

Chao Han

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Education

- 2023 Ph.D. in Linguistics, University of Delaware, Newark, DE
- 2014 M.A. in Linguistics and Applied Linguistics, Beijing Foreign Studies University, Beijing, China.
- 2009 B.A. in International Economics and Trade, Beijing Foreign Studies University, Beijing, China.

Employment

Postdoctoral researcher 2024/1 – now

Department of Language Studies, University of Toronto Scarborough, Toronto, Canada

Adjunct professor 2023/8 – 2023/12

Department of Linguistics and Cognitive Science, University of Delaware, Newark, USA

Research Grant

- 2021/3/1 – 2023/2/28 NSF BCS-2041266, Doctoral Dissertation Research Improvement Grants (\$19,200), PI: A. Hestvik
 - Title: Evoked Category Representations
 - Role: Co-PI

Journal Publications

- in revision No exclusive access to phonemes with the varying-standards MMN paradigm.
- in review Feedback explicitness, working memory, and explicit knowledge in classroom-based second language Mandarin tone learning.
- 2023 Shinohara, Y., Han, C., & Hestvik, A. (2023). English Vowel Discrimination and Perceptual Assimilation by Japanese Listeners. *Language and Speech*, 67(4), 945–960. <https://doi.org/10.1177/00238309231209311>
- 2023 Dong, Z. R., **Han, C.**, Hestvik, A., & Hermon, G. (2023). L2 processing of filled gaps: Non-native brain activity not modulated by proficiency and working memory. *Linguistic Approaches to Bilingualism*, 13(6), 767–800. <https://doi.org/10.1075/lab.20058.don>

- 2022 Shinohara, Y., **Han, C.**, & Hestvik, A. (2022). Discriminability and prototypicality of non-native vowels. *Studies in Second Language Acquisition*, 44(5), 1260–1278. <https://doi.org/10.1017/S0272263121000978>
- 2022 Rhodes, R., Avcu, E., **Han, C.**, & Hestvik, A. (2022). Auditory predictions are phonological when phonetic information is variable. *Language, Cognition and Neuroscience*, 37(9), 1099–1114. <https://doi.org/10.1080/23273798.2022.2043395>
- 2019 Rhodes, R., **Han, C.**, & Hestvik, A. (2019). Phonological memory traces do not contain phonetic information. *Attention, Perception, & Psychophysics*, 81(4), 897–911. <https://doi.org/10.3758/s13414-019-01728-1>

Conference Proceedings

- 2023 Hestvik, A., Morlet, T., Nagao, K., & **Han, C.** (2023) Auditory processing disorder targets phonetics, not phonology. In P. Gappmayr & J. Kellogg (Eds.), *Proceedings of the 47th Annual Boston University Conference on Language Development*, Somerville, MA: Cascadilla Press (pp. 356-365). [PDF](#)
- 2020 **Han, C.**, Vogel, I., Yuan, Y., Athanasopoulou, A. (2020) Perceptual confusion of Mandarin tone 3 and tone 4. *University of Pennsylvania Working Papers in Linguistics*, 26(1), 12, 97-103. [PDF](#)
- 2019 Rhodes, R., **Han, C.**, Hestvik, A. (2019) Ad hoc phonetic categorization and prediction. In S. Calhoun, P. Escudero, M. Tabain, & P. Warren (Eds.), *Proceedings of the 19th International Congress of Phonetic Sciences, Melbourne, Australia* (pp. 1223-1227). [PDF](#)
- 2019 Shinohara, Y., **Han, C.**, Hestvik, A. Effects of perceptual assimilation: The perception of English /æ/, /ʌ/, and /ɑ/ by Japanese speakers. (2019). In S. Calhoun, P. Escudero, M. Tabain, & P. Warren (Eds.), *Proceedings of the 19th International Congress of Phonetic Sciences, Melbourne, Australia* (pp. 2344-2348). [PDF](#)
- 2019 Vogel, I., Athanasopoulou, A., **Han, C.**, Yue, Y. (2019) How perceptible is the difference between tone 3 and tone 4 in Mandarin Chinese? In S. Calhoun, P. Escudero, M. Tabain, & P. Warren (Eds.), *Proceedings of the 19th International Congress of Phonetic Sciences, Melbourne, Australia* (pp. 2027-2031). [PDF](#)
- 2019 Athanasopoulou, A., Vogel, I., **Han, C.**, Yue, Y. (2019) Confusability of Mandarin tone 3 and tone 4: effects of focus and syllable position. In S. Calhoun, P. Escudero, M. Tabain, & P. Warren (Eds.), *Proceedings of the 19th International Congress of Phonetic Sciences, Melbourne, Australia* (pp. 442-446). [PDF](#)

Presentations

- 2023 **Han, C.**, Hestvik, A., & Idsardi, W. Memory trace retention of acoustic details with a category. Talk at *PhonolEEGy2, Linguistics Society of America Summer Institute*, UMASS/Amherst, USA, June 2023.

