



## Post-doctoral Fellow/Scientist Position at the Auditory & Speech Sciences Laboratory, University of South Florida

The Auditory & Speech Sciences Laboratory (ASSL) has an exciting employment opportunity for a post-doctoral fellow or research scientist. The laboratory is part of USF's Department of Communication Sciences & Disorders and is affiliated with the Department of Chemical & Biomedical Engineering, Department of Medical Engineering, and the Global Center for Hearing & Speech Research.

The ASSL focuses on basic and applied research to solve communication problems through the combination of behavioral sciences, electrophysiology, and assistive technology. Current projects are funded by NIH NIA, NIH NIDCD, DOD, and Industry partners. We are searching for individuals who are passionate about auditory research to collaborate with our investigators (Drs. David and Ann Eddins, Dr. Erol Ozmeral) and team of scientists, post-docs, and students. Successful candidates will contribute to research projects that focus on:

- Central auditory plasticity and tinnitus, hyperacusis, and aging
- Development and evaluation of hearing aid signal processing strategies
- Development, validation, and interpretation of clinically viable tools for automated assessment of central auditory dysfunction
- Development and evaluation of automated fitting methods, spatial hearing systems, and use of advanced sensors for hearing enhancement devices
- Development and evaluation of mobile applications focused on cognitive and behavioral assessment including ecological momentary assessment

The ideal candidates will have a Ph.D. in hearing science or related discipline and a strong set of skills in several of the following areas:

- Experience conducting auditory perceptual, electrophysiological, or hearing instrument research
- Knowledge of quantitative methods including data analysis, signal processing, modeling, machine learning
- Software development/coding in MATLAB, PYTHON, or skills in mobile app development
- Knowledge of hearing aid signal processing
- Expertise in speech perception in normal hearing and hearing impaired listeners
- Experience in auditory electrophysiology including ABR, auditory cortical evoked potentials, or EEG
- Experience with hearing instrument fitting and verification
- Skills in the use of laboratory instrumentation
- Strong written and verbal communication skills and desire to work with various patient populations including older adults and persons with history of traumatic brain injury
- Strong organizational skills and ability to organize and manage data

Applicants should have enthusiasm for research, a mind for innovation and creativity, a desire to work in a thriving team atmosphere, and capacity for acquiring expertise in new research techniques.

Candidates will have the opportunity to work in a vibrant, multi-disciplinary environment that includes experts in audiology, hearing science, neuroscience, electrical and biomedical engineering, and speech/voice science. Professional development opportunities include formal mentorship and mentoring opportunities, presentations at national and international conferences, formal and informal educational opportunities, and interaction with members of several sister laboratories. Compensation is commensurate with experience and opportunities for advancement in ranked professional tracks are available. Expected start date, Summer or Fall 2019 with 2 to 3 years of funding available. **USF**, with over 41,000 students, is one of the fastest growing research institutions in the U.S., and the Greater Tampa Bay region is perennially ranked among the best places in the U.S. to work and play. Please contact Dr. David A. Eddins ([deddins@usf.edu](mailto:deddins@usf.edu)) or Dr. Ann Clock Eddins ([aeddins@usf.edu](mailto:aeddins@usf.edu)) or visit [ASSL.cbcs.usf.edu](http://ASSL.cbcs.usf.edu) for more information.

# Auditory & Speech Sciences Laboratory

The Auditory & Speech Sciences Laboratory emphasizes basic and applied research to solve communication problems through the combination of behavioral sciences, neuroscience, engineering, and assistive technology. We encourage students, collaborators, research participants, and sponsors to explore our work and contact us with inquiries.

## *ASSL Research Today and Tomorrow*

### Aging and central auditory plasticity

The brain changes as we age, and that may be a good thing. We are gauging the plasticity of the central auditory system with an eye towards the possibility of using neural plasticity to overcome problems such as difficulty with speech-in-noise, tinnitus, and loudness discomfort.

### Aging, hearing loss, and factors related to speech perception

Key to improving speech perception in background competition is understanding the effects of aging and hearing loss on the ability to extract desired sounds from a complex array of competing sounds. We use listening tests and brain imaging to identify remediation targets.

### Improving hearing enhancement devices

Our scientists, clinicians, and engineers are working hard to develop, evaluate and improve hearing technology such as hearing aids, cochlear implants, consumer electronics, and assistive technology. Current foci include spatial hearing systems and biologically assisted control.

### Auditory perception of pathological voices

Combining traditional psychoacoustics and auditory-based modeling, we aim to improve diagnostics and treatment of child and adult patients with voice disorders.

### Understanding tinnitus and hyperacusis

To better understand these often bothersome and even debilitating disorders, we are using a combination of electrophysiological measures to understand tinnitus and its treatment. We also are developing novel devices for the treatment of mild to severe hyperacusis.

### Mobile app for aural rehab (tinnitus and speech-in-noise)

Difficulties associated with tinnitus and speech in background competition are widespread, but active military and young veterans are underserved. Accessible education and treatment can improve access, outcomes, and quality of life.

### Translation of lab measures to clinical tests

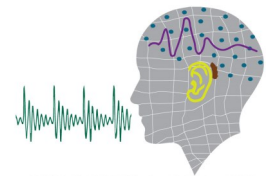
Typical audiometric and neuropsychological evaluations lack indices of central auditory dysfunction that can be impacted by many disorders. Reasons include test availability, test complexity, difficult interpretation, high cost, and limited time. Development and norming of automated measures of central auditory dysfunction can facilitate accurate diagnosis, patient profiling, and identification of potential treatment targets.

**Come join us!**

[assl.cbcs.usf.edu](http://assl.cbcs.usf.edu)

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AUDITORY & SPEECH  
SCIENCES LABORATORY  
UNIVERSITY OF SOUTH FLORIDA

### Faculty & Staff

**David A. Eddins, Ph.D.**

Co-Director

**Ann Clock Eddins, Ph.D., MBA**

Co-Director

**Erol J. Ozmeral, Ph.D.**

Research Assistant Professor

**Anusha Yellamsetty, Ph.D.**

Post-Doctoral Fellow

**Carrie Secor, Au.D.**

Research Audiologist

**Peter Hutchison, Au.D.**

Research Audiologist

**Robert Budinsky, Au.D.**

Research Audiologist

**Jennifer Pedraza, M.A.**

Research Coordinator

**Erika Boone, B.S.**

Research Support Specialist

**Craig Formby, Ph.D.**

Adjunct Professor

### Affiliations

Communication Sciences & Disorders;  
Chemical & Biomedical Engineering;  
Global Center for Hearing & Speech  
Research

### Activities

Basic, translational, & applied research  
Development & evaluation of  
algorithms, devices, and clinical &  
research tools  
Education of tomorrow's clinicians  
and scientists

### Funding

NIH, NSF, DoD, Industry, & Private