



Universität
Zürich^{UZH}

Open PhD Position Calcium Imaging of Dendrites during Mouse Learning

ZNZ
Zentrum für
Neurowissenschaften Zürich

INTRODUCTION

The group of **Fritjof Helmchen** (Brain Research Institute, University of Zurich; www.hifo.uzh.ch/en/research/helmchen.html) is offering a PhD position to study dendritic computation using two-photon imaging in behaving mice. The project aims at recording from dendrites of anatomically defined populations of the cortex of mice during learning of a multi-sensory behavioral task and relating dendritic activity to behavioral performance. In our research group we study circuit function and principles of computation in the mammalian brain, with a particular focus on advancing and applying optical imaging methods for in vivo measurements during behavior. We investigate both the local cellular micro-level with the help of high-resolution microscopes as well as the more global 'mesoscale' brain network using large-scale imaging tools.

REQUIREMENTS

You have an excellent education in neuroscience, biology, physics or related fields. Ideally you have prior experience with using two-photon microscopes for calcium imaging, training of mice for behavioral tasks and considerable knowledge in computational neuroscience and data analysis.

STARTING: The PhD position is available starting January 2022.

APPLICATION

Please send your application including curriculum vitae, a one-page description of scientific interests and motivations, your transcript of records and two reference contacts to Prof. Fritjof Helmchen (helmchen@hifo.uzh.ch). Successful applicants will enroll in the International PhD Program in Neuroscience of the Neuroscience Center Zurich (<http://www.neuroscience.uzh.ch/>), embedded in the Life Science Graduate School Zurich (<https://www.lifescience-graduateschool.uzh.ch/en.html>). The University of Zurich is offering a very stimulating academic environment and competitive salaries. The Neuroscience Center Zurich includes many international renown research groups working on all aspects from fundamental neuroscience to clinical applications. In addition, the successful candidate will be part of the University Research Priority Program (URPP) "Adaptive Brain Circuits in Development and Learning (AdaBD)", which offers a strong collaborative network across research groups in Zurich (<https://www.adabd.uzh.ch/en.html>). The PhD position is available starting 2022.

