



Bern University
of Applied Sciences

Research Group HuCE – BME Lab

Competences

In our research group Biomedical Engineering (HuCE – BME Lab), we combine technologies of different engineering disciplines to develop specific solutions to challenges arising in medicine and biology. Here, we benefit from our competences in the fields of biomechanics, biomedical sensors and actuators, electronics, telemetry, signal and image processing and engineering physics. We focus our research and development activities on applications of electronic implants, biomedical instrumentation, electronic healthcare, and optical instruments for diagnosis. Current R&D projects include bioreactors for tissue engineering, capsule implants, diagnosis of apnea, energy harvesting, multi-electrode measurements of heart cell cultures as well as optoacoustic imaging.

Partnerships

Companies and Foundations

- RMS Foundation
- Synthes
- Medivation AG
- Haag-Streit
- Reber Informatik und Engineering

University of Bern

- Department of Clinical Research
- Department of Physiology
- Ruminants Clinic
- Department of Obstetrics and Gynecology
- ARTORG, Cardiovascular Engineering

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- Institute for Rehabilitation and Performance Technology
- Communication Design
- Health Section

Infrastructure

The modern infrastructure of the HuCE – BME Lab includes equipment for fast-prototyping like a 3D plotter, a tunable pulsed nanosecond laser, high-end measurement devices like LeCroy 20 GS/s oscilloscopes, mobile and wireless bio-signal acquisition devices (Clevemed, ADInstruments), a PCB and SMD workplace with a semi-automatic SMD assembly device, and a temperature and climate test chamber.

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