

Newsletter

July 2024



SOCIETY FOR THE

NEUROBIOLOGY OF

ANGUAGE

Join us in Brisbane for SNL 2024!

Brisbane (traditional name, Meanjin) is a modern, sub-tropical capital city with the river at its heart. With almost year-round sunshine, the city and surrounds offer a range of appealing visitor experiences including easy access to the nearby Gold and Sunshine Coasts and to the Great Barrier Reef.

The SNL meeting will convene at the <u>Brisbane Convention</u> and <u>Exhibition Centre</u>, situated across from the 1.5 hectare <u>South Bank Parklands</u> precinct with its lagoon beach, the <u>Queensland Cultural Centre</u> and <u>Gallery of Modern Art</u> (GOMA).

Brisbane was named by Frommer's guide as one of the best places to go in 2024: https://www.frommers.com/slideshows/848587-frommer-sbest-places-to-go-in-2024



The State Host Destination



And by the New York Times as a 'must see' for 2024: <u>https://www.nytimes.com/interactive/2024/travel/places-to-travel-destinations-2024.html</u>

For more information, visit <u>https://www.queensland.com/au/en/places-to-see/destinations/brisbane</u> and <u>https://visit.brisbane.qld.au</u>



Scouting for waterfalls, lakes and waterholes near Brisbane

The Brisbane region is teeming with cascading waterfalls, expansive lakes and trickling waterholes. Strap on your hiking boots and hit the trails to discover cooling waterfalls and waterholes, or take in a spot of fishing, boating or paddling on one of



Brisbane: Things to do with kids

Brisbane is an urban oasis full of fun. Family friendly adventures await with an abundance of places create lifelong family memories.

Looking for new and fun ways to keep the kids entertained? Well, you've hit the jackpot! We have compiled the ultimate list of activities for any Brisbane's lakes. Go on, chase them down – and don't forget to pack togs (or bathers or swimmers, or whatever you like to call them). Learn more timeframe, weather condition, energy type and interests. It's time to create some unforgettable memories with the little ones. Learn more





Neurobiology of Language

<u>Neurobiology of Language</u> is the open-access journal sponsored by the Society for the Neurobiology of Language and MIT Press. Launched in March 2019, the journal provides a new venue for articles across a range of disciplines addressing the neurobiological basis of speech and language. To learn more about Neurobiology of Language and how to submit articles, go to https://www.mitpressjournals.org/nol.



Job Postings and Announcements

If you have a job posting, general announcement, or conference that you would like to include in the SNL Newsletter, please send it to <u>newsletter@neurolang.org</u>.



Job Postings



Postdoctoral Position at the University of California-Irvine: Experimental and Computational Studies in Speech Perception

Applications are invited for a postdoctoral position in the laboratory of Dr. Xin Xie (<u>https://sites.uci.edu/sclab/</u>) in the Department of Language Science at the University of California, Irvine. The position is funded through an NIH award (NIH R01HD111936: Identifying the mechanisms of adaptive speech perception), with the co-PI Dr. Chigusa Kurumada at the University of Rochester (<u>https://kinderlab.bcs.rochester.edu/</u>). The goal of this project is to develop a comprehensive model of adaptive speech perception and to test model-generated predictions on human perceptual data. The initial appointment is for two years. Renewal is based on the availability of support and need.

Primary responsibilities include behavioral study design, data collection and analyses, computational modeling and manuscript preparation. The anticipated starting time is as early as September 2024, with flexibility. Application materials should be sent through this <u>link</u> and will be reviewed on a rolling basis. Informal questions and inquiries may also be directed to Dr. Xie by email (<u>xxie14@uci.edu</u>).



PhD Position in Department of Brain and Cognitive Sciences at the University of Rochester

- Rolling application
- Start Date: Spring 2025 or Fall 2025
- Application Details & Link: <u>https://www.sas.rochester.edu/bcs/graduate/admission.html</u>
- Program Info: <u>http://www.sas.rochester.edu/bcs/graduate/curriculum.html</u>.

The Kurumada Lab invites applications for a 5-year Ph.D. program in Brain and Cognitive Sciences. Ideal candidates will have a research background and experience in linguistics, psycholinguistics, and/or speech science; computational skills and/or experimental research experience are a plus. Students with a strong interest in linguistics may be eligible for a joint PhD in Brain and Cognitive Sciences and Linguistics.

