



Postdoctoral Position (funded for 3+ years), ECoG-Based Neurophysiology/Systems Neuroscience

Overview

The successful candidate will be part of the Schalk lab (www.schalklab.org) at the Wadsworth Center in Albany, New York. The research will be focused on the development and testing of new theories of information routing in the brain using high-resolution electrocorticography (ECoG) in humans. A critical aspect of this research will be the development of new algorithmic methods to establish anatomical or functional network topologies from ECoG signals. The incumbent will be expected to be involved in all aspects of this research, which includes experimental design, ECoG data collection with our collaborators at Albany Medical College, method development, signal analysis and interpretation, manuscript preparation, and grant development. The candidate will also have the exciting opportunity to participate in our newly funded Center for Adaptive Neurotechnologies (www.neurotechcenter.org), which is the only NIH-funded neurotechnology center in the United States.

The Wadsworth Center

The Schalk research lab at the Wadsworth Center is widely recognized for its basic neuroscience and translational neurotechnology research. The Wadsworth Center has been named one of the "Best Places to Work for Postdocs" and one of the "Best Places to Work in Academia" by The Scientist magazine. Cost of living in Albany is relatively low, and there is easy access to some of the most exciting metropolitan areas in North America, including New York City, Boston and Montreal, as well as to a large variety of tourist attractions such as Niagara Falls.

Required Expertise

We are seeking candidates with substantial experience in different areas of neuroscience and engineering. With respect to neuroscience, we expect the candidate to be intimately familiar with EEG/MEG/ECoG neurophysiology, in particular oscillatory dynamics and population-level activity, and to have a strong interest in current theories of cortical processing, such as communication-through-coherence, gating-by-inhibition, and predictive coding. With respect to engineering, we expect the candidate to have a solid background in signal processing, in particular time series/spectral analysis, classification, and advanced statistics/machine learning, as well as excellent programming expertise in Matlab. We will not consider candidates without a strong background in both of these areas of science and engineering.

In addition, the candidate should be familiar with C++, have an intense interest in multidisciplinary work, and an impeccable work ethic and problem solving and communication skills. We collaborate intensively, both within our group and with a number of outstanding external collaborators. Hence, the most compatible candidates will embrace the multidisciplinary, fast-paced, and collaborative nature of our work.

Applicants should send a CV, a brief statement of background and goals, and two reference letters to Dr. Gerwin Schalk (<http://www.schalklab.org/people/lab-director>) at gerwin.schalk@health.ny.gov. Review of applications will start immediately and continue until the position is filled.