science

04/2016 - 03/2017	JSPS KAKENHI Grant (1,000,000JPY \approx €7,700) JSPS: Japan Society for the Promotion of Science
04/2016 - 03/2018	JSPS Research Fellowship for Young Scientists (DC2) (4,800,000JPY \approx €37,000) JSPS: Japan Society for the Promotion of Science
12/2015	Outstanding Presentation Awards at the 32nd Annual Meeting of the JCSS JCSS: Japanese Cognitive Science Society
03/2015	Research Grant for Presentation at International Conference (350,000JPY \approx €2,700) The Kyoto University Foundation

Current research topic

1. Phonetic reduction in second language learning
 - Reduced speech (unclear pronunciations) can be a challenge for a second language learner who is used to clearly spoken canonical phonological word forms. This project addresses the question as to how second language learning can be aided in terms of reduced speech, using a recent psycholinguistic computational model (i.e., Discriminative Learning Model).
2. Recognition of acoustically-degraded signals
 - Acoustics patients of hearing loss would be hearing can be simulated by manipulating acoustic signals. Would healthy listeners show similar recognition accuracy and patterns as patients of hearing loss, if they hear such acoustically manipulated signals? A recent psycholinguistic framework of discriminative learning predicts that they should differ in systematic ways. This project addresses differences in performance between people of hearing loss and normal hearing upon acoustically degraded signals.

Preprints

- [13] **Saito, Motoki**, and Jessie S. Nixon. (Under revision). Selective signal strengthening: speakers only enhance cues most likely to improve listener perception. *PsyArXiv* (to be uploaded).
- [14] **Saito, Motoki**, and Ruben van de Vijver. (Under review). How meaning and predictability affect the duration of Japanese homophonous words. *PsyArXiv* (<https://doi.org/10.31234/osf.io/y8h4b>).
- [15] **Saito, Motoki**, Fabian Tomaschek, and R. Harald Baayen. (Under revision). Interaction of frequency and inflectional status: An approach from discriminative learning. *PsyArXiv* (<https://doi.org/10.31234/osf.io/fr5vk>).

Publications (Peer-reviewed)

- [1] **Saito, Motoki**. 2024. Contrasting phonetic effects of morphological boundaries for vowel and consonant suffixes. *Proceedings of the 13th International Seminar on Speech Production (ISSP 2024)*, 170–173.
- [2] **Saito, Motoki**. 2024. [Review of the book *Production, perception, and comprehension of subphonemic detail: Word-final /s/ in English*, by Dominic Schmitz]. *English Language and Linguistics*, 1–7. <https://doi.org/10.1017/S1360674323000588>.

- [3] **Saito, Motoki**, Fabian Tomaschek, Ching-Chu Sun, and R. Harald Baayen. 2024. “Articulatory effects of frequency modulated by semantics”, In Marcel Schlechtweg (ed.) *Interfaces of Phonetics* (pp. 125–154), Berlin/Boston: De Gruyter Mouton. (<https://doi.org/10.1515/9783110783452-005>)
- [4] **Saito, Motoki**, Fabian Tomaschek, Ching-Chu Sun, and R. Harald Baayen. 2021. “An ultrasound study of frequency and co-articulation” *Proceedings of the 12th International Seminar on Speech Production (ISSP 2020)*.
- [5] **Saito, Motoki**, Fabian Tomaschek, and R. Harald Baayen. 2021. “Relative functional load determines co-articulatory movements of the tongue tip” *Proceedings of the 12th International Seminar on Speech Production (ISSP 2020)*.
- [6] Sering, Konstantin, Fabian Tomaschek, and **Motoki Saito**. 2021. “Anticipatory coarticulation in predictive articulatory speech modeling” *Tagungsband der 32. Konferenz Elektronische Sprachsignalverarbeitung (ESSV)*.
- [7] **Saito, Motoki**. 2017. “Language, linguistic knowledge, and linguistic ability: Similar but different technical concepts illuminating different assumptions about *language*” *Proceedings of the Annual Meeting of the Japanese Cognitive Linguistics Association*, Japanese Cognitive Linguistics Association, Vol.17. (In Japanese)
- [8] **Saito, Motoki**. 2016. “Statistical Assessment of the Effect of Semantic Concreteness on Acceptability Judgment.” *Proceedings of the Annual Meeting of the Japanese Cognitive Linguistics Association*, Japanese Cognitive Linguistics Association, Vol.16, pp.562-567. (In Japanese)
- [9] **Saito, Motoki**. 2015. “Statistical Evaluation of the Effect of Constructional Subschemas on Acceptability Judgment.” *Proceedings of the 32nd Annual Meeting of Japanese Cognitive Science Society*, Japanese Cognitive Science Society, pp.1-8. (In Japanese)
- [10] **Saito, Motoki**. 2014. “How Does Visual Information Motivate Specific Interpretation?: An Attempt Towards Mathematical Model.” *Proceedings of the Annual Meeting of the Japanese Cognitive Linguistics Association*, Japanese Cognitive Linguistics Association, Vol.14, pp.511-517. (In Japanese)
- [11] **Saito, Motoki**. 2013. “The understanding process of pragmatic meanings: Activation-spreading model unifying non-linguistic perception.” *Proceedings of the 30th Annual Meeting of Japanese Cognitive Science Society*, Japanese Cognitive Science Society, pp.263-272. (In Japanese)
- [12] **Saito, Motoki**. 2013. “How are pragmatic meanings comprehended: Perception-unified processing model.” *Proceedings of the Annual Meeting of the Japanese Cognitive Linguistics Association*, Japanese Cognitive Linguistics Association, Vol.13, pp.570-576. (In Japanese)

