Biomedical Engineering Day 2025

Friday, 2. May 2025
Auditorium Ettore Rossi, Inselspital Bern, Switzerland

Program and Exhibition

Organisation
MSc Biomedical Engineering
ARTORG Center for Biomedical Engineering
Research, Universität Bern

Contact person:
Julia Spyra
Julia.Spyra@unibe.ch
+41 78 301 20 05

Biomedical Engineering Day 2025

Pictures taken at the BME Day 2025 may be used for further publications of the BME master's program or the ARTORG Center, University of Bern, such as websites and annual reports.
If you don't consent to the use of images showing you, please refer to the registration desk or inform us at bme.artorg@unibe.

Program

08.30   **Welcome & Introduction**

Nadia Mercader, Medical Faculty, University of Bern

Peter Brunner, School of Engineering and Computer Science, Bern University of Applied Sciences

08.45   **Biomedical Engineering Research & Education – An Update**

Philippe Zysset, ARTORG Center and MSc BME, University of Bern

08.55   **Master's Program Artificial Intelligence in Medicine – An Update**

Stavroula Mougiakakou, ARTORG Center and MSc AIM, University of Bern

09.05   **From Idea to Investment: Promoting Entrepreneurial Projects at UniBE**

Sébastien Hug, Innovation Office, University of Bern

09.15   **Lifelong learning advancing translational medicine – The sitem-insel school**

Antje Knopf, Director Sitem-School

09.25   **Presentation of Medical Technology Companies**

Zoë Despature, CSEM

Advancing Pediatric Cancer Care: Continuous Fever Monitoring and AI-Driven Infection Prediction

Richard Büchi and Léon Walt, Ziemer Ophthalmic Systems AG

Sharing the Ziemer Values

Jan Hermann, Cascination AG

Bringing Certainty to Medical Treatment Outcomes – Our Story

**Alexander Grundmann,** Johnson&Johnson

BME Graduates at Johnson & Johnson – an ideal match

Dieter Ulrich, Helbling Technik Bern AG

From your concept to the medical device – how to make it happen?

09.55   **Coffee Break / Visit Medtech Companies and Research Groups**

Participants may meet with representatives of Medtech companies at their booths and visit the research exhibits of the University of Bern and the Bern University of Applied Sciences.
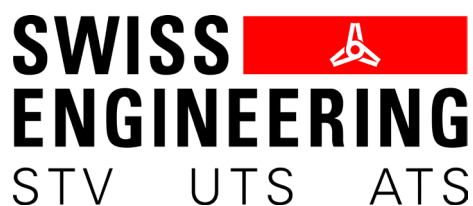
competence center for medical technology
ccmt

SWISS ENGINEERING
STV   UTS   ATS

Biomedical Engineering Club

Organisation
MSc Biomedical Engineering
ARTORG Center for Biomedical Engineering
Research, Universität Bern

Contact person:
Julia Spyra
Julia.Spyra@unibe.ch
+41 78 301 20 05

Biomedical Engineering Day 2025

10.40   **BME Club Awards (Alumni BME Master)**

Best Master's Thesis Abstract (rank 1, 2 and 3)

10.50   **Award Presentations**

Best Master's Thesis Award BME (sponsored by Swiss Engineering)

1. **Guillaume Cheng,** BME alumnus, University of Bern

The Influence of Fat Suppression on Parametric Mapping in MRI

2. **Alicia Feist,** BME alumnus, University of Bern

Preclinical Validation of Mechanoregulatory Fracture Healing Simulations

3. **Lukas Studer,** BME alumnus, University of Bern

Development of a High-Sensitivity Longitudinal Brain Metastases Tracking Algorithm

Best Master's Thesis Award AIM (sponsored by Swiss Engineering)

1. **Marta Herrera,** AIM alumnus, University of Bern

Advancing Glaucoma Progression Prediction with Machine Learning

2. **Zahra Hamedi,** AIM alumnus, University of Bern

AI-based Analysis of Abdominal Ultrasound Images to Support Medical Diagnosis in Emergency Departments

Best PhD Thesis Award (sponsored by CCMT)

1. **Matteo Frigelli,** ARTORG Center, University of Bern

Localized Corneal Stiffening for Refractive Correction: Experiments and Computational Analysis

2. **Mathieu Simon,** ARTORG Center, University of Bern

Multi-Scale Bone Morphology-Mechanical Property Relations in Ageing and Disease

3. **Hanspeter Hess,** Inselspital, Department of Orthopaedic Surgery and Traumatology

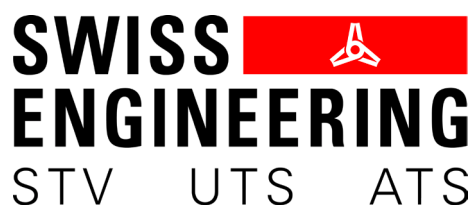*Three-dimensional Diagnosis for Rotator Cuff Tear using Deep Learning Algorithms*

