



Department of Linguistics

Linguistics is the scientific study of language. The department's core disciplines--phonetics, phonology, syntax, semantics, and morphology--aim to uncover the underlying structures of language. Its other linguistic subfields, sociolinguistics, language acquisition, psycholinguistics, and computational linguistics investigate the interaction of language with a variety of social, cognitive, neuroscientific, and computational factors.

Academics

The Linguistics department offers an undergraduate BA in Linguistics or a BA in Romance Linguistics, and it offers a minor in ASL and Deaf studies. At the graduate level, the department offers a PhD in Linguistics, a PhD in Computational Linguistics, and a professional MS in Computational Linguistics (CLMS), the last of which is aimed at preparation for careers in industry at the intersection of computer science and linguistics. In our highly competitive PhD programs, students are fully supported through a combination of teaching, grant-funded research, and fellowships. PhD students are encouraged to apply for their own research and education funding and have a high success rate.

Undergraduate Program

The undergraduate degree program incorporates concepts of linguistics with a research-driven curriculum to introduce students to the theory and methods of the field, and to nurture critical thinking and analytical reasoning skills that translate to careers inside and outside of academia. Many of our undergraduate students collaborate directly with faculty members, often in one of our four research laboratories. Students in the undergraduate honors program take one graduate-level research seminar and complete a senior thesis based on their own original research under the direction of a linguistics faculty member.

The department offers a range of courses from small research workshops and seminars to large omnibus introductory courses resulting in an average of 2600¹ enrolled undergraduates per year. The more advanced courses, which count towards our major, are typically small (less than 35 students), and many are withers – attended by both advanced undergraduate and introductory-level graduate students. Cross-listed courses in eight departments attest to the interdisciplinary nature of the department’s offerings.

Computational Linguistics

The Department is extremely active in research in Computational Linguistics, including projects on automatic processing of speech and text in diverse languages (including those that are the focus of language documentation projects), applications including language processing for crisis response and biomedical language processing, linguistically-informed analytical work on large language models, and work on the societal impacts of language technology. Our funding comes from NSF, RRF, and historically DARPA, IARPA, NIH, and grants from private companies. Publications, frequently in top-tier venues, include not only the work of faculty and PhD students, but also often result from further development of term projects by MS students. As an example, a recent paper from a collaboration between faculty (Steinert-Threlkeld), a PhD student (C.M. Downey), and an M.S. student (Nora Godfine) as well as a CSE PhD student (Terra Blevins) won a best paper award at the event *Multilingual Representation Learning*.

American Sign Language (ASL)

The ASL program is led by three faculty members: **Lance Forshay (ASL Director)**, **Dan Mathis (Assistant Teaching Professor)**, and **Kristi Winter (Associate Teaching Professor)**. ASL courses are offered up until the 300-level, with 400-level courses in the Linguistics of Signed Languages and an Independent Study in ASL also available. The program also sponsors the UW ASL Honors Society. ASL faculty and program activities include:

- Weekly curriculum development meetings
- Conducting outreach in the Deaf community and consulting with ASL teachers in WA State.
- Provide proctoring services such as local ASL Proficiency Interview Testing, administrated by Gallaudet University, at our office.
- Coordinated public Deaf Studies Lectures.
- Conducted Exterior Reviews of other ASL programs such as Western Oregon University and promotions of ASL teachers are several universities out of state.
- Provide proctoring services such as local ASL Proficiency Interview Testing, administrated by Gallaudet University, at our office.

Faculty

Linguistics has 19 faculty members, with an additional 33 adjunct or affiliate faculty. Recent awards and leadership roles of the Department of Linguistics include:

- A University of Washington Distinguished Teaching Award
- Editorship of several academic journals
- Mellon Fellowship for Emeritus Faculty
- 2 NSF Career Awards
- President, Linguistics Society of America
- President, Washington ASL Teacher Association
- Research funding from UW RRF, NSF, NIH, DARPA, IARPA, and private sources

¹ University of Washington Time Schedule Enrollment Data

Research Laboratories

The Linguistic Phonetics Laboratory (LPL) is led by Richard Wright (acting director is Yuan Chai while Wright is Chair). With 15 faculty and student members from a variety of departments, the LPL acts as a nexus for transdisciplinary research in phonetics, electrical engineering, and speech and hearing science at UW. Since 2010, the lab has continuously supported an NIH NIDCD R01 subcontract (total \$722,964 PI Wright), an NSF IIS grant (total \$249,975 PI Levow) and an NSF IIS/BCS grant (total \$500,000 PI Ostendorf). LPL projects include:

- Assisting with documentation of spoken languages, especially ones that are endangered or under-documented.
- Examining several issues related to speech perception under conditions of distortion (i.e., hearing loss, hearing aid amplification, dialect, foreign accent, etc).
- Modeling variation in spoken language with applications to speech technology and AI.
- Studying the effect of linguistic and non-linguistic context on speech perception and language processing.