Publications (Non-peer-reviewed)

- [16] **Saito, Motoki**. 2016. “Which affects more on acceptability judgment, individual words or constructional subschemas?” *Papers in Linguistic Science*, Kyoto University, Vol.21, pp.37-57. (In Japanese)

Dissertations

- [17] **Saito, Motoki**. 2024. *Enhancement effects of frequency: An explanation from the perspective of Discriminative Learning*. Ph.D. dissertation, Eberhard Karls Universität Tübingen, Tübingen, Germany.

- [18] **Saito, Motoki**. 2015. *Cognitive Factors Affecting Acceptability Judgment: From the perspective of Cognitive Grammar*. M.A. dissertation, Kyoto University, Kyoto, Japan. (Written in Japanese)
- [19] **Saito, Motoki**. 2013. *Unified Cognitive Activation Model*. Thesis submitted for a Minor Degree of Language and Speech Science, Waseda University, Tokyo, Japan.

Conference presentations (Peer-reviewed)

- [20] **Saito, Motoki** and Jessie S. Nixon. 2025. “Vocalic signals are worth strengthening, but consonants may not be” Presented at a workshop “Moving beyond the means: Instability of acoustic-phonetic cues marking segmental contrasts” at the 6th Phonetics and Phonology in Europe (PaPE 2025), Palma, Spain.
- [21] **Saito, Motoki** and Ruben van de Vijver. 2025. “Semantics co-determines which writing system to use in Japanese” Presented at the 13th International Conference on the Mental Lexicon, Montréal, Canada.
- [22] **Saito, Motoki** and Ruben van de Vijver. 2025. “Durational differences among Japanese homophones as a function of their meanings” Presented at a workshop “Morphological variation” at the 47th annual conference of the German Linguistic Society (Deutschen Gesellschaft für Sprachwissenschaft; DGfS 47), Mainz, Germany.
- [23] **Saito, Motoki**. 2024. “Contrasting phonetic effects of morphological boundaries for vowel and consonant suffixes” Presented at the 13th International Seminar on Speech Production (ISSP 2024), Autrans, France.
- [24] **Saito, Motoki**, Fabian Tomaschek, and R. Harald Baayen. 2022. “Articulatory enhancement by frequency with GAMs on ultrasound images” Presented at Ultrafest X: Conference on Ultrasound Imaging for Speech and Language Research, Manchester, the UK.
- [25] **Saito, Motoki**, Fabian Tomaschek, and R. Harald Baayen. 2022. “Articulatory effect of morphological complexity without morphemes: Semantics all the way down” Presented at Morphology in Production and Perception (MPP2022), Düsseldorf, Germany.
- [26] **Saito, Motoki**, Fabian Tomaschek, and R. Harald Baayen. 2022. “Frequency of use and articulation of vowels in matched morphologically simple and complex words: an EMA study” Presented at Morphology in Production and Perception (MPP2022), Düsseldorf, Germany
- [27] **Saito, Motoki**, R. Harald Baayen, and Fabian Tomaschek. 2021. “Differences in anticipatory coarticulation in tauto- and hetero-morphemic VC sequences” Presented at Interfaces of Phonetics, Carl von Ossietzky Universität Oldenburg, Germany.
- [28] **Saito, Motoki**, Fabian Tomaschek, and R. Harald Baayen. 2020. “Co-articulation between stem vowels and suffixes: semantics all the way down” Presented at Words in the World International Conference, St. Catharines, Canada (virtual talk).
- [29] **Saito, Motoki**, Fabian Tomaschek, Ching-Chu Sun, and R. Harald Baayen. 2019. “Using ultrasound imaging to trace the effect of frequency on the articulation of the stems of inflected words” Presented at the International Morphological Processing Conference (MoProc), University of Tübingen, Tübingen, Germany.
- [30] Tatsumi, Tomoko, **Motoki Saito**, Colin Bannard, and Ben Ambridge. 2018. “How Japanese children learn to mark *who did what to whom?*: A registered report on the acquisition of Japanese case marking using repetition paradigm.” Presented at the 4th Language and Development Conference, University of Liverpool, Liverpool, the UK.