11.45   **Live Surgery**

Levin Häni, Department of Neurosurgery, University Hospital Bern (Inselspital)
Moderator: **Andreas Raabe,** Department of Neurosurgery, University Hospital Bern (Inselspital)

12.45   **Lunch and Visit Medtech Companies and Research Groups**

14.00   **End of BME Day**

competence center for
medical technology
ccmt

SWISS ENGINEERING
STV UTS ATS

Biomedical
Engineering Club

Organisation
MSc Biomedical Engineering
ARTORG Center for Biomedical Engineering
Research, Universität Bern

Contact person:
Julia Spyra
Julia.Spyra@unibe.ch
+41 78 301 20 05

Biomedical Engineering Day 2025

## Industrial and Research Exhibitors

FOYER - Companies

1   **Haag-Streit AG**

2   **Ziemer Ophtalmic Systems AG**

3   **CSEM**

4   **PMS Process Management System Sàrl**

5   **Johnson & Johnson**

6   **Cascination AG**

7   **Swiss m4m Center**

8   **Helbling Technik Bern AG**

FOYER - Research Groups from the University of Bern

9   University of Bern, ARTORG Center, **Cardiovascular Engineering**

10   University of Bern, ARTORG Center, **Urogenital Engineering**

11   University of Bern, ARTORG Center, **Gerontechnology and Rehabilitation**

12   University of Bern, ARTORG Center, **Hearing Research Laboratory**

13   **MSc Artificial Intelligence** / **MSc Biomedical Engineering** / **MSc Precision Engineering**

13a   **BME Club** (MSc students and alumni)

14   University of Bern, ARTORG Center, **Organs-on-Chip Technology**

15   University of Bern, ARTORG Center, **Musculoskeletal Biomechanics**

COURSE ROOM 1 - Research Groups from the University of Bern

16   University of Bern, ARTORG Center, **Computational Bioengineering**

17   University of Bern, ARTORG Center, **AI in Medical Imaging Laboratory**

18   University of Bern, ARTORG Center, **Medical Image Analysis**

19   University of Bern, **Support Center for Advanced Neuroimaging (SCAN)** / **HORAO Research Group**

20   University of Bern, ARTORG Center, **AI in Health and Nutrition**

21   University of Bern, DBMR, **Tissue and Mechanobiology**
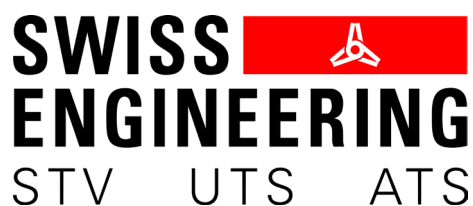
competence center for medical technology
ccmt

SWISS ENGINEERING
STV UTS ATS

Biomedical Engineering Club

Organisation
MSc Biomedical Engineering
ARTORG Center for Biomedical Engineering
Research, Universität Bern

Contact person:
Julia Spyra
Julia.Spyra@unibe.ch
+41 78 301 20 05

Biomedical Engineering Day 2025

**COURSE ROOM 1** (cont.) **- Research Groups from the University of Bern**

22   University of Bern, UDEM & Diabetes Center Berne, **Machine Learning in Medicine Lab**

23   University of Bern, UDEM & Diabetes Center Berne, **PrecisionLab**

24   University of Bern, UDEM & Diabetes Center Berne, **Sensing & Monitoring Lab**

25   University of Bern, ARTORG Center, **Neuro Robotics**

26   University of Bern, ARTORG Center, **Image-Guided Therapy**

COURSE ROOM 2 - Research Groups from the Bern University of Applied Sciences

27   Bern University of Applied Sciences, Institute for Human Centered Engineering, **microLab**

28   Bern University of Applied Sciences, Institute for Human Centered Engineering, **microLab**

29   Bern University of Applied Sciences, Institute for Human Centered Engineering, **bmeLab**

30   Bern University of Applied Sciences, Institute for Human Centered Engineering, **bmeLab**

COURSE ROOM 3 - Research Groups from the Bern University of Applied Sciences

31   Bern University of Applied Sciences, Institute for Human Centered Engineering, **rehaLab**

32   Bern University of Applied Sciences, Institute for Human Centered Engineering, **roboticsLab**

33   Bern University of Applied Sciences, Institute for Human Centered Engineering, **optoLab**

34   Bern University of Applied Sciences, Institute for Human Centered Engineering, **sensoLab**
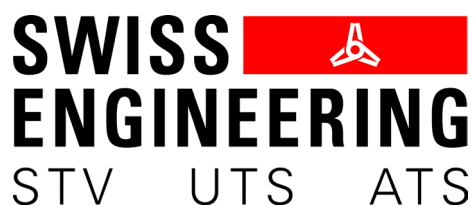
competence center for
medical technology
ccmt