Publications from members or the LPL have appeared journals from a variety fields including Acoustics, Brain Sciences, Cognitive Science, Electrical Engineering, Linguistics, Medicine, and Speech and Hearing Sciences.

The Linguistic Phonetics Laboratory (LPL)

Dr. Richard Wright

Website:

depts.washington.edu/phonlab

The Language Development and Processing (LDP) Lab

Dr. Naja Ferjan Ramírez

Website:

sites.uw.edu/ldplab/

The Language Development and Processing (LDP) Lab is directed by Dr. Naja Ferjan Ramírez, an Assistant Professor in Linguistics who holds the UW's Distinguished Professorship in Language Acquisition and Multilingualism Endowment. The lab investigates how infants and young children learn one, two, or multiple languages through interacting with the world! We are particularly interested in examining how variation in children's early language environments contributes to language development, and in applying this knowledge to the development of interventions. Current projects include:

- Studies of language development, including intervention studies, with infants raised bilingually with Spanish and English
- Studies of language development in infants raised by families headed by same sex couples
- Studies of language development in indigenous communities
- Eye tracking studies with infants
- Brain studies with infants, in collaboration with the Institute for Learning & Brain Sciences

Dr. Ferjan Ramírez is particularly passionate about science dissemination and regularly shares her research with those who work with infants or make decisions that affect them.

The Neuroplasticity & Language Lab is a psycho/neurolinguistic lab led by Linguistics faculty Dr. Qi Cheng, with a research focus on the role of early language experience on language and brain development. Current lab members include graduate students from Linguistics, as well as undergraduate RAs from Linguistics and Speech & Hearing Sciences. The lab is located in Smith 008, equipped with a video filming booth, a behavioral testing station, and two iMac workstations. We use a variety of research methods, including corpus based analysis, behavioral psycholinguistic experiments, and neural methods such as EEG and MEG. We also test various groups of language users, including deaf and hearing American Sign Language (ASL) signers, deaf Chinese Sign Language (CSL) signers, deaf and hearing bilinguals, etc. We also host bi-weekly lab meetings where lab members present research progress and solicit feedback from others.

The Neuroplasticity and Language Lab (NLL)

Dr. Qi Cheng

Website:
sites.uw.edu/nllab/

The Sociolinguistics Lab

Dr. Alicia Wassink

Website:
depts.washington.edu/sociolab

The Sociolinguistics Laboratory is led by Professor Alicia Wassink. Current membership totals 20 people, and includes faculty from Linguistics, Anthropology, and French and Italian studies, as well as 7 graduate and 7 undergraduate students. Lab members have successfully submitted research to major publications and presented at conferences. The laboratory has also received a major grant from the UW CoMotion/Innovation Gap Fund for the SocioLinX (see below) project. Some recent projects include:

- **Joint laboratory series: Black American Sign Language (BASL)** – Lab members joined with the Neuroplasticity and Language Laboratory and ASL faculty to learn about the history and structure of BASL, the different settings of language acquisition experienced by native-signing members of our group, and language attitudes toward different visuo-gestural varieties used for communication.
- **The Pacific Northwest English (PNWE) Study** – Spanning 17 years, this project has investigated dialect evolution and interethnic contact in the PNW. We are in the third year of a partnership with the Yakama Nation tribal council. We are creating a website that showcases PNWE data that members of the Yakama Nation believe valuable for work in education, historical documentation, and language-related activities.
- **SocioLinX** – This project aims to mitigate racial bias in Automatic Speech Recognition by revealing the pain-points minoritized people face when using voice assistants, building dialect-rich datasets suitable for ASR system development, and creating novel software to improve pronunciation models.

