

# GIANG LE

(+1) 217-250-1700 ◊ gianghl2@illinois.edu

## EDUCATION

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- Ph.D. Candidate in Linguistics** *expected 2023*  
University of Illinois at Urbana Champaign
- M.S. in (Applied) Statistics** *expected 2023*  
University of Illinois at Urbana Champaign
- M.A. in East Asian Languages and Cultures** *2014*  
University of Southern California
- B.A. in Economics, East Asian Studies** *2009*  
Ohio Wesleyan University

## RESEARCH INTERESTS

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Experimental linguistics, computational linguistics, psychoacoustics, machine translation, natural language processing, phonology, phonetics

## RESEARCH PROJECTS

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### **Fairness in Artificial Intelligence: A New Paradigm for the Evaluation and Training of Inclusive Automatic Speech Recognition**

- PI: Prof. Mark Hasegawa-Johnson, Prof. Zsuzsanna Fagyal
- Abstract
- Mine large, publicly available text and speech corpora (e.g., a 100,000-podcast corpus) in collaboration with the research team working on inclusive speech recognition

### **Tone Perception in Noise**

- Designing perception experiments for tone perception in noise following our production results of Lombard speech

## PUBLICATIONS

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**Le, Giang;** Shih, Chilin; Tang, Yan. 2022. A Laryngographic Study on the Voice Quality of Northern Vietnamese Tones under the Lombard Effect In *INTERSPEECH 2022*.

**Le, Giang;** Shih, Chilin; Tang, Yan. 2021. Distortion in Tone Production due to the Lombard Effect. In *Proceedings of the First International Conference on Tone and Intonation*.

**Le, Giang;** Mori, Shinka; Schwartz, Lane. 2021. Illinois Japanese ↔ English News Translation for WMT 2021. In *Proceedings of the Sixth Conference on Machine Translation (WMT)*. pp 149-158. November 10-11, 2021. Association for Computational Linguistics.

**Le, Giang.** 2021. L1 Vietnamese L2 English Speakers' Cues to the Perception of Stress, *Studies in the Linguistic Sciences: Illinois Working Papers 2021*.

## INVITED TALKS

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## CONFERENCE PRESENTATIONS

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*A Laryngographic Study on the Voice Quality of Northern Vietnamese Tones under the Lombard Effect* - INTERSPEECH, Sep 2022

*Distortion in Tone Production due to the Lombard Effect* - 1st International Conference on Tone and Intonation, Dec 2021

*Illinois Japanese ↔ English News Translation for WMT 2021* - EMNLP 2021 Sixth Conference on Machine Translation (WMT 2021), Nov 2021

*Do we change the tone quality spontaneously when speaking in non-ideal conditions?* - Mid-continental Phonetics and Phonology Conference 26, University of Chicago, Sep 2021

*L1 Vietnamese L2 English Speakers' Cues to the Perception of Stress* - Illinois Language and Linguistics Society 13 and Asian Conference on Languages, Spring 2021

## ACADEMIC HONORS AND AWARDS

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Department of Linguistics Conference Presentation Awards, University of Illinois, Fall 2021

Teacher Ranked Excellent by Students, University of Illinois, Fall 2021

Graduate College Conference Presentation Awards, University of Illinois, Spring 2021

LSO Service Recognition Award, University of Illinois, Spring 2021

Human Subjects Award, University of Illinois, Spring 2020

Departmental Fellowship, University of Illinois, Fall 2019

Provost's Fellowship, University of Southern California, 2009

Travel Award, University of Southern California, 2012

Phi Beta Kappa, Ohio Wesleyan University, 2009

Graduation with University Honors, Magna Cum Laude, Ohio Wesleyan University, 2009

Omicron Delta Epsilon (International Honor Society in Economics), 2009

Outstanding Major in Economics, Ohio Wesleyan University, 2009

Florence Leas Freshman Mathematics Prize, Department of Mathematics and Computer Science, Ohio Wesleyan University, 2007

Phi Eta Sigma (National Freshman Honor Society), 2006

Presidential Scholar, Ohio Wesleyan University, 2006

## ACADEMIC APPOINTMENTS

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**Research Assistant** *UIUC*  
Fairness in Artificial Intelligence: A New Paradigm for the Evaluation and Training of Inclusive ASR

**Instructor** *UIUC*  
LING 100 - Introduction to Linguistic Science Spring 2022

**Head Teaching Assistant** *UIUC*  
LING 100 - Introduction to Linguistic Science Fall 2021  
Instructor: Professor Ryan Shosted