SWISS ENGINEERING
STV UTS ATS

Biomedical
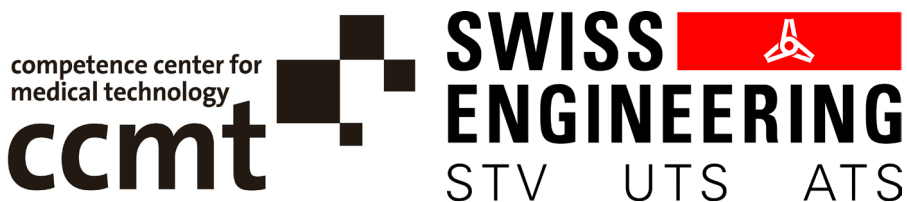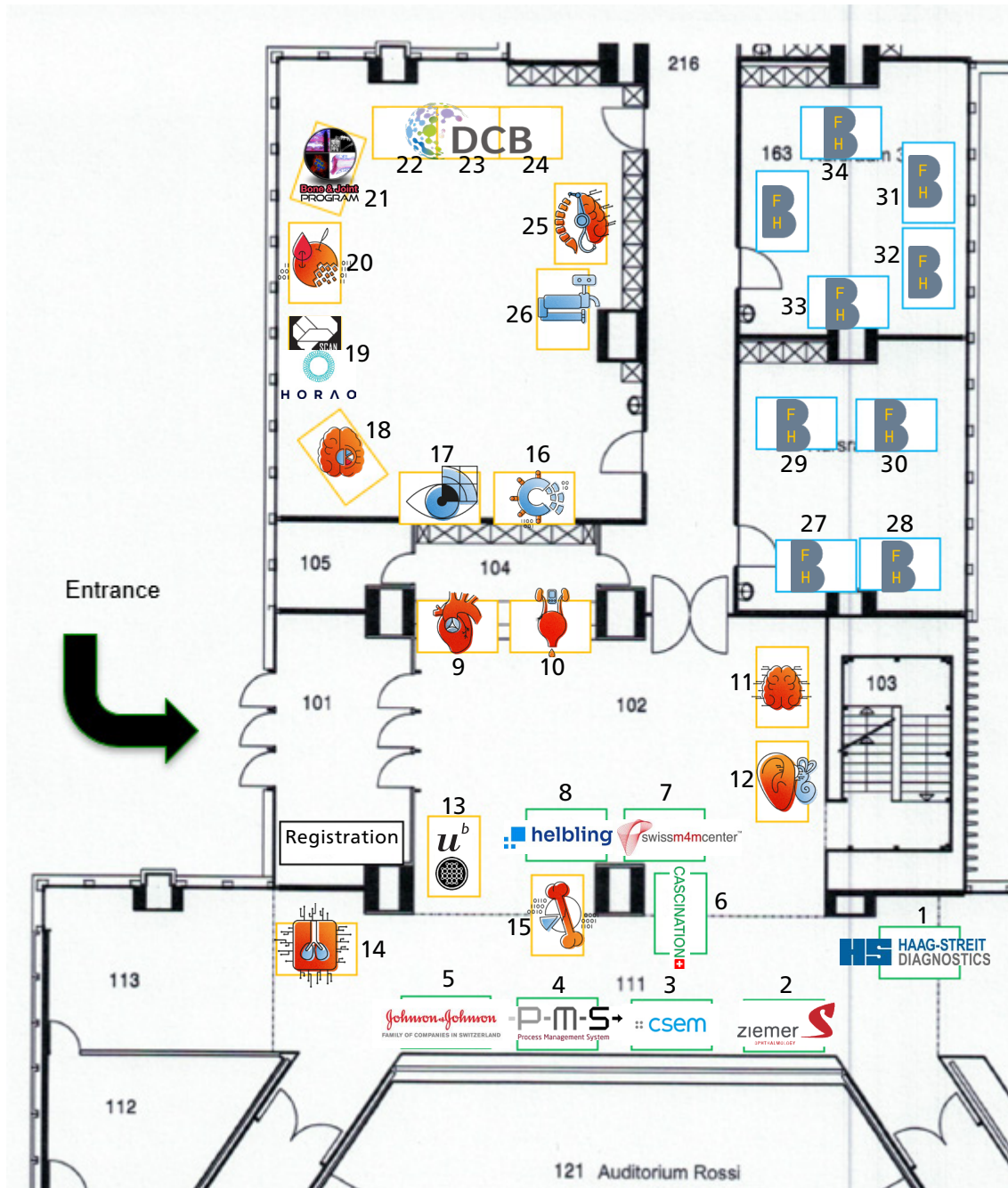Engineering Club

Organisation
MSc Biomedical Engineering
ARTORG Center for Biomedical Engineering
Research, Universität Bern

Contact person:
Julia Spyra
Julia.Spyra@unibe.ch
+41 78 301 20 05

Biomedical Engineering Day 2025

Exhibition map

competence center for medical technology
ccmt

SWISS ENGINEERING
STV UTS ATS

Biomedical Engineering Club

Organisation
MSc Biomedical Engineering
ARTORG Center for Biomedical Engineering
Research, Universität Bern

Contact person:
Julia Spyra
Julia.Spyra@unibe.ch
+41 78 301 20 05