Faculty Specializations

Sharon Hargus (Professor) is currently involved in projects related to the documentation of four Native American languages: Sahaptin – Yakama dialect (spoken in Washington state), Deg Xinag (spoken in Alaska), Kwadacha Sekani, and Witsuwit'en (both spoken in British Columbia). She has published 3 dictionaries, one grammar, and various articles. Professor Hargus also teaches a seminar on language documentation, where students work with a native speaker of an understudied language to record and document the language, while gaining fieldwork skills. In Winter 2023, the chosen language was Tibetan. She also teaches classes in phonetics, phonology, and morphology, and is currently serving as the Graduate Program Coordinator.

Emily M. Bender (Professor) has been active in public scholarship, based on her academic work on the societal impacts of language technology (especially the well-known [Stochastic Parrots](#) paper, Bender, Gebru et al 2021, published at FAccT and the paper [Situating Search](#), published with iSchool Professor Chirag Shah in CHIIR 2022). Her public scholarship includes media profiles (including in [New York Magazine](#) and the [TIME100AI](#) list of most influential people in AI, as international publications in [Switzerland](#), [Spain](#), [Norway](#), [Brazil](#), [Italy](#), [Portugal](#), [France](#), [Germany](#), and [the Netherlands](#)); op-eds (including in the [Seattle Times](#), the [Guardian](#), and [Scientific American](#)); and consulting with UWINCO, the City of Seattle, many different members of the US Congress, the FTC, the White House Office of Science and Technology Policy, Department of Defense, several different groups within the UN, and the IMF. In October 2023, she was called to testify before a subcommittee of the US House of Representatives Committee on [Science, Space and Technology](#).

Department syntacticians **Andrew Hedding (Assistant Professor)** and **Barbara Citko (Professor)** investigate the structure of human language, both from a theoretical and empirical perspective.

In addition to being a theoretical syntactician, Andrew Hedding is a fieldworker. His research on information structure, the relationship between questions and answers, and the role of alternatives in grammar sheds new light on the field's understanding of how syntax interacts with other components of language. Andrew works with native speakers of an indigenous Mexican language called Mixtec—in Mexico, in California, and more recently, with migrant communities in Mount Vernon, Washington—to describe and document the language. His in depth focus on a particular language helps us understand which aspects of human language are shared across all people, and which can vary from language to language.

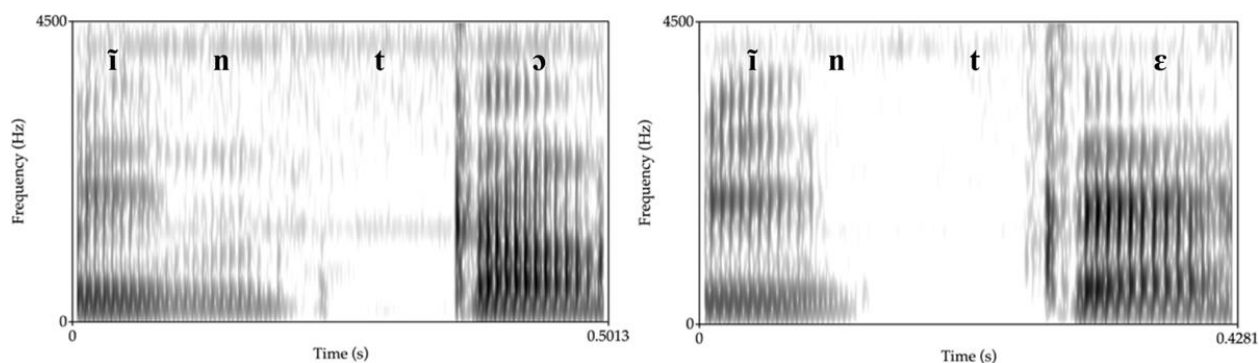
Barbara Citko's theoretical research on multidominant structures (i.e., the kinds of syntactic structures which allow a single element to occupy two positions simultaneously) contributes to our understanding of structure building mechanisms in language and the constraints these mechanisms are subject to. On an empirical level, Barbara's research contributes to our understanding of various types of constructions involving *wh*-words (*who*, *what*, *when* etc), and her research on the syntax of Polish contributes to our understanding of the syntax of Slavic languages and crosslinguistic variation in general.