**Teaching Assistant** *UIUC*  
LING 302 - Elements of Phonology Spring 2021  
Instructor: Professor Ryan Shosted

**Teaching Assistant**  
LING 100 - Introduction to Linguistic Science  
Instructor: Professor Ryan Shosted

UIUC  
Fall 2020

**Teaching Assistant**  
LING 490 - Computational Morphology  
Instructor: Professor Lane Schwartz

UIUC  
Spring 2020

## UNIVERSITY & PROFESSIONAL SERVICE

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**Organizer**  
Computational Linguistics Reading Group

UIUC  
Fall 2021 - Spring 2022

**Abstract Reviewer**  
Slavic Linguistics Society 16  
Illinois Language and Linguistics Society 12, 13, 14

UIUC  
Spring 2021  
Spring 2020-Spring 2022

**Organizing Committee Member**  
Illinois Language and Linguistics Society 12, 13

UIUC  
2019-2021

**Treasurer**  
Linguistics Student Organization

UIUC  
2020-2021

## INDUSTRY EXPERIENCE

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**Dictionary Database Manager**  
*July 2022 - present*

*The Language Conservancy*

**Analytical Linguistic Project Manager**  
*June 2016 - July 2019*

*Google via Adecco, Tokyo Japan*

*As Analytical Linguistic Project Manager at Google, I led Vietnamese syntax annotation, segmentation annotation, message development, and linguistic evaluation projects. Since Q2 2017, I worked on cross-linguistic projects and became co-owner of a major grammar domain for APAC languages at the end of Q4 2017. I created tools and workflows for data extraction and manipulation to speed up the process of grammar induction. I also worked on two lexicon building efforts, specifically I was the main contributor to pronunciation data analysis, function words/mwe extraction, mapper for data conversion of Japanese Unidic. I also worked on data collection for i18n lexical resources to improve grammar quality.*

**Speech Data Operations Project Manager**  
*October 2015 - June 2016*

*Google via Beyondsoft, Taipei Taiwan*

*As manager of the Vietnamese speech data operations team, I managed a team of evaluators to work on the launch of the first Vietnamese TTS voice. I led the creation of the phonemic guidelines, quality control, development of the speech database, development of the pronunciation dictionary, and evaluation of the final product. Due to limited resources, we optimized our performance with creative solutions. Our first Google voice was well-received by the media in Vietnam.*

## PROFESSIONAL MEMBERSHIP

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Association for Laboratory Phonology  
Association for Computational Linguistics  
Linguistic Society of America

## COMPUTATIONAL SKILLS

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<b>Programming Languages</b>	Python, shell scripting, R, Wolfram Language, Praat scripting yodalog, gqui, SQL, dremel Java, Lua (basic)
<b>Software &amp; Tools Libraries</b>	LaTeX, RMarkdown, vim, Git, Mathematica, SPSS, SAS, Praat, TLex pandas, numpy, scikit-learn

## NATURAL LANGUAGES

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<b>Vietnamese</b>	native
<b>English</b>	full professional proficiency
<b>Japanese</b>	JLPT N2 certified
<b>Mandarin Chinese</b>	conversational
<b>German</b>	knowledge of grammar

## SELECTED COURSEWORK

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\* STAT 400 (MATH 463) Statistics and Probability I  
 STAT 410 (MATH 464) Statistics and Probability II  
 STAT 425 Applied Regression and Design  
 STAT 432 Basics of Statistical Learning  
 STAT 431 Applied Bayesian Analysis  
 STAT 448 Advanced Data Analysis  
 STAT 446 Data Science Programming Methods  
 STAT 510 Mathematical Statistics

LING 402 Tools and Techniques of Speech and Language Processing  
 \* LING 514 Design and Methods in Linguistic Research  
 LING 506 Introductory Machine Learning  
 \* LING 401 Introduction to General Phonetics  
 \* LING 520 Acoustic Phonetics  
 \* LING 506 Neural Machine Translation  
 LING 446 Fundamentals for Speech Signal Processing and Analysis

(\* indicates a grade of A+ earned)

## REFERENCES

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<b>Professor Chilin Shih</b>	cls@illinois.edu
<b>Professor Yan Tang</b>	yty@illinois.edu
<b>Professor Ryan Shosted</b>	rshosted@illinois.edu