



Berner Fachhochschule  
Haute école spécialisée bernoise  
Bern University of Applied Sciences

School of Health Professions  
Division of Physiotherapy



<sup>b</sup>  
UNIVERSITÄT  
BERN

ARTORG CENTER  
BIOMEDICAL ENGINEERING RESEARCH

# Student Assistant Position (40%)

The [Spinal Movement Biomechanics Group](#) of the Bern University of Applied Sciences and the [Computational Bioengineering Group](#) of the University of Bern are looking for a student assistant **to develop and build a non-invasive traction system** that can be installed in a radiological environment. The purpose of this system is to **evaluate the mechanical properties of the spine of adolescent idiopathic scoliosis patients** prior to treatment planning.

You will be part of an interdisciplinary project funded by the Swiss National Science Foundation (SNSF) and conducted in collaboration with the radiology and orthopedic departments of the Bern University Hospital (Inselspital) and the University Children's Hospital Basel (UKBB).

## Your tasks

- Evaluation of technical options for a lifting system in the radiologic setting
- Structural and electronic design of the system
- Software control and GUI
- Documentation and validation

## Qualifications required

- BSc degree in mechatronics, system engineering, mechanical engineering, or similar field.
- Hands on experience in constructing a system that integrates mechanics, electronics, and computer control.
- Strong communication skills in English required. Knowledge of German language desired.

## We offer

- Creative and international environment to conduct competitive research in an interdisciplinary team.
- Flexible work environment with competitive salary.
- Strong ties to university hospitals.
- Expected starting date in fall 2023 for a duration of 9 months.

## Application

Interested candidates should send their detailed resumes with references, motivation letter, and school transcripts to PD Dr. Stefan Schmid ([stefan.schmid@bfh.ch](mailto:stefan.schmid@bfh.ch)) and Prof. Dr. Philippe Büchler ([philippe.buechler@unibe.ch](mailto:philippe.buechler@unibe.ch)).

## About the institutions

The School of Health Professions is one of eight departments of the Bern University of Applied Sciences, consisting of the divisions Physiotherapy, Nutrition and Dietetics, Obstetrics, and Nursing, as well as the Institute for Health Economics and Health Policy, the Competence Centre for Participatory Health Care, and the Competence Centre for Interprofessionalism. In close cooperation with its partners, the school conducts practice-relevant, impact-oriented and sustainable research in the fields of psychosocial health, health promotion, prevention, assessments, interventions, outcomes and the progressive development of qualified personnel.

The ARTORG Center for Biomedical Engineering Research is the University of Bern's transdisciplinary Center of Excellence for medical technology research. Its mission is to tackle unmet clinical needs and envision future challenge in diagnosis, monitoring and treatment to create viable healthcare technology solutions with imagination, agility and purpose. Its projects run from discovery and basic research to clinical translation.