

SARA NG

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Simon Fraser University

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SUMMARY

I am interested in the way humans create, modify, and perceive speech sounds, especially in the way that prosodic cues convey pragmatic and discourse meaning. My research goals are to integrate the unique information found in speech prosody into modern methods for natural language processing and understanding, and to use computational methods to aid in the linguistic study of the role of prosody in dialogue management. For example, I have used prosodic signals to recover punctuation in speech transcripts, and used computational techniques to model speaker entrainment and conversational dynamics. I have also investigated the differential use of perceptual speech cues by listeners with hearing loss, and developed methods for identifying listening behaviors in for clinical applications.

I was previously a member of the Transformation, Interpretation, and Analysis of Language (TIAL) Lab in the Department of Electrical Engineering and the Phonetics Lab and Sociolinx Solutions Group in the Department of Linguistics at the University of Washington.

POSITIONS HELD

2025-	Simon Fraser University Assistant Professor, Linguistics
2024-2025	Western Washington University Visiting Assistant Professor, Linguistics

EDUCATION

2017-2024	University of Washington Ph.D.: Linguistics, conferred August 16, 2024 Thesis: Prosody in Human Communication and Machine Understanding Masters of Science: Computational Linguistics, conferred August 18, 2023 General Exam: Assessing the Stability of the Speech Cue Profile; Time series estimation of utterance pitch in two-party conversation Advised by Drs. Richard Wright and Mari Ostendorf
2013-2017	University of Utah Honors Bachelor of Arts: Linguistics, conferred May 5, 2017 Advisor: Dr. Abby Kaplan Thesis: Musical Textsetting as Evidence for Syllabification of Highly Moraic Structures in English Bachelor of Science: Applied Mathematics, conferred May 5, 2017 TESOL: Teaching English to Students of Other Languages Certificate, conferred May 17, 2016

PUBLICATIONS

accepted Marina Oganyan, Emily Ahn, Gina-Anne Levow, **Sara Ng**, Robert Squizzero, Richard Wright
Fidelity of Fricative Measurements in Remote Data Collection
Journal of the Acoustical Society of America - Express Letters

accepted **Sara Ng**, Valerie Freeman, Gina-Anne Levow, Richard Wright
Pragmatic Prominence in Stance-Taking
Anglophonia

- 2024 Nicolas Ballier, Léa Burin, Behnoosh Namdarzadeh, **Sara Ng**, Richard Wright, Jean-Baptiste Yunès
Probing Whisper Predictions for French, English and Persian Transcriptions
7th International Conference on Natural Language and Speech Processing
- 2024 **Sara Ng**, Gina-Anne Levow, Mari Ostendorf, Richard Wright
Investigating the Influence of Stance-Taking on Conversational Timing of Task-Oriented Speech
INTERSPEECH
- 2024 **Sara Ng**, Valerie Freeman, Gina-Anne Levow, Mari Ostendorf, Richard Wright
Effects of Information Load and Pragmatic Load on the Hypo-Hyper Continuum
Fonetik 2024
- 2024 Marina Oganyan, Gina-Anne Levow, Robert Squizzero, Emily P. Ahn, **Sara Ng**, Ella Deaton, Richard A. Wright
Investigating the Acoustic Fidelity of Vowels across Remote Recording Methods
Linguistics Vanguard
- 2023 **Sara Ng**, Abigail Schwendiman Sleight
Properties of Constructed Language Phonological Inventories
University of Washington Working Papers in Linguistics
- 2022 Yeonjin Cho, **Sara Ng**, Trang Tran, Mari Ostendorf
Leveraging Prosody for Punctuation Prediction of Spontaneous Speech
INTERSPEECH
- 2022 Andrew Hard, Kurt Partridge, Neng Chen, Sean Augenstein, Aishanee Shah, Hyun Jin Park, Alex Park, **Sara Ng**, Jessica Nguyen, Ignacio Lopez Moreno, *and others*
Production federated keyword spotting via distillation, filtering, and joint federated-centralized training
INTERSPEECH
- 2021 **Sara Ng**, Gregory M. Ellis, Pamela E. Souza, Frederick J. Gallun, Richard A. Wright, Mari Ostendorf
Assessing the stability of the spectro-temporal cue weighting angle for listener categorization
Proceedings of Meetings on Acoustics
- 2021 Courtney Mansfield, **Sara Ng**, Gina-Anne Levow, Richard Wright, Mari Ostendorf
Revisiting Parity of Human vs. Machine Conversational Speech Transcription
INTERSPEECH

