

Job Description

Title: Wireless Systems Electrical Engineer for Neurotechnology applications

Posted on: 18th March, 2020

Location: Wyss Center for Bio and Neuroengineering, Campus Biotech, Geneva Switzerland

The Wyss Center for Bio and Neuroengineering (<https://www.wysscenter.ch/>), a non-profit organization focused on the translation of neurotechnology to clinical applications, is seeking a **Wireless Systems Electrical Engineer** to join our growing, international team of scientists, clinicians and engineers. The individual will work both independently and collaboratively as a member of the Wyss Center to develop advanced wearable and implantable neuro-sensing and neuromodulation devices that are designed to collect real-time neural signals, transmit multichannel recordings and provide closed loop control signals for a range of human applications. The individual will report to a tech leader in the Electrical Engineering team.

Key responsibilities:

In his/her position, the Wireless Systems Electrical Engineer will:

- Research, develop and implement the electrical design for wireless power and data transfer systems; from requirements to manufacturing, ready for clinical deployment
- Design RF communication systems based either on standards and/or proprietary protocols, optimized for neurotechnology applications where form-factor and energy restrictions are prevalent and performance is challenging, including interactions with the human body
- Design PCB layouts optimized for RF/wireless designs
- Design RF systems in compliance with regulations and medical standards
- Model, analyze and optimize wireless systems and antennas using finite element software
- Test, debug and optimize wireless systems and antennas
- Be part of the EE team and collaborate closely with our Mechanical Engineers, Scientists, Product Managers and Medical doctors
- Collaborate with clinicians and end-users to capture, analyze and implement requirements for wireless systems optimized for usage by patients, carers and clinicians
- Manage electronics sub-contractors and vendors within the scope of the function, balance technical requirements with manufacturability and cost
- Help drive a positive, collaborative and translation-focused culture at the Wyss Center

The ideal candidate should be flexible and open to providing technical solutions for multiple neurotechnology applications in a cutting edge, multidisciplinary translation-oriented environment. The candidate must also be able to work independently to identify innovative approaches to wireless electronic solutions suitable for human neurotechnology applications.

Required competence and experience:

- BS or MS in Electrical Engineering or related discipline with at least 5 years (BS) or 3 years (MS) of work experience in an industrial setting
- Hands-on experience in wireless systems engineering for medical devices
- Hands-on experience in developing RF communication and power/data transfer systems for wearable or implantable medical devices
- Proven experience in PCB layout technics specially for RF designs
- Working knowledge of radio communication protocols such as Wi-Fi, Bluetooth, Bluetooth low energy
- Experience in working in a tightly regulated industry (e.g. medical devices, space or transport industry); experience with ISO 13485, IEC 60601-1 and related standards is a plus;
- Experience in writing requirements, test plans, perform run tests and generate reports
- Aptitude for innovation, willingness and ability to drive change, passion for quality and continuous improvement
- Results oriented, with a strong sense of ownership, urgency, and drive
- Good communication and presentation skills
- Fluent in English; French a plus

Additional skills include:

- Experience in embedded software and/or software defined radio system design
- Good knowledge of electronics suppliers; in particular vendors active in RF design and manufacturing
- Experience or interest in neuroscience/neurotechnology
- Familiarity with sensing hardware

To apply, please send your **CV and a covering letter** describing your qualifications and your motivations to HR@wysscenter.ch. Applications received by **Thursday 30th April 2020** will receive full consideration.