About the project

With a research focus on pragmatic understanding of human language, the Kurumada lab takes a unique approach to studying the entire chain of linguistic encoding and decoding processes, from high-level social/pragmatic reasoning to low-level speech signal processing. The current position is primarily devoted to a collaborative research project with <u>Dr. Xin Xie</u> (UC Irvine) on mechanisms underlying adaptive speech perception and comprehension. (For details of the grant project, see: <u>https://reporter.nih.gov/project-details/10803600#details</u>)



Postdoctoral Researcher in Cognitive or Computational Linguistics

The Cognition, Language and Plasticity Laboratory (PI Sehyr) at Chapman University, Crean College of Health and Behavioral Sciences, invites applications for a postdoctoral researcher position under an NSF grant (BCS-2234786), starting Fall 2024 (start is negotiable). This is a collaborative project between Chapman University (PI Sehyr) and Boston University (PI Caselli). This is a full-time position for 2 years and offers an exceptional opportunity to contribute to cutting-edge research focusing on aspects of sign reduction in American Sign Language (ASL) using computational and experimental approaches. The postdoc will collaborate on an NSF-funded project investigating aspects of sign reduction in American Sign Language (ASL) and language processing using experimental and computational approaches and will also have the opportunity to develop independent projects. Candidates should have a Ph.D. in Psychology, Linguistics, Cognitive Science, Computer Science, or a related field, with a strong background in computational or experimental research, research design, quantitative data analysis, data visualization. Candidates should have experience working with deaf and hard-of-hearing people and excellent communication skills. Individuals who identify as deaf/hard-of-hearing and those who know American Sign Language (ASL) and/or other sign languages are especially encouraged to apply. The successful candidate will become a core member of the lab as well as part of the broader Health and Behavioral Sciences, Psychology and Data Science intellectual community at Chapman University.

Key Responsibilities:

- Experiment design, data collection and analysis.
- Video data preparation and processing from a large database of sign videos.
- Extraction and analysis of spatial coordinates from signers' joint positions.
- Data visualization.
- Preparing and writing up research for publications.
- An opportunity to contribute to the lab's EEG/ERP projects

Qualifications:

- Ph.D. in Cognitive or Computational Linguistics, Psychology, Linguistics, or a related field.
- Proficiency in statistical analyses and scripting / programming language (e.g., Python, R)
- Commitment to ethical and culture-responsive research practices.
- Demonstrable skills in preparing grant proposals and scientific manuscripts.
- Strong communication skills (English and/or ASL)

Mentoring and Development Opportunities:

- Regular guidance and feedback from PI Sehyr and collaborator PI Caselli at Boston University.
- Access to high-performance computing resources and professional societies.
- Career counseling, including CV preparation, job application, and negotiation strategies.
- Opportunities for leadership by mentoring undergraduate research assistants.
- Opportunities for training in EEG/ERP techniques to study language and visual processing

APPLY HERE: http://apply.interfolio.com/141509

Application Deadline: Open until filled.

Application Procedure: Interested candidates should submit:

- Curriculum Vitae
- Cover letter outlining their research experience and interests
- Reprints of publications or other examples of scholarly work
- Contact information for three references.

Please send inquiries to Zed Sehyr at sehyr@chapman.edu

About Cognition, Language & Plasticity Lab

The brain has a remarkable capacity for adaptation in response to experiences and activities throughout a person's life. Central to our human experience are language and communication. Our research focuses on exploring the neuroplasticity of pathways dedicated to language and visual processing as a consequence of experiences (such as learning a new language or lifelong sign language use). Language, whether spoken or signed, is a focal point of our investigations. We place a particular emphasis on the study of sign languages and their users, recognizing their pivotal role in advancing our understanding of universal aspects of human language and communication. Our research is at the forefront of advancing knowledge and applications in neuroscience, technology, and clinical rehabilitation. Our research contributes to neuroscience by shedding light on the intricate networks responsible for language processing. Moreover, our findings have the potential to assist the development of more intelligent machines that can interact with humans in a more human-like manner. Finally, our research findings also hold promise for clinical practice, as they can inform strategies for language recovery following brain injuries. Lab website: http://www.claplab.org/

About Chapman University

The vision of Crean College of Health and Behavior Sciences is to engage diverse faculty, students, and staff in community outreach, learning, research, and evidence-based practice. We emphasize an ethical, interdisciplinary approach to understanding health across the lifespan.

