

Sihan Chen

PHD CANDIDATE · DEPARTMENT OF BRAIN AND COGNITIVE SCIENCES

Massachusetts Institute of Technology, 43 Vassar St, 46-4127, Cambridge, MA 02139

✉ sihanc@mit.edu | 🏠 sihan-chen.org | 📺 [cshnican](https://www.youtube.com/cshnican) | 🐦 [@cshnican](https://twitter.com/cshnican)

Education

Massachusetts Institute of Technology

PHD IN COGNITIVE SCIENCE

- Advisor: Dr. Edward Gibson

Cambridge, MA, United States

September 2020 - present

University of Miami

BS IN MECHANICAL ENGINEERING

- Minor in Mathematics
- graduated summa cum laude

Coral Gables, FL, United States

January 2016 - December 2019

Professional Experience

2020- **Research Assistant**, Brain and Cognitive Sciences, MIT

2020 **Assistant Scientist**, SilicoSpine Inc. Miami, FL

2018-2019 **Undergraduate Research Assistant**, Mechanical Engineering, University of Miami

2017-2019 **Peer Tutor**, Camner Academic Resource Center, University of Miami

Publications

JOURNAL ARTICLES

1. **Chen, S.**, Futrell, R., Mahowald, K. (2023), Investigating information-theoretic properties of the typology of spatial demonstratives. *Cognition*, 240, 105505.
2. **Chen, S.**, Nathaniel, S., Ryskin, R., Gibson, E., (2023), The effect of context on noisy-channel sentence comprehension. *Cognition*, 238, 105503.
3. Everett, C., **Chen, S** (2021), Speech adapts to differences in dentition within and across populations. *Scientific Reports* 11, 1066.
4. Zhu, Q., Gao, X., **Chen, S.**, Gu, W., Brown, M. D., (2020) Effects of Intervertebral Disc Degeneration on Mechanical and Electrical Signals at the Interface between Disc and Vertebra. *Journal of Biomechanics*, 104, 109756.

CONFERENCE PROCEEDINGS

1. **Chen, S.** & Everett, C. (2020), Did Post-Neolithic Changes in Bite Configuration Impact Speech? A New Approach to the Question. *Proceedings to the 13th International Conference on the Evolution of Language*, Brussels, Belgium

CONFERENCE ABSTRACTS

1. **Chen, S.**, Benítez-Burraco, A., Cahuana, C., Gil, D., Progovac, L., Reifegerste, J., Yuditha, T., & Tatarinova, T. (2023), Cognitive and genetic correlates of a single macro-parameter of crosslinguistics variation. *Protolang 2023*, Rome, Italy
2. **Chen, S.**, Benítez-Burraco, A., Gaponov, S., Gil, D., Progovac, L., Reifegerste, J., Tatarinova, T. (2023), Linking language variation to sociopolitical variation. *Sociotypology: linking language variation to sociological diversity; Workshop at the 56th Annual Meeting of the Societas Linguistica Europaea* Athens, Greece
3. Benítez-Burraco, A., Cahuana, C., **Chen, S**, Gil, D., Progovac, L., Reifegerste, J., Tatarinova, T. (2022), Cognitive and genetic correlates of a single macro-parameter of crosslinguistics variation. *Joint Conference on Language Evolution*. Kanazawa, Ishikawa, Japan
4. **Chen, S.**, Futrell, R., Mahowald, K. (2022), An information-theoretic approach to the typology of spatial adverbs. *The 4th Workshop on Research in Computational Typology and Multilingual NLP*. Seattle, WA

