Job Description

Title: Research Engineer – Neurophotonics project
Posted on: 21 January 2022
Availability: This position is available immediately
Location: Wyss Center for Bio and Neuroengineering, Campus Biotech, Geneva Switzerland

About the Wyss Center for Bio and Neuroengineering, Geneva, Switzerland
The Wyss Center is an independent, non-profit research and development organization that advances our understanding of the brain to realize therapies and improve lives. The Wyss Center staff, together with the Center’s academic, clinical and industrial collaborators, pursue innovations and new approaches in neurobiology, neuroimaging and neurotechnology. The Wyss Center advances reveal unique insights into the mechanisms underlying the dynamics of the brain and the treatment of disease to accelerate the development of devices and therapies for unmet medical needs. The Center was established by a generous donation from the Swiss entrepreneur and philanthropist Hansjörg Wyss in 2014. Additional resources from funding agencies and other sources help the Wyss Center accelerate its mission.

About the Neurophotonics project (short name: NeuroGI)
The NeuroGI project is focused on the development of innovative solutions to understand functioning of the neuronal network in the gut and its connection to the brain. The project will tackle technical challenges to enable in-vivo and longitudinal studying of the microbiota-gut-brain axis by evaluation of morphological and functional changes of the digestive system and its microbiota. With a strong focus on transferring findings to humans, the team will be focused on defining biomarkers and solutions that can enable new diagnostic and therapeutic approaches for digestive and neuronal disorders.

About the Position
The successful candidate will join and actively participate in advancing the NeuroGI project and will work in a multidisciplinary environment that brings together neuroscience, photonics, biology, and engineering. In collaboration with Wyss Center staff, the individual will develop new solutions to address medical needs linked to digestive and neuronal disorders.

Key responsibilities
• Advance the NeuroGI neurophotonics project aiming at investigating the microbiota-gut-brain axis.
• Survey and report on existing literature and track emerging trends in optical imaging, stimulation, and activation of neurons.
• Collaborate with engineers, scientists, clinicians, faculty, entrepreneurs, and industry to leverage and integrate various disciplines and capabilities to the NeuroGI project.
• Design and develop an intraluminal or implantable technology for monitoring and activation of the enteric neurons.
• Participate in the design and execution of bench-top, ex-vivo and in-vivo verification and validation tests.
• Write and maintain technical documentation, including requirements and specifications documents as well as scientific publications and grant submissions.
• Participate and present research findings at internal and external events, conferences, and seminars.
• Communicate and collaborate effectively with various stakeholders at the Center to address operational challenges. Work closely with the quality and regulatory affairs team.

• Beyond the immediate NeuroGI project responsibilities, the successful candidate will be an active member of the Wyss Center community, contributing intellectually to other projects and initiatives at the Center, providing mentorship and vision to colleagues around the organization, as well as to academic and industrial partners.

**Required competence and experience:**
– PhD degree in Biomedical Engineering, Optical Engineering, Micro-engineering, Mechanical Engineering, Physics, Image Processing, or related fields.
– Strong experimental research background in design, development, manufacturing and testing of optical imaging systems, fiberoptic technologies, opto-electromechanical systems, and micro-fabricated devices.
– Additional expertise in neuroscience, biology, image processing, medical device development and programming is a plus.
– Results oriented, proactive problem-solving attitude with strong sense of ownership and drive.
– Ability to collaborate closely with colleagues and partners in a multicultural and multidisciplinary setting.
– Excellent communication skills.
– Fluent in English (both verbal and written), French is a plus.

**To apply, please send your CV and cover letter to** [HR@wysscenter.ch](mailto:HR@wysscenter.ch) **no later than February 30, 2022.**