

Yike Li

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 Yike Li |  Yike-echo-Li |  @yikeli1054

EDUCATION

- **University of Michigan, Ann Arbor** Ann Arbor, MI
Ph.D. in Psychology - Cognition & Cognitive Neuroscience Sep 2023 - Present
Ph.D. in Scientific Computing (joint degree)
Advisor: David Brang, Ph.D., Jonathan Brennan, Ph.D.
- **New York University** New York, NY
M.A. in Experimental Psychology Sep 2021 - May 2023
Focus: Cognitive Neuroscience
Advisor: David Poeppel, Ph.D.
Thesis: *Spectro-temporal information distinguishes between speech and music*
- **Peking University** Beijing, China
B.A. in Spanish Language and Literature Sep 2015 - Jul 2019
Minor in Psychology (Cognitive Psychology)

PUBLICATIONS, CONFERENCES, & WORKSHOPS

- **Publications**
Chang, A., Li, Y., Roman, I. R., & Poeppel, D. (2025). *Spectrotemporal modulation: efficient and interpretable feature representation for classifying speech, music, and environmental sounds* [arXiv:2505.23509].
<https://doi.org/10.48550/arXiv.2505.23509>
- **Conferences**
Li, Y., Oten, S., Hervey-Jumper, S. L., & Brang, D. (2025, Nov. 15-19). Altered phonetic representation in tumor-afflicted auditory cortex during speech perception. [**Poster presentation**]. *Society for Neuroscience, 2025*, San Diego, CA.
Li, Y., Oten, S., Hervey-Jumper, S. L., & Brang, D. (2025, Sep. 12-14). Altered phonetic representation in tumor-afflicted auditory cortex during speech perception. [**Poster presentation**]. *17th Annual Meeting of the Society for the Neurobiology of Language*, Washington, DC.
Li, Y., DeWitt, I., Cao, C. Z., Stacey, W. C., & Brang, D. (2024, Oct. 5-9). Congruent visual information enhances phoneme selectivity in auditory cortex. [**Poster presentation**]. *Society for Neuroscience, 2024*, Chicago, IL.
Li, Y., DeWitt, I., & Brang, D. (2024, Jun. 17-20). Congruent visual speech enhances phoneme selectivity in auditory cortex. [**Oral presentation**]. *22nd Annual International Multisensory Research Forum*, Reno, NV.
Li, Y., Chang, A., & Poeppel, D. (2022, Oct. 6-8). Spectro-temporal Information Distinguishes between Speech and Music. [**Poster presentation**]. *14th Annual Meeting of the Society for the Neurobiology of Language*, Philadelphia, PA.
Li, Y., Chang, A., & Poeppel, D. (2022, Apr. 29). The Role of Spectro-temporal Information in Speech and Music. [**Poster presentation**]. *26th Annual NYU Psychology Masters Research Conference*, New York, NY.
Li, Y., & Creel, S. C. (2021, Jul. 28-31). Tone Language Enhances Consistency in Pitch Production Across Domain. [**Oral presentation**]. *16th International Conference on Music Perception and Cognition*, Sheffield, United Kingdom (remote).
- **Workshops**
Parameter-efficient Fine-tuning for Visual Question Answering using Outside Knowledge. *Neuromatch Academy 2024 - Deep Learning*.
Prediction of semantically differentiated tasks from fMRI using standard GLM and time-decoding model. *Neuromatch Academy 2022 - Computational Neuroscience*.

SKILLS

- **Languages:** Mandarin Chinese (native), English (proficient), Spanish (proficient), Japanese(intermediate)
- **Programming Languages:** MATLAB, Python, R, Praat, JavaScript, HTML/CSS
 - **Data Analysis:** Audio signal processing (MATLAB), Neural data analysis (iEEG/EEG, fMRI; EEGLab, Fieldtrip, SPM, MNE), Machine learning (Scikit-Learn, Nilearn, PyTorch, TensorFlow), Phonetic & acoustic analysis (Praat), Statistics (R, SPSS, G-Power)
 - **Experimental Design:** Psychtoolbox, PsychoPy, OpenSesame, jsPsych, Qualtrics
 - **Other:** Markdown, LaTeX, Github
- **Experimental Skills:**
 - **Neuroscience:** iEEG (patient testing), MRI/fMRI, MEG, EEG, t-DCS
 - **Behavioral:** Eye-tracking (EyeLink) and behavioral experiments in adults and preschoolers
- **Other Skills:** Musical training (Accordion, Music Theory), video editing (Adobe Premiere, OBS Studio)

