Sihan **Chen**

PhD Candidate · Department of Brain and Cognitive Sciences

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Education

Massachusetts Institute of Technology   *Cambridge, MA, United States*
PhD in Cognitive Science   *September 2020 - present*
- Advisor: Dr. Edward Gibson

University of Miami   *Coral Gables, FL, United States*
BS in Mechanical Engineering   *January 2016 - December 2019*
- Minor in Mathematics
- graduated summa cum laude

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.**, Nathaniel, S., Ryskin, R., Gibson, E., (2023), The effect of context on noisy-channel sentence comprehension. *Cognition*, 238, 105503.

2. Everett, C., **Chen, S** (2021), Speech adapts to differences in dentition within and across populations. *Scientific Reports* 11, 1066.

3. 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.

In Press

1. **Chen, S.**, Futrell, R., Mahowald, K. (in press), Investigating information-theoretic properties of the typology of spatial demonstratives. *Cognition*.

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.**, 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

2. 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

3. **Chen, S**, Benítez-Burraco, A., Gaponov, S., Gil, D., Progovac, L., Reifegerste, J., Tatarinova, T., 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

4. **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

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]

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?

IN PREP

1. **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.

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

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

Languages

- Native / bilingual proficiency: Chinese Mandarin, English

- Intermediate: Spanish

- Programming languages: Python, R, Matlab

- Writing systems: Chinese, Latin, Cyrillic, Greek, Armenian