



SOCIETY FOR THE  
NEUROBIOLOGY OF  
LANGUAGE

Newsletter

MARCH 2023



We're pleased to announce that **Neurobiology of Language** is now indexed on **Web of Science** and on **Scopus**. The editorial team has recently accepted their 100th paper for publication. Congratulations to Steve Small, Kate Watkins, the editorial team, and our publishers **MIT Press**.

This month's paper selected by the editors is summarised by **Marco Lai**, a PhD student at New York University:

**Lexicality-Modulated Influence of Auditory Cortex on Subthalamic Nucleus During Motor Planning for Speech**

Alexander R. Weiss, Anna Korzeniewska, Anna Chrabaszczyk, Alan Bush, Julie A. Fiez, Nathan E. Crone, Robert M. Richardson  
Neurobiology of Language (2023) 4 (1): 53–80.

In the last 30 years, many new methods for studying the neurobiology of language have become available to researchers. Imaging methods like fMRI and MEG give incredible detailed measures of brain activity in space and time. However, there are still questions for which these imaging methods fall short, for instance when measuring signals from deep brain structures or trying to measure the rapid spread of neural activity across the brain. In this paper, Weiss and colleagues use direct recordings from implanted electrodes to investigate how a deep brain structure, the basal ganglia, communicates with the cortex, during speaking. They studied individuals with Parkinson's disease (PD) who underwent surgery to implant deep brain stimulation electrodes to reduce the symptoms of their movement disorder. During surgery, patients' brain activity was measured by intracranial electrodes while they read aloud real words ("chair") or pronounceable pseudowords (like "flast") shown on a computer screen.

Uniquely, Weiss et al. use event-related causality (ERC) analysis to examine interactions between the basal ganglia and the cortex conveyed by high-gamma frequency neural activity (60-180 Hz). ERC analysis revealed causal interactions between cortical regions involved in speech production and the subthalamic nucleus (STN); a part of the basal ganglia responsible for motor planning and somatosensory integration. Sustained high-gamma activity was



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observed that propagated reciprocally between the STN and a ventral sensorimotor region during speech planning and the initiation of articulatory movements. A further interaction involved increased high-gamma activity propagating from an auditory area, the superior temporal gyrus (STG), to the STN when PD patients were preparing to speak. Moreover, these interactions between the STG and STN were modulated by the status of the words. High-gamma activity propagation was enhanced for real words compared to pseudowords. By combining deep brain and cortical recordings, this study provides evidence of causal interactions between the cortex and basal ganglia; specifying the neural computations involved in speaking with unprecedented detail.

You can read the paper here:

<https://direct.mit.edu/nol/article/4/1/53/113550/Lexicality-Modulated-Influence-of-Auditory-Cortex>

Matt Davis (SNL Publications Officer) is keen to invite volunteers to write summaries of other forthcoming papers. This is a great opportunity to gain experience writing about neuroscience for a broad audience. Email [matt.davis@mrc-cbu.cam.ac.uk](mailto:matt.davis@mrc-cbu.cam.ac.uk) if you're interested in contributing.

Among the papers due to appear in Volume 4, Issue 1 are the following:

### **Using Motor Tempi to Understand Rhythm and Grammatical Skills in Developmental Language Disorder and Typical Language Development**

Enikő Ladányi, Michaela Novakovic, Olivia A. Boorum, Allison S. Aaron, Alyssa C. Scartozzi, Daniel E. Gustavson, Rachana Nitin, Peter O. Bamikole, Chloe Vaughan, Elisa Kim Fromboluti, C. Melanie Schuele, Stephen M. Camarata, J. Devin McAuley, Reyna L. Gordon  
Neurobiology of Language (2023) 4 (1): 1–28.

### **Auditory Word Comprehension Is Less Incremental in Isolated Words**

Phoebe Gaston, Christian Brodbeck, Colin Phillips, Ellen Lau  
Neurobiology of Language (2023) 4 (1): 29–52.

