Postdoctoral Research Fellowship in Neural Systems Modelling

Position as postdoctoral research fellow available at the Department of Bioscience at the University of Oslo.

The fellowship period is 4 years, with 25 % compulsory work.

Anticipated start date is 01.02.2018.

Project description:

We study neural processing and plasticity of neural circuits at multiple levels, from the morphological changes at the synapse to functional changes of network activity in behaving animals. The position will be part of the project *'BrainMatrix'* funded by the Norwegian Research Council, and seeks to explore the biophysical and physiological roles of perineuronal nets (PNNs) in neuron information processing and plasticity. PNNs are extracellular protein complexes thought to act as long-lasting synaptic anchors, thereby defining stable structural and functional connectivity in widespread but discrete regions of the brain. The entire *BrainMatrix* project is built on interdisciplinary principles and will involve strong interaction between mathematical modelling and experimental goals across the levels of investigation. As such, a key feature of this position will be to work between the outstanding computational and experimental groups at Simula Research Laboratory (www.simula.no) and the University of Oslo (www.mn.uio.no/ibv/english/research/sections/fyscell/cinpla). For this reason, the candidate should have experience in either computational neurophysiology/cell electrophysiology or experimental, and a strong desire and potential to expand their skillset to include the other discipline.

Job description:

We are searching to fill a 4-year full time postdoctoral, with 75% of the time devoted to research and 25% reserved for other career promoting activities such as lecturing or mentoring. The successful candidate will develop and implement models for interrogating the effects of genetic and pharmacologic manipulation of PNNs on single neuron and network function in visual and spatial information processing. The modeling approach will take advantage of tools and resources available through the Human Brain Project, and developed locally such as the NEST and LFPy simulators. The experimental goals will involve opportunities to apply or learn classical slice electrophysiology and single/multi-unit extracellular recordings, as well as advanced *in vivo* optical recordings and *in vivo* patch clamping. Within the framework of the position duties corresponding to one year of compulsory work may be assigned.

For more information, including on how to apply, see:
https://www.jobbnorge.no/ledige-stillinger/stilling/145487/postdoctoral-research-fellowship-in-neural-systems-modelling?p=0&reset=1

Deadline for application: January 10th 2018

For questions, please contact:

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