Chapman University is a nationally ranked, R2 Carnegie Classified, private institution offering traditional undergraduate and graduate programs in the heart of Orange County, Southern California's diverse and vibrant region. Chapman's campuses are home to nearly 10,000 students representing 50 states, three territories, and 78 countries. The 11 schools and colleges of Chapman, including Schmid College of Science and Technology, offer 65 bachelors, 53 master, and six doctoral programs, along with nearly 60 minors and 17 accelerated and bridge programs. Classes are taught by the more than 1,100 dedicated faculty members who are leaders in their fields, including Nobel Prize recipients, MacArthur Fellows, National Medal of Science honorees, former U.S. Supreme Court clerks, and Emmy, Grammy, and Academy Award winners.

Commitment to Diversity:

Chapman University is an equal opportunity employer committed to fostering a diverse and inclusive academic global community. The University is dedicated to enhancing diversity and inclusion in all aspects of recruitment and employment. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law. We strongly encourage applications from individuals who are traditionally underrepresented in higher education, including deaf individuals.



Research Assistant Position Available in the Language and Learning Lab, Moss Rehabilitation Research Institute (MRRI), Philadelphia/Elkins Park, PA

Dr. Erica Middleton, Director of the Language and Learning Lab of Moss Rehabilitation Research Institute (<u>http://mrri.org/</u>) announces **an opening for a BA/BS-level research assistant** supporting research on language processing in neurotypical speakers and stroke-survivors with language and cognitive impairments. The position is now open and will continue for a minimum of two years. The position is hybrid eligible.

The Language and Learning Lab focuses on advancing an understanding of the cognitive basis of aphasia and mechanisms of language change in the service of promoting effective rehabilitation. The successful candidate will gain hands-on experience conducting basic and applied research with people with aphasia and neurotypical adults; will have opportunities for enrichment by participating in scholarly activities at MRRI; will have opportunities for contributing directly to products of research in the form of manuscript authorship or presentations, based on individual interest, experience, and ability.

The Language and Learning lab conducts its work at MRRI, a unique environment with a highly active research community situated in the context of a rehabilitation hospital.

With appropriate training and supervision, the successful candidate will:

- recruit and schedule research participants from a database of volunteers
- administer standardized assessments of cognitive and language function to people with aphasia and to neurologically intact individuals
- help design and conduct experimental studies using computer-administered protocols, which may involve eye
 tracking, electrophysiological (EEG/ERP) measurement, brain lesion image segmentation and lesion-symptom
 mapping techniques, and telerehabilitation application development
- manage, process, and analyze data, including speech samples
- participate in other aspects of research and lab operation as warranted

A bachelor's degree is required for this position. Applicants should have a strong academic background in cognitive psychology/cognitive science, psycholinguistics, linguistics, speech & hearing science, and/or neuroscience, with coursework in statistics and research methods. Preference will be given to applicants with prior research experience with human subjects and coursework in relevant areas. Prior relevant clinical experience will also be considered. Other desired qualifications include excellent organizational and communication skills and demonstration of willingness and ability to flexibly learn new techniques in a dynamic environment.

MRRI and Moss Rehab are part of Thomas Jefferson University, an Equal Opportunity Employer located in the Philadelphia area. Thomas Jefferson University is proud to offer its employees outstanding career opportunities including competitive compensation, attractive benefits plan including medical/dental/vision coverage, generous vacation time, and tuition reimbursement.

Send cover letter including, when applicable, a description of prior relevant research experience, C.V. (including a list of relevant coursework), and references. Letters of reference detailing performance in prior research or clinical roles are strongly preferred, but contact information for at least two professional references will be accepted, if necessary, in lieu of letters. Please email application materials to Dr. Anna Krason at <u>anna.krason@jefferson.edu</u>

Applications will be accepted until the position is filled. Position is available immediately.