Gina-Anne Levow (Associate Professor) focuses on automatic processing of spoken language, ranging from automatic recognition of stance in speech to conversational agents. Her research has been funded by multiple grants from NSF and DARPA, with results published in flagship Computational Linguistics and Speech Processing venues. Her current NSF-funded research project, in collaboration with Prof. Bender, enables creation of systems which support documentation, archiving, and revitalization of endangered languages. Most current speech processing services only support 100-200 widely spoken languages and rely on large datasets and computing resources. This project aims to bring such technology to these often-neglected languages and communities, while developing improved and more general computational models. Systems are applied to a broad set of typologically and regionally diverse languages, and related tools are being applied to support language documentation and language acquisition research in the department. Prof. Levow's research also investigates the role of prosody, including pitch, loudness, and duration, to convey meaning in spoken interaction and how prosody can improve computational speech applications and make conversational agents more attuned to these factors.

Myriam Lapierre (Assistant Professor) is a co-PI on a cutting edge multi-researcher collaboration advancing our knowledge of the phonetics and phonology of 12 endangered and under-documented languages (NSF Grant 1918064). She is collaborating with 10 leading experts on Amazonian indigenous languages, collecting phonetic recordings and airflow data from complex and poorly-understood nasal and oral sounds. Her articulatory, acoustic, and perceptual field experiments have provided empirical support for the existence of a distinction between speech sounds that was previously claimed to be impossible: Panãra, a language of Brazil, contrasts two types of nasal-oral consonants resulting from two distinct phonological processes: post-oralization of underlying nasal consonants [NT] (1, left), and pre-nasalization of underlying oral obstruents [NT] (2, right). These [nt]s contrast in distinct words, such as [mĩntɔ] ‘caiman eye’ vs. [mĩntɛ] ‘caiman leg.’

(1) /m, n, ŋ, ŋ/ → [mp, nt, ns, ŋk] / __ V (2) /p, t, s, k/ → [mp, nt, ns, ŋk] / ̃ __

Figure 1: Spectrograms from the production of the [̃NTV] sequences in the words /mĩntɔ/ [mĩntɔ] ‘caiman eye’ (post-oralization, left), and /mĩntɛ/ [mĩntɛ] ‘caiman leg’ (pre-nasalization, right).



Fei Xia (Professor) specializes in computational linguistics (CL), and her research covers a wide range of NLP tasks including morphological analysis, grammar extraction and grammar generation, treebank development, machine translation, information extraction, and bio-NLP. Her work is supported by grants from NSF, NIH, IARPA, Microsoft, IBM, and UW, including the prestigious NSF CAREER Award. In the past year, her work focuses on four areas:

1. Applying CL technology for crisis preparedness and response (CL4CPR): she has been collaborating with George Mason University (GMU) in the past two years. The team organized a workshop in June 2023 and submitted an NSF proposal in Sept 2023.
2. Building CL systems for the biomedical domain: she co-organized a team to participated in the 2023 Medi-QA shared tasks and achieved good results; she is also collaborating with GMU and Microsoft Research on multiple biomedical CL projects including creating the datasets for the shared tasks at the 2024 BioNLP workshop.
3. Evaluating large language models (LLMs) such as GPT4: she leads a team on designing tasks to determine whether LLMs can understand and follow instructions. The work has been submitted to an international conference.
4. Identifying gender bias in middle-school textbooks and exams: this work is in collaboration with Prof. Mari Ostendorf at the UW EE department. The goal is to examine whether middle-school textbooks and exams include sentences with gender bias (e.g., whether females are associated with housework more often than males). The work is supported by an NSF grant (PI: Ostendorf).

Since retirement, **Julia Herschensohn (Professor Emerita)** has continued to be active in Department activities and to pursue research and professional service. She participates and does presentations in Department lab meetings and colloquia, she has served as Coordinating Editor of the Journal of French Language Studies (2013-2022), is a member of two editorial boards and regularly contributes reviews of publications and grants. She has published one single-author book, seven refereed journal articles, five chapters and has done numerous conference presentations. She is currently collaborating with Professor Ana Fernández-Dobao (Spanish and Portuguese) and graduate student Stefana Vukadinovich to collect data from the dual language immersion Spanish-English programs in the Seattle Public Schools. Having already published work deriving from earlier data, they continue to elaborate evidence on Spanish language maintenance and acquisition by heritage Spanish speakers (mainly from Latin American immigrant families) and second language learners, who are nine to eleven years old. This research is significant in examining a little studied population and in establishing ties between the University of Washington and the public schools of Seattle.

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