PRESENTATIONS

- 2026 **Sara Ng**
The Math of Human Language
FASS Forum, Simon Fraser University, **invited flash talk**
- 2025 **Sara Ng**, Gretchen Gaspers, Sophia Chan
Seeing Migration Patterns through Chinese Names in the CPNWS Archives
Scholars in the Archives 2025, Center for Pacific Northwest Studies, **invited talk**
- 2025 **Sara Ng**
Meaningfully Aligning Whisper Outputs with Human Transcriptions
Workshop on Promoting Fairness for Underrepresented Languages in Multilingual LLMs, **talk**
- 2025 **Sara Ng**
Prosody in Human Communication and Speech Technology
Simon Fraser University Linguistics Colloquium, **talk**

- 2024 Richard Wright, **Sara Ng**, Valerie Freeman, Gina-Anne Levow, Mari Ostendorf
How lexical and pragmatic information affect pronunciation variation.
The Thirty-Eighth General Meeting of the Phonetic Society of Japan, **talk**
- 2024 Richard Wright, Gina-Anne Levow, Mari Ostendorf, **Sara Ng**, Valerie Freeman
Pragmatic prominence in stance marking
21e colloque sur l'anglais oral de Villetaneuse (ALOES)– La prééminence en anglais oral, **talk**
- 2022 Emily P. Ahn, William Bowers, Ella Deaton, Gina-Anne Levow, **Sara Ng**, Marina Oganyan, Robert Squizzero, Richard A. Wright
Investigating the acoustic fidelity of remote recording methods
Acoustical Society of America, **poster**
- 2021 **Sara Ng**, Gregory Ellis, Pamela Souza, Frederick Gallun, Richard Wright
Modeling the time course of cue weighting angle calculations
Acoustical Society of America, **poster**
- 2021 Courtney Mansfield, **Sara Ng** Gina-Anne Levow, Mari Ostendorf, Richard Wright
What does parity mean? A detailed comparison of ASR and human transcription errors
Acoustical Society of America, **talk**
- 2018 **Sara Ng**, Joselyn Roriguez and Abby Kaplan
Musical Evidence for Syllabification Patterns of Highly Moraic Structures in English
Linguistic Society of America, **poster**
- 2017 Jenica Jessen, **Sara Ng** and Joselyn Rodriguez
Musical Evidence for Syllabification Patterns in English
University of Utah Student Conference in Linguistics, **talk**
- 2017 Jenica Jessen and **Sara Ng**
Musical Evidence for Syllabification Patterns of Highly Moraic Structures in English
Undergraduate Research Symposium, University of Utah, **poster**

ADVISING

Graduate students

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| Sylvia Cho | Ph.D. Linguistics, SFU; <i>committee member</i>
<i>Speaker identification</i> |
| Amber Ryaneason | M.A. Linguistics, SFU; <i>committee member</i>
<i>Women, words, and wrestling: A CADS approach to women's representation in the UFC</i> |

Undergraduate researchers

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| Madeleine Bordenet | B.A. Linguistics, WWU; <i>research advisor</i>
<i>Mock Language and Social Media: Underlying Stereotyping and Language Ideologies</i> |
| Gretchen Gaspers | B.A. Linguistics, WWU; <i>research advisor</i>
<i>Phonological Mapping of Chinese Migrant Labor Origins in Whatcom County</i> |
| Norah Kelly | B.S. Cognitive Science, SFU; <i>research advisor</i>
<i>Automated prosodic detection of pathological speech</i> |
| Malia Murphy | B.A. Linguistics, SFU; <i>research advisor</i>
<i>/t/-glottalization in Utah English</i> |

Ella Roos	B.A. Linguistics, SFU; <i>research advisor</i> <i>Phonetic characteristics of comorbid stuttering with autism</i>
Paul Ummalukacholk	B.S. Cognitive Science, SFU; <i>research advisor</i> <i>Folk linguistic indicators of AI-generated writing</i>

TEACHING

Simon Fraser University

2026	Spring	LING 450/807: Computational Linguistics
2025	Fall	LING 250: Computational Text Analysis

Western Washington University

2025	Spring	HNRS 217: Colloquium in Linguistics
2025	Spring	LING 311: Phonetics
2025	Winter	LING 204: Language and Society
2025	Winter	LING 402: Computational Linguistics
2024	Fall	HNRS 217: Colloquium in Linguistics
2024	Fall	LING 311: Phonetics
2024	Fall	LING 411: Topics in Phonetics and Phonology (Corpus Linguistics)
2024	Fall	SMNR 101: Patterns in your Mind