### **Predictive Coding and Internal Error Correction in Speech Production**

Alex Teghipco, Kayoko Okada, Emma Murphy, Gregory Hickok  
Neurobiology of Language (2023) 4 (1): 81–119.

### **Dynamics of Functional Networks for Syllable and Word-Level Processing**

Johanna M. Rimmele, Yue Sun, Georgios Michalareas, Oded Ghitza, David Poeppel  
Neurobiology of Language (2023) 4 (1): 120–144.

### **Right Posterior Temporal Cortex Supports Integration of Phonetic and Talker Information**

Sahil Luthra, James S. Magnuson, Emily B. Myers  
Neurobiology of Language (2023) 4 (1): 145–177.

### **Spatiotemporal Dynamics of Activation in Motor and Language Areas Suggest a Compensatory Role of the Motor Cortex in Second Language Processing**

Lili Tian, Hongjun Chen, Pyy Petteri Heikkinen, Wenya Liu, Tiina Parviainen  
Neurobiology of Language (2023) 4 (1): 178–197.

Neurobiology of Language is keen to encourage submissions for a Special issue on **The Role of the Cerebellum in Language Comprehension and Production** edited by Julie Fiez and Catherine Stoodley. The deadline for submissions has been extended until 1st April 2023.

The editors are also keen to receive proposals for special issues and other contributions to the journal. You can contact the editors, Steven Small ([small@utdallas.edu](mailto:small@utdallas.edu)) and Kate Watkins ([kate.watkins@psy.ox.ac.uk](mailto:kate.watkins@psy.ox.ac.uk)) with suggestions or questions.





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>.



## Neurobiology of Language



### 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 [newsletter@neurolang.org](mailto:newsletter@neurolang.org)



## Job Postings

### Multilingual Aphasia and Dementia Research Lab, University of Texas, Austin Postdoctoral Position

The Multilingual Aphasia and Dementia Research Lab at the University of Texas, Austin (MADR Lab, PI: Stephanie Grasso, PhD, CCC-SLP) is seeking an individual to fill a postdoctoral research position. This position will be directly involved with an NIH-funded clinical trial in collaboration with Hospital de Sant Pau's Memory Unit (Barcelona; co-PI: Miguel Ángel Santos Santos, MD, PhD). Research in the MADR Lab focuses on developing treatment approaches for bilingual adults (Spanish-Catalan; English-Spanish) with progressive aphasia, on better characterizing the manifestation of aphasia and neurodegenerative disorders in individuals from culturally and linguistically diverse backgrounds, and addresses bilingualism as a contributor to cognitive and neural reserve. Both research sites utilize current approaches in cognitive neuroscience, neuroimaging, and cognitive rehabilitation to address these issues. This position is based in Austin, Texas and includes the possibility of working for some time in Barcelona, Catalonia.

Responsibilities will include:

- generation of presentations and manuscripts from research findings
- organization of data and managing databases shared across labs
- conducting data analyses
- participant screening, assessment, and possibly treatment for studies examining the nature and management of progressive aphasia and related disorders
- supervision of undergraduate and Master's level students

Requirements for the positions include:

- a doctoral degree in speech-language pathology or a related field
- English proficiency
- a publication record and/or clinical record that reflects experience with cognitive neuroscience, neurorehabilitation, neurogenic communication disorders, bilingualism or related areas
- experience with collecting and analyzing behavioral data

Preferred skills include:

- strong or native-like Spanish
- strong or native-like Catalan
- prior experience interacting with individuals with aphasia in a research or clinical setting

- (in person or teletherapy)
- experience managing multi-site data collection workflows
- experience using R for data analyses and experience specifically with linear-mixed effects regression models
- experience conducting neuroimaging analyses
- experience applying for external funding

-The position may be used to fulfill requirements for the Clinical Fellowship in speech-language pathology.

-Preferred start date is Spring 2023, but alternative dates will certainly be considered including Summer 2023 and Fall 2023.

