John McGahay
Curriculum Vitae

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Education

2027 (expected)	**Doctor of Philosophy in Linguistics**
University of California, Los Angeles | Los Angeles, CA
2024	**Master of Arts in Linguistics**
University of California, Los Angeles | Los Angeles, CA
"Vowel System Typology and Confusion Minimization"
Advised by Profs. Bruce Hayes (Co-Chair), Megha Sundara (Co-Chair), Meg Cychosz
2019	**Bachelor of Arts**
University of Pennsylvania, College of Arts and Sciences | Philadelphia, PA

2019   **Bachelor of Arts**

Honors Thesis: "The Effect of Conditioned Mergers on Underlying Representations"
                        Advised by Prof. Charles Yang
Majors: Linguistics with Honors
                        Cognitive Science (Language and Mind concentration)
Minors: Computer Science
                        German

Spring 2017	**Semester Abroad**
Berlin Consortium for German Studies | Berlin, Germany
German-language coursework at the Freie Universität and Humboldt-Universität
2015	**High School Diploma**
Regis High School | New York, NY

Research Presentations

Under Review	**Journal Article**
Language
"A Theory of Vowel System Typology Based on Confusion Minimization"
Under Review	**Conference Talk & Proceedings**
Interspeech 2025, Rotterdam, The Netherlands
"Modeling Vowel System Typology Using Iterated Confusion Minimization"
December 2023	**Poster Presentation**
Acoustics Sydney 2023, hosted by *Acoustical Society of America*
"A Theory of Vowel Dispersion Based on Probabilistic Modeling of Optimized Speakers and Listeners"
March 2019	**Conference Talk**
Penn Linguistics Conference 43
"The Effect of Conditioned Mergers on Underlying Representations"
• Won award for Best Undergraduate Abstract

Grants & Fellowships

AY 2025-2026 **Graduate Research Mentorship**
UCLA Graduate Education
"Modeling Allophony Using Iterated Confusion Minimization"
Advised by Prof. Megha Sundara

Summer 2025 **Graduate Summer Research Mentorship**
UCLA Graduate Education
"Modeling the Great Vowel Shift Using Iterated Confusion Minimization"
Advised by Prof. Megha Sundara

AY 2024-2025 **Graduate Research Mentorship**
UCLA Graduate Education
"Modeling Human Speech Perception Using Automatic Speech Recognition"
Advised by Prof. Megha Sundara

Spring 2024 **Biggs Graduate Fellowship**
UCLA Department of Linguistics

Summer 2023 **Graduate Summer Research Mentorship**
UCLA Graduate Education
"Testing a New Probabilistic Theory of Phoneme Dispersion"
Advised by Prof. Bruce Hayes

Summer 2018 **Jumpstart for Juniors Program for independent summer research**
Penn Center for Undergraduate Research & Fellowships
"The Effect of Conditioned Mergers on Underlying Representations"
Advised by Prof. Meredith Tamminga

Summer 2016 **Penn Undergraduate Research Mentorship**
Penn Center for Undergraduate Research & Fellowships
Grant for summer RA work for rising second year undergrads, mentored by Prof. Meredith Tamminga

Teaching Experience

Fall 2024 **Teaching Assistant (50%) to Prof. Laurel Perkins**
UCLA Linguistics Department | Los Angeles, CA
LING 185A: Computational Linguistics I
- Running weekly discussion sections and office hours, grading, and responding to student emails

Spring 2024 **Teaching Assistant (25%) to Prof. Sun-Ah Jun**
UCLA Linguistics Department | Los Angeles, CA
LING C211: Intonation
- Running weekly discussion section and office hour, grading, and responding to student emails

Winter 2024 **Teaching Assistant (50%) to Prof. Sam Zukoff**
UCLA Linguistics Department | Los Angeles, CA
LING 165A: Phonology II
- Running weekly discussion sections and office hours, grading, and responding to student emails

Winter 2024 **Teaching Assistant (25%) to Dr. Elise Bell**
UCLA Linguistics Department | Los Angeles, CA
LING 102: Introduction to Applied Phonetics
- Running weekly discussion sections and office hours, and responding to student emails