Postdoctoral Fellowships Available in the Georgetown University Neuroscience of Language Training Program https://neurolang.georgetown.edu/

The Neuroscience of Language program provides postdoctoral fellowship training in the brain basis of language, as well as sensory, motor, and cognitive systems as they pertain to language, speech, concept representation and communication. Fellows will conduct research with one or more of our many faculty members focused on Neuroscience of Language research, ranging from basic work on auditory or language processing (spoken, signed, and written language), plasticity and development of language systems, to clinical trials in adults and children with brain injuries affecting language. Interactions with Georgetown's highly regarded Linguistics Department, as well as Children's National Hospital and MedStar National Rehabilitation Hospital, provide us with access to additional faculty and research populations and further enrich the training environment.

Fellows will have an individualized development plan designed to advance their career goals. In addition to conducting research in the broad field of the Neuroscience of Language, fellows will have opportunities to take coursework and participate in a regular journal club and seminar series, clinical experiences, community engagement activities, and professional development activities. The overall goal of the program is to develop well-rounded scientists who have a broad perspective on basic and clinical Neuroscience of Language research.

Appointments are funded at standard NIH NRSA stipend rates, with an initial one-year term, which will be renewed for a second year assuming fellows are in good standing.

Individuals with doctoral degrees from any field related to Neuroscience of Language (Neuroscience, Cognitive Science, Linguistics, Psychology, Communication Science and Disorders, etc.) are encouraged to apply.

U.S. citizens or permanent residents who currently hold a doctoral degree or will have met all doctoral program requirements before enrolling are eligible to apply. Admissions are rolling and applicants are encouraged to inquire about available slots early. Individuals from groups recognized to be underrepresented in the sciences are encouraged to apply.

Please submit the following application materials via the application form.

- CV
- Personal statement describing career goals, prior research, goals for postdoctoral training, and lab(s) of interest (3 pages)
- Names and contact information for three references
- Writing sample (manuscript or dissertation)

Contact Dr. Peter Turkeltaub (peter.turkeltaub@georgetown.edu) with any questions.



Assistant/Associate Professor of Psychology, Natural Behavior and Computation

The Department of Psychology at The University of Texas at Austin seeks a productive scholar whose research will complement existing departmental strengths in the area of Natural Behavior and Computation. The ideal candidate will develop an active, independent research program that leverages the expanding opportunities for high-density behavioral data to be collected in everyday environments and computational approaches to understanding these rich

datasets. The position will be at the rank of tenure-track assistant professor or tenured associate professor and begins Fall of academic year 2025-2026.

The department offers a vibrant and interactive cross-area research community with interests in natural behavior and computation. This critical mass of expertise is well-situated to provide early career mentorship and excellent collaborative opportunities. As well, the Department recently launched a new college-wide major in Behavioral and Social Data Science (BSDS), the first undergraduate degree program in the country devoted to producing data-science-ready graduates with a solid understanding of human psychology.

Review of applications will begin October 15th, 2024 and continue until the position is filled. For questions about the position, please contact Professor Lori Holt -<u>lori.holt@austin.utexas.edu</u>. Application materials, and further information can be found here: <u>https://apply.interfolio.com/149500</u>.



Postdoctoral Research Associate Position

Neuropsychological Studies of Language in Aging And Neurodegenerative Disease.

A 2-year Postdoctoral Research Associate position is available at the Mesulam Center for Cognitive Neurology and Alzheimer's Disease (Northwestern University Feinberg School of Medicine, <u>https://www.brain.northwestern.edu/index.html</u>), to work on projects focusing on the neurobiology of neurodegenerative disease. The Research Associate will work under the supervision of Drs. Marsel Mesulam, Sandra Weintraub, and Elena Barbieri and will have the opportunity to develop and collaborate on research projects that make use of our large database of neuropsychological and multimodal neuroimaging (MRI/fMRI, DTI, perfusion, PET) collected from individuals with clinical syndromes of Primary Progressive Aphasia (PPA), Dementia of the Alzheimer's Type (DAT) and from cognitively healthy older participants, as well as of our large brain bank.

The position is available immediately for an initial period of 2 years, with potential extension for additional years, depending on funding. International candidates are encouraged to apply.

Mentorship and environment

The mission of the Mesulam Center is to investigate the neurobiology and cognitive trajectories of normal cognitive aging and dementia, while also offering personalized care to patients and their families through the affiliated clinical sites. Research at the Mesulam Center is focused on understanding the biological mechanisms that cause several types of dementia, by addressing the cognitive, neuroimaging, cellular, molecular and genetic aspects of neurogenerative disease. This comprehensive approach is made possible by the presence of a diverse, international team of experts from different disciplines including molecular neuroscience, neuropathology, neuroimaging, neuropsychology, behavioral neurology, and psychosocial aspects of aging and dementia. The Postdoctoral Research Associate will therefore have the unique opportunity to work in a multidisciplinary, collaborative, inclusive and diverse environment.

