

Spring 2024 INDEPENDENT STUDY & DIRECTED RESEARCH OPPORTUNITIES

Department of Linguistics, University of Arizona

HOW TO REGISTER:

To register for either an independent study or directed research, you must first contact the professor you are interested in working with. Our faculty are great; don't hesitate to email them!

1. In your email, ask the professor if they have any openings. You can certainly email more than one professor but send a separate email for each.
2. Once you've worked things out with a professor, decide together how many credits you want to take, which course and section number to use, and what the expectations are for your planned research.
3. Complete the [Independent Study Proposal Form](#) and have the professor e-sign it.
4. **Email the completed and signed form to our Program Coordinator**, Josh Carlin (jcarlin117@arizona.edu), and ask him to register you for the independent study.

DR. TOM BEVER (tgb@arizona.edu)

Open to any project on the psychology or biology of language, including comprehension, production, acquisition, genetic issues, and neurological organization. Other topics include:

1. Behavioral/neurological processes in English, Chinese, Arabic, and other languages.
2. Neurological functioning during normal language behavior (using EEG with collaborators).
3. The nature of conscious experience.
4. Perception of depth in visual arrays.

DR. SANDIWAY FONG (sandiway@arizona.edu)

Projects include:

1. Spanish Minimalist Parser Project. NSF project collaboration with U. of Puerto Rico. Spanish speakers who are experienced in syntax wanted. Funded positions also available.
2. Minimalist Program Implementation. Students can add examples to an existing theory that is implemented on a computer. Most of the examples are in English, but previously students have added examples in Arabic, Persian, Japanese, etc.
3. The Investigation of Deep Learning papers. Students can both create training and test examples to explore the capabilities of these new systems.
4. Work on models based on latest theory from Noam Chomsky.

DR. GUS HAHN-POWELL (hahnpowell@arizona.edu; <https://parsertongue.org/availability>)

Qualifications: Python proficiency and successful completion of LING 439 preferred. Topics and projects include:

1. ANY PROJECT related to computational linguistics or natural language processing (with preference for non-English languages).
2. Machine reading for scientific discovery (ex. measuring the uncertainty of claims, identifying causal hypotheses, classifying citations, etc.).
3. Developing web-based tools for language documentation and linguistic annotation.
4. Implementing and comparing the predictive power of computational models of some linguistic theory.

DR. ANDREW CARNIE (carnie@arizona.edu)

Any project of student's choice on:

1. Syntax, semantics, and/or morphology

DR. AMY FOUNTAIN (avf@arizona.edu; <https://calendly.com/avf>)

All independent study and directed research will be online. Projects include:

1. Amy is always happy to work with students wishing to learn about and contribute to development of a web application for the Coeur d'Alene Tribe Language Programs. You will need at least a little bit of experience with some (any) kind of coding (enough to know that you enjoy it!), access to a reasonably well-equipped laptop or desktop computer running Windows10 education edition, or Mac, or Linux on which you have root/sudo access.
2. Technology development for endangered or indigenous language communities-especially looking for students with software development (CS, ECE, Data) interests/experience to collaborate in software development projects.
3. Language reclamation, revitalization, repatriation, especially to support students' investigation of their own linguistic heritage.
4. Improving the teaching of linguistics to undergraduates, creating and implementing teaching tools, and studying the effectiveness of various kinds of instruction for students at different levels.

DR. MICHAEL HAMMOND (hammond@arizona.edu)

Projects include:

1. Anything to do with Welsh.
2. Anything to do with poetry and song.
3. If you've got the background; computational projects with phonology, morphology, speech technology

DR. HEIDI HARLEY (hharley@arizona.edu)

Projects include:

1. Work on Hiaki (Yaqui), a language spoken in Arizona and Northern Mexico. Especially happy to work with any students who are members of the Pascua Yaqui tribe and are interested in learning more about their heritage language.

DR. ROBERT HENDERSON (rhenderson@arizona.edu)

Topics and projects include:

1. Any topic in formal semantics, pragmatics, or philosophical logic.
2. Any topic concerning the documentation and description of Mesoamerican languages.
3. Pluractionality and Argumentation Structure Project. Students will either help (i) conduct experiments on the interpretation of collective, distributive, and pluractional expressions in English, or (ii) build a database of pluractional effects on argument structure based on previous typological and descriptive literature.
4. Mayan Sign Languages Project. Students will work on processing and analyzing data from narratives and experiments to answer questions about various sign languages used in highland Maya communities.

DR. WILSON DE LIMA SILVA (wdelimasilva@arizona.edu)

Research (any topic) related to the Indigenous Languages of the Americas—especially Amazonian languages. Projects include:

1. Transcription of Amazonian languages.
2. Compilation of comparative vocabulary for understanding language contact in Amazonia and historical linguistics.
3. Creating language materials (including digital storytelling videos) for Desano, Siriano, and Karapana (Tukanoan languages).
4. Any other linguistic topic involving these languages. Let me know what your interest in linguistics is, and we will find a cool project for you to work on!

DR. JANET NICOL (nicol@arizona.edu)

Projects include:

1. Second Language Learning. We are interested in the kinds of things that make it easier to learn new vocabulary. We teach people novel words under various learning conditions and then test them. During the pandemic, we have been testing participants via Zoom but hope to move back to the lab at some point.
2. Bilingual Language Processing. We are also interested in how people produce and comprehend their second language. In some of this research, we use an eye-tracking to device to track eye-movements as they hear the second language and look at pictures on a computer screen.

DR. MASSIMO PIATELLI-PALMARINI (massimo@arizona.edu)

Topics and projects include:

1. Biological foundations of language, in particular language pathologies (e.g., aphasia, dyslexia, Williams Syndrome, the case of "savants"), the genetics of language (in particular the gene FOXP2), neural correlates of language.
2. Language evolution (especially non-adaptationist/non-functionalist approaches), aspects of syntax that cannot be explained by the use of language in communication, Minimalism and optimal solutions in biology.
3. Deep formal invariants of language. Fibonacci numbers in syllables, prosody, and syntax. The syntactic tree as the optimal solution to the problem of minimizing dependencies while allowing expansion. Scaling laws in evolution or brain structure and organization, with interesting consequences for language.
4. Attitudes De Se (the syntax and semantics of referring to oneself, an inter-language comparative analysis).
5. Theories of reference: Is the semantics of natural languages purely "intentional"? (Entirely internal) (work by Noam Chomsky, Paul Pietroski, James McGilvray) Or do linguistic expressions refer to external mind-independent objective entities? (Work by Jerry Fodor and Zenon Pylyshyn).

DR. ARESTA TSOSIE-PADDOCK (atsosiepaddock@arizona.edu)

Topics include:

1. Diné language, focusing on learning and working with terms in conversational, legal, medical, and environment/natural resources, and cultural areas. Diné language translation for a decolonial framework and method of heritage language learning.

DR. NATASHA WARNER (nwarner@arizona.edu)

Qualifications: LING 314 preferred but not required. Topics include:

1. Work on speech production and perception (phonetics lab). How we understand the speech we hear, even though casual speech often lacks the sounds of the words we think we're hearing. Students make acoustic measurements of natural and careful speech or help with perception experiments to look at how listeners process reduced speech.