-Our lab is committed to diversity, equity, and inclusion. We strongly encourage applications from candidates who are committed to contributing to this goal and to applicants from groups historically underrepresented to apply.

If interested, please send a cover letter, CV, and three listed references to:  
Drs. Stephanie Grasso and Miguel Ángel Santos Santos. ([smgrasso@austin.utexas.edu](mailto:smgrasso@austin.utexas.edu); [MSantosS@santpau.cat](mailto:MSantosS@santpau.cat))



## Georgetown University Neuroscience of Language training program

Georgetown University's new **Neuroscience of Language T32 training program** is seeking postdoctoral fellows. The Neuroscience of Language program provides training in the brain basis of language, as well as sensory, motor, and cognitive systems as they pertain to language and communication. Georgetown has a number of faculty focused on Neuroscience of Language research, ranging from basic work on auditory or language processing (spoken, signed, and written language) 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.

Individuals with doctoral degrees from any field related to Neuroscience of Language (Neuroscience, Cognitive Science, Linguistics, Psychology, Communication Disorders, etc.) are encouraged to apply. Fellows will be supported for two years and will develop an individualized training plan to provide expertise across disciplines important to Neuroscience of Language research. Fellows will take coursework as needed and will participate in a regular journal club and seminar series, clinical experiences, community engagement activities, and professional development activities, in addition to conducting research in the neuroscience of language. The overall goal of the program is to develop well-rounded scientists who have a broad perspective on basic and clinical Neuroscience of Language.

Fellows will work with one or more of the following investigators: Drs. Thomas Coate, Guinevere Eden, Rhonda Friedman, William Gaillard, Anna Greenwald, Xiong Jiang, Elissa Newport, Josef Rauschecker, Max Riesenhuber, Ella Striem-Amit, Ted Supalla, Peter Turkeltaub, and Michael Ullman. Collaborations among our faculty are common and a strength of our program.

Appointments are funded at standard NIH NRSA stipend rates, with an initial one-year term to be renewed for an additional year if fellows meet the program requirements.

U.S. citizens or permanent residents who currently hold a doctoral degree or will have met all doctoral program requirements before starting the program are eligible to apply. 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](mailto:peter.turkeltaub@georgetown.edu)) with any questions about the program or eligibility. Contact Rachel Galginaitis ([rg1171@georgetown.edu](mailto:rg1171@georgetown.edu)) with questions about the application process.



## Tenure-Track Assistant Professor of Psychology: Neuroscience

The College of Arts & Sciences at the University of Alabama (UA) invites applications for a tenure-track faculty position at the assistant professor level in the Center for Innovative Research in Autism (CIRA). The position is in the area of neuroscience of autism and developmental disorders. The successful candidate will have a Ph.D. and will have completed post-doctoral training in a relevant area of neuroscience or psychological sciences. We seek a candidate with an active research program who has the promise of securing extramural funding to support basic and translational neuroscience research in autism.

Link to full ad: <https://facultyjobs.ua.edu/postings/51244>



## Lab Manager, Language & Aging Lab

The **Department of Psychology** in the College of the Liberal Arts at Penn State seeks candidates for a position as a **Lab Manager** (Human Research Technologist) in the **Language and Aging Lab**. Research in the lab focuses on age-related differences in the human brain, behavior, and language production. Responsibilities include data collection, data coding, data analysis, and general laboratory administration under the direct supervision of Dr. Michele Diaz. The individual in this position will provide support for a wide range of research activities including coordination of lab activities; assisting with collection, processing, and analysis of neuroimaging and behavioral data; and training and supporting undergraduate research assistants.