Fall 2023	**Teaching Assistant (50%) to Prof. Sun-Ah Jun**
	UCLA Linguistics Department | Los Angeles, CA
	LING 103: Introduction to General Phonetics, instructed by Prof. Sun-Ah Jun
	• Running weekly discussion sections and office hours, grading, and responding to student emails

Sept 2019 – March 2020	**Fulbright English Teaching Assistant**
	Nicolaus-Cusanus-Gymnasium | Bonn, Germany
	• Fulbright Scholar in Germany assisting English instruction for middle and high school-aged students
	• Ended three months early due to COVID-19 pandemic

Sept 2015 – May 2019	**German Tutor**
	Penn Language Center | Philadelphia, PA
	• One-on-one tutoring of beginning to intermediate German students at the University of Pennsylvania

Fall 2018	**Teaching Assistant to Prof. Meredith Tamminga**
	Penn Linguistics Department | Philadelphia, PA
	LING 336: Sound Systems in Use (quantitative corpus sociophonetics)
	• Moderating in-class undergraduate discussions, assisting students with R scripting during in-class lab time, holding weekly office hours, responding to student emails

Experience as Research Assistant

Summer 2024	**Research Assistant to Prof. Jesse Harris**
	UCLA Language Processing Lab | Los Angeles, CA
	• Splicing and masking of stimuli for pupillometry experiment with phoneme restoration component

Summer 2023	**Research Assistant to Prof. Sun-Ah Jun**
	UCLA Phonetics Lab | Los Angeles, CA
	• ToBI-based intonation transcription in experiment stimuli and responses

May 2016 – May 2019	**Research Assistant to Prof. Meredith Tamminga**
	Penn Language Variation and Cognition Lab | Philadelphia, PA
	• Maintenance and Reorganization of the Philadelphia Neighborhood Corpus
	• Processing and analysis of phonetic data using Praat scripting, R, and Python
	• Transcription and forced alignment of sociolinguistic interview with ELAN and FAVE

Feb 2016 – May 2016	**Research Assistant to Prof. Jianjing Kuang**
	Penn Phonetics Lab | Philadelphia, PA
	• Sound segmentation and labeling of Shanghainese wordlist recordings in Praat

Other Work Experience

June 2021 – July 2022	**Junior Computational Linguist**
	Verbio Technologies | Remote
	• Developing intent-classification systems used for call center automation
	• Bash scripting for manipulation of large training datasets

March 2021 – June 2021	**Natural Language Understanding Specialist**
	Cerence | Remote
	• Training and testing of neural-network-based language models used for car voice control features
	• Left due to job insecurity from budget cuts associated with semiconductor shortage

April 2020 – Aug 2021	**Computational Linguistics Temporary Worker** *Linguistic Data Consortium* | Remote

- Assistant on project to develop a new forced aligner
- Transcription of clinical and experimental linguistic data for research into early language-based markers of neurodegenerative diseases

May 2019 – Aug 2019	**Computational Linguistics Temporary Worker** *Linguistic Data Consortium* | Philadelphia, PA

- Phonetic and phonological analysis of Portuguese dialects for speech recognition applications
- Implementation of grammars in OpenFst-based packages Pynini and Thrax

Awards and Honors

2019-2022	**Fulbright Scholar** *Fulbright Germany*
May 2019	**Summa cum Laude** *University of Pennsylvania*
May 2019	**Major Honors in Linguistics** *Penn Department of Linguistics*
2018-2019, 2017-2018, 2016-2017, 2015-2016	**Dean's List** *University of Pennsylvania*
March 2019	**Best Undergraduate Abstract** *Penn Linguistics Conference 43*
April 2018	**Phi Beta Kappa Inductee** *Delta Chapter of Phi Beta Kappa* at the University of Pennsylvania

Selected Skills

Technical:	Python; Praat (incl. scripting); R; LaTeX; Microsoft Office; Haskell; OCaml; Java; Matlab; ELAN
Language:	English (native); German (fluent); French, Spanish (intermediate, grammatical and phonological familiarity); Irish, Portuguese, Russian, Italian, ASL (basic, grammatical and phonological familiarity); various others (grammatical and phonological familiarity)

References

Megha Sundara, Ph.D.
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Bruce Hayes, Ph.D.
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Meg Cychosz, Ph.D.
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