Job Description

Title: Wireless Systems Electrical Engineer for Neurotechnology applications
Posted on: 26th June 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:

– Design RF systems (electronics)
– Design, develop and test electrical designs of wireless power transfer systems; from requirements to manufacturing optimized for neurotechnology applications, where size and energy restrictions are prevalent, and performance is challenging
– Design, develop and test electrical near-field RF communication systems
– Design PCB schematics and layouts optimized for RF/wireless designs
– Be the technical contact point of electronics sub-contractors, balance technical requirements with manufacturability and cost
– Be capable to timely apply his/her general knowledge in electronics design, as acquired by education and proven in industrial settings
– Be part of the EE team and collaborate closely with our Mechanical Engineers, Scientists, Product Managers and Medical doctors
– Collaborate with end-users to capture, analyze and implement requirements for wireless systems optimized for usage by patients, carers and clinicians
– 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 design innovative RF/wireless systems suitable for human neurotechnology applications.
Required competence and experience:

– BS or MS in Electrical Engineering or related discipline with at least 5 years (BS) of work experience in an industrial setting
– Hands-on experience in RF/wireless systems engineering
– Hands-on experience in developing RF communication and power transfer systems for critical devices
– Proven experience in PCB layout techniques specially for RF designs
– Knowledge of mitigation techniques for EMC/EMI and on its testing
– Good knowledge of off-the-shelf electronic circuits such as operational amplifiers, filters, ADCs, DACs, power regulators
– Working knowledge of radio communication protocols such as Wi-Fi, Bluetooth, Bluetooth low energy
– 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 valuable skills include:

– Capable of modeling and optimizing wireless systems and antennas using finite element software
– Lab skills: experience in testing and characterizing RF systems using VNAs or other instruments
– Basic knowledge of digital electronics
– Programming skills in C and/or Python
– Working knowledge of scientific software such as Matlab or Octave
– Experience or interest in neuroscience/neurotechnology
– Good knowledge of electronics suppliers; in particular vendors active in RF design and manufacturing
– Experience in the development of medical devices or in a tightly regulated industry; experience with ISO 13485, IEC 60601-1 and related standards is a plus

To apply, please send your CV and a covering letter describing your qualifications and your motivations to HR@wysscenter.ch. Applications received by Monday 14th of August 2020 will receive full consideration.