- [31] **Saito, Motoki**, Michael Ramscar, and R. Harald Baayen. 2018. “Exponential choice distributions and their consequences for language processing.” Presented at the 18th International Morphology Meeting (IMM18), Eötvös Loránd University, Budapest, Hungary.
- [32] **Saito, Motoki**. 2017. “Subschema frequency effect and their instances’ distributions” Presented at the 42nd annual meeting of Kansai Linguistic Society, Kyoto University, Kyoto, Japan.
- [33] **Saito, Motoki**. 2016. “Language, linguistic knowledge, and linguistic ability: Similar but different technical concepts illuminating different assumptions about *language*” Presented at the workshop “What is necessary to make *invisible* language *visible*?”, the 17th Annual Meeting of Japanese Cognitive Linguistics Association, Meiji University, Tokyo, Japan. (In Japanese)
- [34] **Saito, Motoki**. 2015. “Statistical Evaluation of the effect of Constructional Subschemas on Acceptability Judgment.” Presented at the 32th Annual Meeting of Japanese Cognitive Science Society, Chiba University, Chiba, Japan. (In Japanese)
- [35] **Saito, Motoki**. 2015. “Statistical Assessment of the Effect of Semantic Concreteness on Acceptability Judgment.” Presented at the workshop “Exploration into the possibility of Methodological Research in Cognitive Linguistics: With Examples of Linguistic Methodological Studies”, the 16th Annual Meeting of Japanese Cognitive Linguistics Association, Doshisha University, Kyoto, Japan. (In Japanese)
- [36] **Saito, Motoki**. 2015. “The Effect of Constructional Subschemas on Acceptability/Grammaticality Judgment.” Presented at the 13th International Cognitive Linguistics Conference, Northumbria University, Newcastle-upon-Tyne, UK.
- [37] **Saito, Motoki**. 2013. “How Does Visual Information Motivate Specific Interpretation?: An Attempt Towards Mathematical Model.” Presented at the 14th Annual Meeting of Japanese Cognitive Linguistic Association, Kyoto University of Foreign Studies, Kyoto, Japan. (In Japanese)
- [38] **Saito, Motoki**. 2013. “The understanding process of pragmatic meanings: Activation-spreading model unifying non-linguistic perception.” Presented at the 30th Annual Meeting of Japanese Cognitive Science Society, Tamagawa University, Tokyo, Japan. (In Japanese)
- [39] **Saito, Motoki**. 2012. “How are pragmatic meanings comprehended: Perception-unified processing model.” Presented at the 13th Annual Meeting of Japanese Cognitive Linguistic Association, Daito Bunka University, Tokyo, Japan. (In Japanese)

Conference presentations (Invited)

- [38] **Saito, Motoki** and Ruben van de Vijver. 2025. “Semantics determines choices of writing styles in Japanese: A computational approach” **To be presented** at International Academic Conference on Digital Humanities and AI Art, National Sun Yat-sen University, Kaohsiung, Taiwan.
- [39] **Saito, Motoki**. 2016. “Cognitive Grammar from the methodological perspective: For development of the theory.” Presented at the 5th Annual Meeting of Cognitive Grammar Circle, Nagoya University, Aichi, Japan. (In Japanese)
- [40] **Saito, Motoki**. 2013. “Modeling of contribution of visual information: language comprehension model based on activation-spreading.” Presented at Human Linguistics Circle, Rikkyo University, Tokyo, Japan. (In Japanese)

