Postdoctoral fellow or research engineer: neural plasticity in the central auditory system

The team PCAC at the Hearing Institute of Paris (Institut de l’Audition, IdA) has an open postdoctoral/research engineer position in systems neuroscience with the broad goal of understanding the plasticity of central auditory circuits related to acoustic overstimulation and genetic forms of deafness.

We are seeking to recruit a talented and motivated post-doctoral fellow/research engineer with experience in *in-vivo* electrophysiology and signal processing/computational neuroscience and that is interested in cortical neural circuits which underlie auditory processing. Experience in behavior or molecular biology would be a plus.

A daily noise exposure at 85dB(A) is commonly reached by cumulating occupational and leisure noise. Not only it is responsible for “auditory fatigue”, a temporary decrease of hearing sensitivity that has been largely ignored so far, but it has also been shown in animal models that long-term moderate exposure to noise could induce plastic changes in the organization of the auditory cortex. We are interested in deciphering molecular, functional and social mechanisms governing auditory fatigue and auditory cortex plasticity by manipulating the statistics of sensory inputs to the auditory cortex.

The work will mainly focus on the thalamocortical system and the inferior colliculus and will involve an innovative system relating social interactions, *in vivo* electrophysiological recordings and occurring behaviors in awake and freely moving animals. The candidate will strongly contribute to the development of the system, the data acquisition and data analysis.

The position will be financed for two years with possible prolongation according to performance and grant results. Candidates with a PhD in Neuroscience, Signal Processing or related discipline and demonstrated expertise with electrophysiology *in vivo*, signal processing/computational neuroscience and coding in Python/Matlab are highly encouraged to apply. The project will be conducted in the beautiful city of Paris, in the brand-new Hearing Institute which also may provide exciting career opportunities for young talented researchers/engineers. Interested candidates should submit a statement of research experience and career goals, a current CV and 1 or 2 reference letters to Boris Gourévitch and Nicolas Michalski who can also be contacted for additional information if required.

**Starting** January 1st, 2023


**Contact:** Boris Gourévitch (boris@pi314.net, phone +33 1 76 53 50 41); Nicolas Michalski (nicolas.michalski@pasteur.fr, +33 6 61 73 27 87)