**Education and Experience:** This position will be filled as a level 1, which typically requires an Associate's degree or higher (Bachelor's degree preferred) plus one year of related experience, or an equivalent combination of education and experience. A degree in psychology, biomedical engineering, or a related field is preferred. All candidates should have excellent problem-solving abilities, interpersonal communication, and organizational skills; an ability to manage multiple simultaneous projects; attention to detail; and a willingness to learn and develop additional research skills related to data management and analysis. Experience with programming (R, Praat, unix shell scripting, or other languages), neuroimaging techniques (especially fMRI), psychological research, and statistics software is preferred.

In addition, successful candidates must either have demonstrated a commitment to building an inclusive, equitable, and diverse campus community, or describe one or more ways they would envision doing so, given the opportunity. This is a limited-term appointment, funded for one year from the date of hire with an excellent possibility of re-funding. Questions about the position can be directed to Dr. Michele Diaz, [mtd143@psu.edu](mailto:mtd143@psu.edu)

To apply, submit a cover letter and resume here:

[https://psu.wd1.myworkdayjobs.com/PSU\\_Staff/job/Penn-State-University-Park/Lab-Manager--Human-Research-Technologist-1---Language-and-Aging-Lab\\_REQ\\_0000041453-1](https://psu.wd1.myworkdayjobs.com/PSU_Staff/job/Penn-State-University-Park/Lab-Manager--Human-Research-Technologist-1---Language-and-Aging-Lab_REQ_0000041453-1)





## Master in Cognitive Neuroscience of Language – BCBL Basque Center on Cognition, Brain and Language

The Master's program aims to provide specialized, comprehensive and rigorous training in the Cognitive Neuroscience of Language. The **Master's program** includes core courses (theoretical and methodological), advanced elective courses, and a research-based project at the end of the program. Students learn from the world-class scientists at the Basque Center on Cognition, Brain, and Language.

The Master's program is aimed at university graduates with various degrees who are interested in the Cognitive Neuroscience of Language, including previous training in psychology or linguistics, as well as language-oriented training in cognitive science, computer science, or mathematics. The duration of the program is one academic year with 60 ECTS credits. Students will develop research skills through the mentorship of experts and by completing a Master's Research Project at the end of the program. The language of instruction is English. Selecting the appropriate Masters program is the best way to start a successful research career, and in fact, several of our current PhD students began their research careers in our Master's program.

In the 12 years that we have been running our Master's program, graduates have gone on to PhD programs in places such as New York University, the Donders Center at Radboud University, UC San Diego, the Max Planck Institute for Psycholinguistics, Michigan State University, the University of Bielefeld, and our own PhD program at BCBL.

For more information about the master's program, visit <https://www.bcbl.eu/en/study-with-us/master-cognitive-neuroscience-language>

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### Application Process

Details of application requirements can be found at: <https://www.bcbl.eu/en/study-with-us/master-cognitive-neuroscience-language>

### Application Period

All applications sent to [mastercnl@bcbl.eu](mailto:mastercnl@bcbl.eu) until **31 March** will be considered.

The preregistration period opens tomorrow March 1st until March 31st and it is necessary to choose our master's degree as the first option.

<https://www.ehu.eus/en/web/masterrak-eta-graduondokoak/university-masters-degrees/pre-enrolment-and-admission>

The BCBL Evaluation Committee will forward via e-mail the provisional result to each candidate evaluated until the end of the preregistration period. Once it has been verified that each candidate meets all the criteria established by the university, this institution must validate the result. Graduated students will have preference.

You can find more information here: <https://www.ehu.eus/en/web/master/master-cognitive-neuroscience-language/registration>

### APPLICATION COMPONENTS

to be sent by e-mail to [mastercnl@bcbl.eu](mailto:mastercnl@bcbl.eu)

Scanned ID (Spanish and European applicants) or Passport (international applicants)

Degree certificate

Transcripts of records

Résumé (CV)

Letters of recommendation:

Either letters from two different Professors, or

One letter from a Full Professor (you may also include a letter from a second Professor if you use this option, but it is not required)

1 essay stating your research interests (1 page maximum, .pdf format)

Certificate of English level is mandatory for applicants who attended a non-English-speaking undergraduate university

Thanks,

Master CNL Management Team

<http://www.bcbl.eu>



## Visceral Mind Summer School A Residential Course in the Neuroanatomy of Cognition

**When:** 4th-8th September, 2023

**Where:** Bangor University, Wales, UK

There is no substitute for the life-changing experience of dissecting the human brain with your own hands. Successful applicants spend the week learning about neuroanatomy through presentations, practical workshops and neurological patient case conferences, and have the unique privilege of handling, and dissecting the human brain.