- 2022 Hestvik, A., Morlet, T., Nagao, K. & **Han, C.** Auditory processing disorder targets phonetics, not phonology. Talk at *The 47th Boston University Conference on Language Development*, Boston, USA, November 2022.
- 2022 **Han, C.**, Hestvik, A., Rhodes, R., & Idsardi, W. Symbolic vs. gradient phonemes. Poster at *The 14th Annual Meeting of the Society for the Neurobiology of Language*, Philadelphia, USA, October 2022.
- 2022 **Han, C.**, Hestvik, A., & Rhodes, R. What does varying the standards in an MMN paradigm really do? Poster at *The 14th Annual Meeting of the Society for the Neurobiology of Language*, Philadelphia, USA, October 2022.
- 2022 **Han, C.**, Rhodes, R., Idsardi W., & Hestvik A. Symbolic vs. gradient phonemes. Poster at *The 9th Mismatch Negativity conference*, Fukushima, Japan, September 2022.
- 2019 **Han, C.**, Yuan, Y., & Vogel, I. Perception of Mandarin tone 3 and tone 4: Effects of syllable position and focus. Talk at *The 43rd Penn Linguistics Conference*, Philadelphia, PA.
- 2019 Avcu, E., Rhodes, R., **Han, C.**, & Hestvik, A. P300 as an index of phonotactic violation. Poster at *The 93rd Annual Meeting of the Linguistic Society of America*, New York, NY.
- 2018 **Han, C.**, Pereira, O., Walter, C., Morlet, T., Hestvik, A., & Nagao, K. Phoneme identification of children with various auditory processing deficits. Talk at *The 12th Mini-Conference on Acoustic*, Washington, DC.
- 2018 **Han, C.**, Yuan, Y., & Vogel, I. Perceptual confusion of Mandarin tone 3 and tone 4. Poster at *The International Forum on Frontiers in Linguistics*, Beijing, China.
- 2018 Avcu, E., Rhodes, R., **Han, C.**, & Hestvik, A. Neurophysiological signature of phonotactic rule-learning. Poster at *The 59th Annual Meeting of Psychonomic Society*, New Orleans, LA.
- 2018 Avcu, E., Rhodes, R., **Han, C.**, & Hestvik, A. Neural underpinnings of phonotactic rule Learning. Poster at *The 49th Annual Meeting of the North East Linguistic Society*, New York, NY.
- 2018 Rhodes, R., & **Han, C.** Phonetic content of auditory representations. Poster at *The 10th Annual Meeting of the Society for the Neurobiology of Language*, Québec City, Canada.
- 2018 Pereira, O., **Han, C.**, Hestvik, A., Morlet, T., & Nagao, K. Phonetic vs. phonological MMN: A novel approach to detect auditory processing deficit in children. Poster at *The 8th Mismatch Negativity Conference*, Helsinki, Finland.
- 2018 Rhodes, R., **Han, C.**, & Hestvik, A. No ad hoc perceptual grouping of speech sounds in the varying standards oddball paradigm. Poster at *The 8th Mismatch Negativity Conference*, Helsinki, Finland.

- 2017 Rhodes, R., **Han, C.**, & Hestvik, A. The ad hoc perceptual grouping of speech sounds in the varying standards oddball paradigm. Poster at *The 24th Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA.
- 2017 Pereira, O., Hestvik, A., Morlet, T., **Han, C.**, Scharf, S., Sklar, R., Nemith, J., DeVore, B., & Nagao, K. Using the mismatch negativity paradigm to explore the deficits in children with auditory processing disorder. Poster at *The DE-CTR ACCEL 4th Annual Meeting*, Newark, DE.
- 2013 **Han, C.**, & Chen, Y. Are Chinese people facing Past? Experimental evidence for Chinese spatiotemporal representations. Talk at *The 2nd International Conference on Psycholinguistics*, Fujian, China.
- 2013 **Han, C.**, & Chen, Y. Psychological reality of space-time metaphors in the horizontal and the vertical dimensions in Mandarin. Talk at *The 3rd National Forum on Neurolinguistics and Second Language Acquisition*, Beijing, China.

Teaching

As Instructor

CGSC496/696 Psycholinguistics | Spring 2022

CGSC433/633 Introduction to Acoustic Phonetics | Spring 2020

CGSC470/670 Elements of Cognitive Science | Fall 2019

As Teaching Assistant

CGSC420/620 Research Methods in Cognitive Science | Fall 2021

PSYC209 Measurement and Statistics | Fall 2018, Spring 2019

CGSC433/633 Introduction to Acoustic Phonetics | Spring 2018

PYSC390 Social Psychology | Fall 2017

CGSC170 Introduction to Cognitive Science | Spring 2017, Fall 2022

LING403/603 Introduction to Phonology | Fall 2016

PYSC100 General Psychology | Spring 2016

Honors and Awards

- 2015-2022 Summer Research Grant, Department of Linguistics and Cognitive Science, University of Delaware
- 2017-2018 Professional Development Award, University of Delaware
- 2018 The 2nd place of the Best Student Papers Competition at *The 12th Mini Conference on Acoustics*, the Washington DC Chapter of the Acoustical Society of America
- 2012 Xu Gehui Alumni Scholarship, Beijing Foreign Studies University

Service

- 2019-2022 **Lab Manager** for Experimental Psycholinguistics Lab, University of Delaware

- 2019 – **Reviewer**
Bilingualism: Language and Cognition (2024)
Language and Speech (2024)
Language, Cognition and Neuroscience (2019)
- 2017-2018 **Committee Member** for Linguistics Colloquium Series, University of Delaware
- 2018 **Student Organizer/Reviewer** for *2018 Linguistics and Cognitive Science Student Conference*, University of Delaware
- 2017 **Student Organizer** for *The 47th Linguistic Symposium on Romance Languages*
- 2012-2013 **Organizer** for Linguistics Reading Salon, Beijing Foreign Studies University

Skills

Experiment Design: PsychoPy, E-prime, Praat

EEG Acquisition: Magstim EGI, Brain Vision

Neural Signal Processing: ERP analysis, spectral analysis (FFT, Welch's method), time-frequency analysis (Morlet wavelet convolution, filter-Hilbert transform)

Data Science: statistics (mixed-effects modeling, source separation), machine learning (TensorFlow)

Programming: R, MATLAB, Python

Language: Mandarin Chinese, Rui'an dialect of Wu Chinese, English, Japanese