Required qualifications for this position:

- A PhD degree in cognitive neuroscience, neuropsychology, experimental psychology, communication sciences and disorders, or related disciplines;
- At least one first-author publication in a peer-reviewed journal;
- Experience performing data analysis using statistical approaches (e.g., linear regression, machine learning, principal component analysis, etc..)
- Experience with one or more neuroimaging techniques (MRI/fMRI, DTI, perfusion, PET)
- Ability to work independently and collaboratively as a team;
- Excellent written and communication skills.

Desired qualifications:

- Experience in working with clinical populations, especially middle aged and older adults with neurodegenerative diseases;
- Familiarity with language disorders and/or language assessment.

If interested, please e-mail your CV, a cover letter and the names of two references to <u>elena.barbieri@northwestern.edu</u>.

Other

Announcing the BRLN Special Issue: Transmodal neural substrates of general semantic knowledge: From single words to sentences, stories, and the default mode network Brain and Language would like to share the <u>newest special issue</u> on *Transmodal Neural Substrates of General Semantic Knowledge, from single words to sentences, stories, and the default mode network,* edited by Dr. David Kemmerer. This collection of articles sheds new light on the neural bases of human semantic knowledge and brings together work by some of the leading researchers. Their work has important implications for theories of how language and thoughts interact.

Please find the list of articles in this exciting forum below.

Editorial: Kemmerer D (2024): <u>Transmodal neural</u> <u>substrates of general semantic knowledge: From single words to</u> <u>sentences, stories, and the default mode network</u> *Brain Lang* 252: 105412.

- 1. Desai RH, Hackett CT, Johari K, Lai VT, Riccardi N (2023): <u>Spatiotemporal characteristics of the neural</u> representation of event concepts. *Brain Lang* 246: 105328.
- 2. Dove G (2023): Concepts require flexible grounding. Brain Lang 245: 105322.
- 3. Fernandino L, Binder JR(2024): <u>How does the "default mode" network contribute to semantic cognition?</u> Brain Lang 252: 105405.
- Liu Y-F, Wilson C, Bedny M (2024): <u>Contribution of the language network to the comprehension of Python</u> programming code. Brain Lang 251: 105392.
- 5. Kuhnke P, Kiefer M, Hartwigsen G (2023): <u>Conceptual representations in the default, control and attention</u> <u>networks are task-dependent and cross-modal.</u> *Brain Lang* 244: 105313.
- Krieger-Redwood K, Wang X, Souter N, del Jesus Gonzalez Alam TR, Smallwood J, Jackson RL, Jefferies E (2024): <u>Graded and sharp transitions in semantic function in left temporal lobe</u>. *Brain Lang* 251: 105402.
- 7. Adezati E, Liu X, Ding J, Thye M, Szaflarski JP, Mirman D (2024): <u>Phase synchronization during the</u> processing of taxonomic and thematic relations. *Brain Lang* 249: 105379.
- 8. Lin N, Zhang X, Wang X, Wang S (2024): <u>The organization of the semantic network as reflected by the neural</u> <u>correlates of six semantic dimensions.</u> Brain Lang 250: 105388.
- 9. Fairhall SL (2024): <u>Sentence-level embeddings reveal dissociable word- and sentence-level cortical</u> representation across coarse- and fine-grained levels of meaning. *Brain Lang* 250: 105389.
- 10. Zhang Y, Mirman D, Hoffman P (2023): <u>Taxonomic and thematic relations rely on different types of semantic features: Evidence from an fMRI meta-analysis and a semantic priming study.</u> Brain Lang 242: 105287.
- 11. Vignali L, Xu Y, Turini J, Collignon O, Crepaldi D, Bottini R (2023): <u>Spatiotemporal dynamics of abstract and</u> <u>concrete semantic representations</u>. *Brain Lang* 243: 105298.

If interested, please contact the Special Content Editor of the Journal to discuss ideas for special issues: Zhenghan Qi: z.qi@northeastern.edu



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