Poster presentations (Peer-reviewed)

- [40] **Saito, Motoki** and Ruben van de Vijver. 2025. “How meaning affects the duration of Japanese homophonous words” *The 6th Phonetics and Phonology in Europe (PaPe 2025)*.
- [41] **Saito, Motoki**, and R. Harald Baayen. 2022. “Probing the Paradigmatic Enhancement of German Interfixes with Linear Discriminative Learning” *International Conference on the Mental Lexicon 2022*.
- [42] **Saito, Motoki**, and R. Harald Baayen. 2022. “The phonetic realisation of German interfixes is co-determined by semantics” *The International Conference on Error-Driven Learning in Language (EDLL 2022)*.
- [43] **Saito, Motoki**, Fabian Tomaschek, and R. Harald Baayen. 2021. “Triphone meanings co-determine tongue shape during articulation: An ultrasound study” *The International Conference on Error-Driven Learning in Language (EDLL 2021)*.
- [44] Sering, Konstantin, **Motoki Saito**, and Fabian Tomaschek. 2021. “Anticipatory coarticulation in predictive articulatory speech modeling” *Die 32. Konferenz Elektronische Sprachsignalverarbeitung (ESSV2021)*.
- [45] **Saito, Motoki**, Fabian Tomaschek, and R. Harald Baayen. 2021. “Relative functional load determines co-articulatory movements of the tongue tip” *The 12th International Seminar on Speech Production (ISSP 2020)*.
- [46] **Saito, Motoki**, Fabian Tomaschek, Ching-Chu Sun, and R. Harald Baayen. 2021. “An ultrasound study of frequency and co-articulation” *The 12th International Seminar on Speech Production (ISSP 2020)*.

Other works

-Contribution to a dictionary

- [46] Nakano, Hirozo, Yoshihiro Hattori, Takahiro Ono, and Tetsuo Nishihara (eds.) 2015. *A Dictionary of Technical Terms of English Linguistics*. Tokyo: Kaitaku-sha. (Some entries including “rule/list fallacy”, “schema”, “schematicity”, and more.) (In Japanese)

Teaching

Summer semester 2024:	Phonetics and Phonology (Vorlesung) Eberhard Karls Universität Tübingen
Winter semester 2023-2024:	Morphology and phonetics (Hauptseminar) Eberhard Karls Universität Tübingen
Winter semester 2023-2024:	Psycholinguistics (Vorlesung) Eberhard Karls Universität Tübingen
Summer semester 2023:	Phonetic realizations in psycholinguistic research (Hauptseminar) Eberhard Karls Universität Tübingen
Summer semester 2023:	Ultrasound in phonetics (Hauptseminar) Eberhard Karls Universität Tübingen

Supervision

- Pun, Ching Nei. 2024. *Effects of syntactic classes on phonetic realizations in Cantonese with linear discriminative learning*, Bachelor thesis, Eberhard Karls Universität Tübingen.

- Posfortunati, Giulio. 2024. *The influence of morphological status and semantics on acoustic realizations of (pseudo-)suffixes with -ing in English*, Bachelor thesis, Eberhard Karls Universität Tübingen.

Academic service: Committees and chairs

- 2022 **Session Chair:** Second International Conference of Error-driven learning in language (EDLL2022). Tübingen, Germany.
- 2022 **Session Chair:** Morphology in Production and Perception (MPP2022). Tübingen, Germany.
- 2016 **Workshop organizer:** 17th Annual Meeting of Japanese Cognitive Linguistics Association, Meiji University, Tokyo, Japan. (In Japanese)
- 2015 **Workshop organizer:** 16th Annual Meeting of Japanese Cognitive Linguistics Association, Doshisha University, Kyoto, Japan. (In Japanese)

Journal reviews

- PLOS One.
- Linguistics.
- The Mental Lexicon.
- The Japanese Association of Sociolinguistic Sciences.

Conference reviews

- Morphology in Production and Perception (MPP2022)
- Workshop Morphological Variation at the Annual Meeting of the German Linguistic Society 2025 (DGfS 2025)

Computer Skills

- Python, R, Julia, Processing, L^AT_EX, Articulate Assistant Advanced (AAA)

Languages

- Japanese (Native)
- English (Advanced)
- German (Upper intermediate/advanced)
- Dutch (Basic)
- Chinese (Basic)