Valery Grinevich Lab announcement (ZI, Central Institute for Mental Health in Mannheim, Germany)

Zentralinstitut für Seelische Gesundheit

We are hiring:

A computational neuroscience researcher (PhD student or Postdoc) or a student assistant (HiWi) with strong computational / programming skills.

Our lab aims to understand how brain signaling determines complex behaviors with the focus on different types of rodent social behaviors. Our projects revolve around oxytocin – a neurohormone known to modulate variety of physiological processes starting from food intake, stress reaction, pain perception, emotional and cognitive processing as well as social behavior. With our research we would like to decipher how a single signaling molecule (oxytocin) can exert so many functions through modulation of distinct neural circuits.

We just started to understand such circuits by performing neural recordings of defined neuronal cell-types, using electrophysiological or optical imaging approaches in behaving animals. In particular, we use Neuropixels probes to record multiple brain areas at a time. We also use one-photon based calcium imaging (Inscopix Miniscopes) in freely-moving animals to record large populations of neurons over weeks. Using these large-scale datasets (in both cases we can record up to hundreds of neurons at a time) we will be able to understand information flow in the brain in a way that was not possible previously, when scientists typically recorded one neuron at a time. The major obstacle and challenge of this approach is to handle, browse and correlate and analyze these large-scale-datasets encoding brain activity with footage of animal behavior in experimental setting. Therefore, we are looking for a researcher or student assistant, who will interact closely with experimentalists and essentially contribute to our research at the stages of conceptualization and analysis. Tasks of the researcher or student assistant will depend on the qualification and motivation, which may include:

-Setting up behavioral or neurophysiological data analysis pipelines

-Higher-level analysis (dimensionality reduction, clustering, GLM, ect.)

-Developing analysis tools / models in an own project

Our lab headed by Prof. Valery Grinevich is one of the leading centers of oxytocin research. We actively collaborate with over 30 laboratories around the world; sharing research tools and ideas to further advance the knowledge of brain control of physiology and behavior. Currently the highly international team is composed of ~20 people at different stages of their scientific carrier from students, PhD candidates, to Postdocs, as well as technical/administrative support.

Interested candidates can apply by contacting Alan Kania and Eduard Maier via email:

alan.kania@zi-mannheim.de and eduard.maier@zi-mannheim.de

Please include your CV and a short letter of motivation.

Requirements:

Bachelor or similar with computational background (for student assistant/ HiWi candidates)

Master or similar with computational background (for PhD candidates)

PhD with computational background (for postdoc candidates)

Salary:

HiWi: ZI student rate (17€/h)

PhD student: TV-L13 (66%)

Postdoc: TVL-13 (100%)