HONORS & AWARDS

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| • Weinberg Institute for Cognitive Science Graduate Fellowship | <i>University of Michigan, 2025</i> |
| • Rackham Conference Travel Grant, \$900 | <i>University of Michigan, 2024</i> |
| • Masters Research Conference Honorable Mentioned | <i>New York University, 2022</i> |
| • Graduate Student Conference Travel Award, \$500 | <i>New York University, 2022</i> |
| • Graduate Student Conference Travel Award, \$200 | <i>New York University, 2022</i> |
| • National Fellowship for Undergraduate Research, 10,000 CNY | <i>Ministry of Education, China, 2018</i> |
| • Santander Scholarship for Distinguished Students, \$4,000 | <i>Santander Bank, Spain, 2017</i> |

RESEARCH EXPERIENCE

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| • Poeppel Lab, New York University, New York, NY | <i>Sep 2021 - May 2023</i> |
| <i>Advisor: Dr. Andrew Chang, Dr. David Poeppel</i> | Research Assistant |
| Thesis Project Spectro-temporal information distinguishes between speech and music | |
| ◦ Led and performed advanced audio signal processing and big data methods on standard corpora to quantify spectro-temporal structure in speech and music. | |
| ◦ Found that speech and music have distinct modulation patterns while maintaining a high within-category consistency. | |
| Other Experience | |
| ◦ Behavioral experiment, fMRI and MEG scanning, data preprocessing and analysis. | |
| ◦ Speech planning, real-time feedback in speech production. | |
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• Language Acquisition & Sound Recognition Lab, UC San Diego, San Diego, CA |
<i>Aug 2019 - Jun 2020</i> |
| <i>Advisor: Dr. Sarah Creel</i> | Visiting Researcher |
| Independent Project Pitch consistency in tone versus non-tone language speakers across domain | |
| ◦ Led and conducted behavioral experiments in Mandarin and English native college students to test absolute and relative pitch consistency in linguistic and non-linguistic production. | |
| ◦ Designed and programmed Praat-based pipeline to batch-process and quantify pitch trajectories and other phonetic cues. | |
| ◦ Found that tonal language experience may benefit both absolute and relative pitch precision in speech production, while music production showed a weakened but similar pattern. | |
| Other Experience | |
| ◦ Eye-tracked phoneme acquisition experiments on preschoolers (ages 3-5). | |
| ◦ Normed language proficiency tests (PPVT-IV, MINT, GFTA) on both adults and children. | |
| ◦ Mentored undergraduate students (initials of mentored students: Y.D., H.W.). | |
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• Attention, Neural Aesthetic, & Time Lab, Peking University, Beijing, China |
<i>Oct 2016 - Jun 2019</i> |
| <i>Advisor: Dr. Yan Bao</i> | Research Assistant |
| Independent Project Relationship between temporal order threshold and McGurk effect | |
| ◦ Led and conducted a psychophysics study to explore the hypothetical relationship between multisensory integration and time perception ability. | |
| ◦ Found that the individual difference in time perception ability may account for the sensitivity to the McGurk effect by interacting with the perception and accuracy of auditory input. | |

OUTREACH & NON-ACADEMIC EXPERIENCE

Outreach & Teaching

- **Outreach**
Spring Harvest: Free PhD Application Support for Non-US Female Applicants Jul 2023 - Present
- **Teaching Experience**
PSYCH342 Human Research Method: EEG, *University of Michigan, Ann Arbor, MI* Jan - Apr 2025
COGSCI200 Introduction to Cognitive Science, *University of Michigan, Ann Arbor, MI* Sep - Dec 2024
PSYCH240 Introduction to Cognitive Psychology, *University of Michigan, Ann Arbor, MI* Jan - Apr 2024
Introduction to Hispanic Culture, *Peking University, Beijing, China* Jul - Aug 2017

Non-academic Experience

- **Department of Psychology, University of Michigan, Ann Arbor** Ann Arbor, MI
CCN Social Committee Sep 2024 - Apr 2025
- **Thinkingdom Media Group Ltd.** Beijing, China
Group Leader, *Literary Rights and Data Management Group* Mar 2021 - Aug 2021
Junior Researcher, *Marketing and Editorial Research Group* Jul 2020 - Feb 2021
- **Peking University** Beijing, China
Co-president, *Association of Accordion* Jun 2016 - Jun 2018
Co-president, *Student Union* Jun 2016 - Jun 2018
- **Embassy of the Republic of Chile in China** Beijing, China
Consecutive Interpreter (Spanish-English-Mandarin), *Chile Week 2016* Aug 2016

REFERENCES

1. **David Brang, Ph.D.**
Associate Professor, Department of Psychology
University of Michigan, Ann Arbor
Relationship: Primary PhD Advisor
2. **Jonathan Brennan, Ph.D.**
Associate Professor, Department of Linguistics
University of Michigan, Ann Arbor
Relationship: Secondary PhD Advisor
3. **David Poeppel, Ph.D.**
Professor, Department of Psychology
New York University
Relationship: Master's Advisor