- For further information, and to apply, please visit: <https://visceralmind.bangor.ac.uk/>
- Deadline for applications: 21.04.23



## Academy of Aphasia 61st Annual Meeting University of Reading, UK and Virtual (Hybrid) Saturday, October 21– Monday, October 23, 2023 ABSTRACT SUBMISSION DEADLINE: MAY 20th, 2023

The 61st Annual Meeting of the Academy of Aphasia will be hosted at **Park House, University of Reading, Whiteknights Campus, UK**. Saturday's opening night reception will take place at the **Museum of English Rural Life**, which explores the history of the English countryside and its people. The Academy welcomes submissions of original experimental, clinical, theoretical, and historical research from any field that contributes to the study of aphasia, including Speech-Language Pathology, Psychology, Neurology, Neuroscience, Linguistics, History, and Computational Modeling. We encourage onsite attendance—required for platform presenters—although we also offer the option to participate online via an interactive hybrid platform.

Our keynote speaker is **Prof. Sophie Scott** of the University College London (UCL). Prof. Scott is Director of the Institute for Cognitive Neuroscience (ICN) and Head of the Speech Communications Group at the UCL. Her research interests span several different areas, including the study of the neural basis of vocal communication and production to the mechanisms and streams for auditory processing, hemispheric asymmetries, and the interaction of speech processing with attention and working memory. Currently, she investigates the expression of emotion in the voice, particularly in laughter processing. She also studies individual differences and plasticity in speech perception as fundamental factors for people with cochlear implants and profiles of recovery in aphasia. At UCL, Prof. Scott gives classes on these topics, and she also runs a module for master's students on communication skills for cognitive neuroscience.

Now in its sixth year, the NIDCD-funded Academy of Aphasia conference grant (R13 DC017375) will sponsor selected student fellows to attend and present their work at the conference. Fellows will also receive focused mentoring and training from seasoned faculty mentors at the meeting. Both U.S. and international students are eligible to apply; please contact Swathi Kiran ([kirans@bu.edu](mailto:kirans@bu.edu)) with inquiries. The grant also sponsors a state-of-the-art New Frontiers in Aphasia Research seminar. This year's topic will focus on stroke and vascular cognitive impairment, and the speaker will be **Dr. Sudha Seshadri** of the University of Texas, Health Science Center at San Antonio. Dr. Seshadri is the founding Director of the Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases. Her scientific research focuses on neuroimaging, genetic, and epidemiological factors associated with brain aging, stroke, dementia, and vascular cognitive impairment. Since 1998, Dr. Seshadri has been a senior investigator of the Framingham Heart study. She has been continuously funded

by the National Institutes of Health since 2009, and currently serves as the principal investigator on eight NIH-funded grants and participates in twelve additional grants.

## **Abstract (proposal) preparation and submission guidelines**

**Submission procedures.** Abstracts of proposed platform and poster presentations must be submitted through the vFairs platform. Stay tuned for the submission link in future communications and on the [conference information](#) of the Academy of Aphasia website.

**Presentation types.** The annual scientific meeting includes both platform and poster sessions. The Academy considers platform presentations and poster presentations to be of comparable scientific merit. Scheduled presentation times of platform sessions and poster sessions will not conflict. At the time of abstract submission, preferred presentation type will be indicated by the submitter.