POSTERS/PRESENTATIONS

1. Zhu, Q., Gao, X., Brown, M. D., **Chen, S.**, Gu, W., (2020), Effects of Intervertebral Disc Degeneration on Mechanical and Electrical Signals at the Interface between Disc and Vertebra. Orthopaedic Research Society 2020 Annual Meeting. New Orleans, LA. February 5, 2020.
2. **Chen, S.**, Futrell, R., Mahowald, K. (2022), An information-theoretic approach to the typology of spatial adverbs. 35th Annual Conference on Human Sentence Processing. Santa Cruz, CA. March 25, 2022.
3. Fleming, J., **Chen, S.**, Gibson, E., (2022), Noisy-Channel Sentence Interpretation in Spanish. ABRCMS 2022, Anaheim, CA, November 2022
4. **Chen, S.**, Conway, B., Gibson, E. (2023), Russian blues do not reveal an effect of language on perception: a reanalysis of the original study. Poster at the 36th Annual Conference on Human Sentence Processing, Pittsburgh, PA, March 9 2023
5. Washington, L., **Chen, S.**, Gibson, E. (2023), The Influence of Prior Semantic Knowledge in Noisy Channel Interpretation. Poster at the 36th Annual Conference on Human Sentence Processing, Pittsburgh, PA, March 9 2023
6. Yuditha, T., **Chen, S.**, Benítez-Burraco, A. (2023). Exotericity and Esotericity in Languages of Indonesia: A Preliminary Study. Talk presented at the 26th International Symposium on Malay and Indonesian Linguistics (ISMIL) 26, The University of Hawai'i at Mānoa, April 19, 2023. [online].
7. Benítez-Burraco, A., **Chen, S.**, Gil, D., Gaponov, S., Reifegeste, J., Yuditha, T., Tatarinova, T., & Progovac, Lj. (2023). Patterns of correlation between linguistic and sociopolitical complexity. Presentation at Complexity in Language Variation and Change 2023. Tokyo, Japan. August 4 2023 [online]

IN REVIEW

1. Zhan, M., **Chen, S.** (equal contributions), Levy, R., Lu, J., Gibson, E. (in review), Rational Sentence Interpretation in Mandarin Chinese.
2. **Chen, S.**, Gil, D., Gaponov, S., Reifegeste, J., Yuditha, T., Tatarinova, T., Progovac, L., and Benitez-Burraco, A. (in review), Cognitive and linguistic correlates of societal variation: A quantitative analysis.
3. Mao, R., **Chen, S.**, Gibson, E. (in review). How do Mandarin native speakers interpret implausible sentences?
4. **Chen, S.**, Conway, B., Gibson, E. (in prep), Russian blues do not reveal an effect of language on perception: a reanalysis of the data in the original study.

IN PREP

1. **Chen, S.**, Gibson, E., & Ramscar, M. (in prep). Corpus frequency measures fail to capture the dynamic nature of human communicative codes.

Awards, Fellowships, & Grants

2020-2022 **Hilibrand Fellowship**, MIT Dept of Brain and Cognitive Sciences

2022-2023 **Singleton Fellowship**, MIT Dept of Brain and Cognitive Sciences

Presentations

INVITED TALKS

December 2021. *Investigating the efficiency of spatial deictic adverbs*, Cog Lunch, MIT

May 2022. *Winawer et al. (2007) revisited: the role of language on color cognition*, Cog Lunch, MIT

November 2022. *Explaining language complexity from sociopolitical complexity*, Cog Lunch, MIT

Teaching Experience

Spring 2023	Lab in Psycholinguistics (9.59) , Teaching Assistant	MIT
Fall 2021	Computational Cognitive Science (9.66) , Teaching Assistant	MIT
Fall 2018, Spring 2019	Calculus II review session , Peer Tutor	Univ. of Miami

Mentoring

Summer 2022	Jorie Fleming , MSRP Student, Washington University in St Louis	Cambridge, MA
Summer 2022	Lia Washington , Post-Baccalaureate Reserch Scholar, MIT	Cambridge, MA

Outreach & Professional Development

PEER REVIEW

- 2022: Open Mind, Nature, PNAS

Media coverage

2023	Uncovering the invisible pressures shaping language , MIT News (MIT), https://news.mit.edu/2023/sihan-chen-uncovering-invisible-pressures-shaping-language-0627
2021	Scholars link diet, dentition, and linguistics , NewsTheU (University of Miami), https://news.miami.edu/stories/2021/01/scholars-link-diet,-dentition,-and-linguistics.html
2019	In Search for Hidden Worlds , NewsTheU (University of Miami), https://news.miami.edu/stories/2019/03/in-search-of-hidden-worlds.html

Languages

- Native / bilingual proficiency: Chinese Mandarin, English
- Intermediate: Spanish
- Programming languages: Python, R, Matlab
- Writing systems: Chinese, Latin, Cyrillic, Greek, Armenian