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

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

RESEARCH EXPERIENCE

- **Poeppel Lab, New York University, New York, NY** — *Sep 2021 - May 2023*
  Advisor: Dr. Andrew Chang, Dr. David Poeppel — 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.

- **Language Acquisition & Sound Recognition Lab, UC San Diego, San Diego, CA** — *Aug 2019 - Jun 2020*
  Advisor: Dr. Sarah Creel — 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.).

- **Attention, Neural Aesthetic, & Time Lab, Peking University, Beijing, China** — *Oct 2016 - Jun 2019*
  Advisor: Dr. Yan Bao — 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

• **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

Volunteer Interpreter (Spanish-English-Mandarin), *Chile Week 2016*   Aug 2016

REFERENCES

1. **David Brang, Ph.D.**
   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