Internship/Master thesis project - Siegert Group

Full Time (40h/w) – the expected length of the project is 8 months, with possibility of extension
Klosterneuburg (Vienna), Austria
€ 1,075 * gross/month

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The Siegert group (https://ist.ac.at/en/research/siegert-group/) is working in the field of neuroimmunology and studies the interaction of microglia, the resident immune cells in the brain, with neurons. Recent findings from our group indicate that microglia are critically involved in neuronal plasticity. This Internship/Master project builds upon this discovery and focuses on identifying how microglia-mediated changes in neuronal circuitry impacts information processing in mice.

The aim of the project is to combine statistical and machine learning approaches to analyze large datasets of neural activity recordings from the mouse primary visual cortex and to identify the effects of anti-depressive drug treatment on the network and single unit activity. This project will be performed in close collaboration with scientists in the field of neurobiology and statistical physics.

- To adapt existing in-house Python analysis pipelines to the scientific questions
- To work independently, set priorities and practice result-focused planning
- To be open-minded and explore alternative approaches
- To write well-documented analysis scripts
- To present analytical results succinctly in front of a biology audience

Your profile

The successful candidate holds a Bachelor’s or Master’s degree in computer science (or closely related discipline like physics, mathematics or engineering) and shows creativity, initiative and enthusiasm to work in a highly-dynamic, multidisciplinary environment, and has problem-solving skills. Prior experience with statistical methods applied to neuroscience, especially in vivo electrophysiological data recording, is an advantage but not required.

- Strong working knowledge in scripting language (e.g. Python, Matlab)
- Experience with modern version control tools (Git is preferred)
- Proficiency in a compiled language (e.g. C++) is a plus
- Effective communication and organizational skills
- Demonstrable knowledge in neuronal signal processing and network dynamics is an advantage

Application documents: Letter of motivation, CV, relevant transcripts, min. 2 references

To submit your application please email: sandra.siegert@ist.ac.at

* This position comes with possible overpayment depending on education, qualification and work experience. IST Austria processes your personal data in accordance with the law. For more information, please refer to www.ist.ac.at/data-protection.