Platform session presenters **will be required to attend and present onsite (in Reading)**. Platform session presentation types include:

- Scientific papers – consisting of original research that has not yet been published.
- Symposia – consisting of a number of papers focusing on a common theme from researchers representing different laboratories. These papers may report on previously published research.
- Mini-Workshops – methodologically-oriented sessions consisting of a number of papers (possibly from the same research group) reporting a unique approach to a timely topic.

Poster session presenters have the option to either: a) attend and present in the onsite poster hall (in Reading); or b) attend and present in the online poster hall. Regardless of presentation mode, poster presenters are strongly encouraged to be available at their poster for the duration of their assigned poster session for purposes of live interaction; therefore, a single attendee may not present more than one poster simultaneously. Poster sessions include:

- Scientific papers that can be presented primarily in a visual format. All posters (onsite or online) will also be posted in virtual form in the virtual poster hall for the duration of the meeting.

**Authorship of submissions.** More than one abstract may be submitted by an individual, but an individual can be listed as first author on only one submission. Both members and non-members of the Academy are encouraged to submit proposals for scientific papers, symposia, mini-workshops and posters. All submissions will be given equal consideration on the basis of their scientific merit and topicality for the Academy.

**Guidelines for abstract content and format.** The submitted abstract should provide a concise statement of the problem or hypothesis, procedures and analyses conducted, results obtained, and final conclusion(s) drawn. Abstracts may include a maximum of 500 words in the abstract proper (excluding title, authors, references and acknowledgements), one camera-ready figure and one table. **Abstracts must conform to the specified [template format](#) to be considered for acceptance to the conference program.**

**Proposal of Symposia and Mini-Workshops.** It is highly recommended that organizers of symposia and mini-workshops contact the chairs of the Program Committee about their plans, well in advance of abstract submission, by e-mail ([academyofaphasia.program@gmail.com](mailto:academyofaphasia.program@gmail.com)), to receive feedback on organizational issues. The organizer then should submit an abstract summarizing the topic, including the names and affiliations of all participants, and the abstract title for each of the proposed presentations within the topic area. In addition, an abstract should be submitted for each of the individual presentations, including the title of the associated symposium in the Acknowledgments section.

**Conference participation.** The meeting is open to anyone interested in attending. However, Academy of Aphasia members, authors of accepted papers, and the first authors of rejected papers will have preference if onsite or virtual space limitations restrict the number of registrants.



- **Certificate of conference participation.** Conference participants may request a certificate of conference participation, which they may use subsequently to pursue application for continuing education units (CEUs) or continuing professional development (CPD) with their respective professional organizations.
- **Childcare** A courtesy list of local childcare providers will be available to registrants upon request. This year, we will provide a \$100 registration credit for people who choose to find childcare options during the conference. Proof of receipt of childcare services will be required.
- **Student Award.** This award is given to the student presenting the most scientifically meritorious paper (either platform or poster presentation). Submissions are judged by the Program Committee on the basis of the abstract submission and the conference presentation itself. All full-time graduate students giving a presentation are eligible for the student award, although priority will be given to students presenting original research. Students wishing to be considered for the Student Award must so indicate at the time of abstract submission. To be eligible for the Student Award, the author-presenter must:
  - be enrolled full-time and be in good standing in a graduate program at the time of submission
  - be the first author and presenter of the paper submitted
  - not have received a student award from the Academy in the past

**Selection criteria for the meeting program.** Abstracts will be reviewed by the Program Committee. Selection of papers will be based on scientific merit, innovation, appropriateness for the Academy of Aphasia, and on the representation of topics in the program.

**Notification regarding acceptance:** The Program Committee will e-mail a decision by July 18, 2023.

**Program availability.** A PDF eBooklet with formatted abstracts will be available during the conference.

**Program Committee:** Paola Marangolo (Co-Chair), Gloria Olness (Co-Chair), Shari Baum (Co-Vice Chair), Adrià Rofes (Co-Vice Chair), Eva Kehayia, Aneta Kielar, Gabriele Miceli and Tatiana Schnur.



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