University of Washington, as Graduate Instructor of Record

2023	Winter	LING 450/550: Introduction to Linguistic Phonetics
2022	Spring	LING 472: Introduction to Computational Linguistics
2020	Summer	LING 473: Basics For Computational Linguistics

Teaching Assistanceships

2020	Fall	LING 450: Introduction to Linguistic Phonetics
2019	Spring	CSE 472: Introduction to Computational Linguistics
2018	Fall	LING 570: Shallow Processing Techniques for Natural Language Processing
2018	Spring	LING 269: Swearing and Taboo Language

Graderships

2020	Winter	LING 451: Phonology I
2019	Spring	LING 452: Phonology II
2019	Winter	LING 451: Phonology I

Curriculum Development

2019	Winter	Staff assistanceship converting LING 553 (Experimental Phonetics), LING 450 (Phonetics), and ASL Program course materials to online format
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Guest Lectures

2019	25 Oct	LING 550 (Phonetics): <i>Reading Spectrograms</i>
2019	21 Aug	LING 473 (Computing Basics): <i>Formal Grammars & Parsing</i>
2019	23 May	LING 200 (Intro. Linguistics): <i>What is Computational Linguistics?</i>

RESEARCH POSITIONS

2023-2024	2023 UW Linguistics Fund Award; <i>Research Assistant</i> PI: Richard Wright
Summer 2023	Meta Reality Labs; <i>Research Scientist Intern</i> Host: Christi Miller
Summer 2022	Meta Reality Labs; <i>Research Scientist Intern</i>

	Host: Christi Miller
2021-2022	US National Institutes of Health, grant NIH R01 DC006014; <i>Research Assistant</i> PI: Richard Wright
2021-2022	Google Federated Assistant, Federated Learning; <i>Software Engineering Intern</i> Host: Andrew Hard
2019-2020	US National Science Foundation, grant IIS-1617176; <i>Research Assistant</i> PIs: Mari Ostendorf, Richard Wright
Summer 2019	Google Core Assistant, Pygmalion; <i>Linguist Intern</i> Host: Katie Vadella
2017-2018	University of Washington Linguistics; <i>Departmental Research Assistant</i> PI: Sharon Hargus

PATENT APPLICATIONS

2023	Sara Ng , Melinda Anderson, Poornima Shankar, Setare Hajarolasvadi, Katherine Chase, Christi Miller <i>Use of Biometric Signals to Personalize Audio</i> Application No. 18 104701
2023	Sara Ng , Melinda Anderson, Poornima Shankar, Setare Hajarolasvadi, Katherine Chase <i>Modifying Audio for Presentation to a User Based on a Determined Location of an Audio System Presenting the Audio</i> Application No. 18 162847
2023	Christi Miller, Sara Ng , Calvin Murdock, Nils Thomas Fritiof Lunner, William Owen Brimijoin II, Vamsi Krishna Ithapu <i>Estimation Of Hearing Loss of a User from Interactions with a Local Environment by the User Identified from Captured Audio and Information Describing the Local Area</i> Application No. 18 162847

GRANTS AND AWARDS

2025	James Scott Fellowship <i>Western Washington University Archives and Special Collections</i>
2024	(Nominated) UW Excellence in Teaching Award <i>University of Washington</i>
2023	Excellence in Linguistic Research Graduate Fellowship <i>University of Washington</i>
2018	Travel Scholarship for Second Ethics in Natural Language Processing Workshop <i>North American Chapter of the ACL</i>
2017	Top Scholar Award <i>University of Washington Graduate School</i>
2017	UROP Small Research Grant <i>University of Utah Undergraduate Research Opportunities Program</i>
2013	President's Scholarship <i>University of Utah</i>

SERVICE

2026	Reviewer , Acta Psychologica
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2025 **Reviewer**, Journal of the Acoustical Society of America
 2025 **Committee member**, Computational Linguistics Development, WWU
 2024 **Student volunteer**, Northwest Linguistics Conference (NWLC)
 2024 **Reviewer**, NWLC
 2022 **Peer mentor**, Undergraduate seminar on graduate school application process
 2021 **Consultant**, High school entrepreneurship competition project
 2021 **Editor**, University of Washington Working Papers in Linguistics
 2020 **Student Volunteer**, Association for Computational Linguistics (ACL)
 2020 **Organizing Committee Member**, NWLC
 2020 **Reviewer**, NWLC
 2020 **Proctor**, North American Computational Linguistics Open Competition
 2020 **Consultant**, Undergraduate senior capstone in speech translation
 2019 **President**, Linguistics Society of the University of Washington (LSUW)
 2019 **Student Volunteer**, North American Chapter of the ACL
 2018 **Vice President**, LSUW