

The ARTORG Center for Biomedical Engineering of the University of Bern is seeking a research assistant (40%) with focus on surgical instrumentation for minimally invasive surgery. The candidate will be part of a multidisciplinary project with industrial and research partners at the interface between materials sciences and medical engineering. The applicant is expected to have a strong engineering background (electrical and/or mechanical) and to have interest in translational research in the domains of ear, spine and neuro surgery. The research assistant will participate in the development of a surgical drill to enable nerve stimulation, tissue impedance spectroscopy and assessment of drill process parameters (e.g. temperature). Validation of the first drill prototypes will be investigated using ex-vivo and in-vivo models.

## Research Assistant 40%

### Tasks

- Laboratory evaluation of a multichannel stimulation drill system (test bench verification)
- Verification of electrical/mechanical properties of the integrated electrodes (ex vivo)
- Validation of a nerve stimulation approach (in vivo)

### Requirements

- BSc. or MSc. degree in Biomedical, Electrical or Mechanical Engineering
- Experience with mechanical/electrical prototype design and evaluation
- Knowledge of medical device industry standards (e.g. IEC 60601)

Other skills positively evaluated:

- Programming skills (C/C++)
- Fluent spoken and written English language (knowledge of German is advantageous)
- Interest in experimental (ex vivo/in vivo) study preparation, execution and data analysis
- Interest in signal processing and data analysis (Matlab, Python, etc.)
- Interest to work in a group of medical engineers and clinicians
- Interest to collaborate with a network of industrial and research partners

### We offer

- Initial contract duration: maximum 12 months, 40%
- Salary level: 2000 to 2500 CHF/month, depending on academic degree (BSc. or MSc.)
- Start date: preferably September-October

### Kontakt

Interested candidates can send their applications via email to Juan Ansó [juan.anso@artorg.unibe.ch](mailto:juan.anso@artorg.unibe.ch) with the following documents:

- Letter of motivation (max. 1 page)
- CV (max. 3 pages)
- At least one reference (contact information)