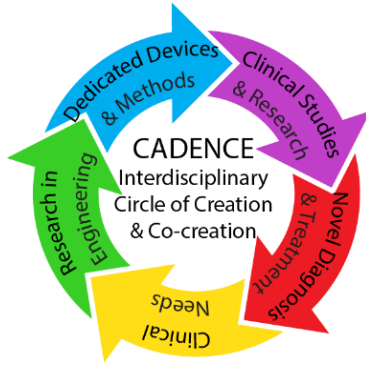


University  
of Basel

Department of  
Biomedical Engineering



# Core Facility CADENCE

For Clinical Biomechanics  
& Ergonomics Engineering

**CADENCE combines the expertise and disciplines of robotics, functional biomechanics, musculoskeletal modelling, virtual reality, orthopaedics and neuro-orthopaedics, paediatrics, spine surgery, biochemistry, and radiology.**

The CADENCE Research Unit develops novel systems and methods for diagnosis, outcome measurement, treatment and rehabilitation of pathologies and conditions of the neuro-musculoskeletal system. The CADENCE Research Unit hosts the new CADENCE Core Facility at the Switzerland Innovation Park.

The CADENCE Core Facility allows users to focus on (collaborative) research projects by combining the multidisciplinary expertise and utilizing tools such as marker-based, markerless and IMU-based motion capture, dynamic body weight support, force testing, electromyography, muscle strength testing, and more within the same research space. The equipment of the Core Facility was funded by a SNF R'Equip matching grant and the University of Basel.

Both academic and industry partners are welcome to use the CADENCE Core Facility and draw from the expertise of the Research Unit.

*Fig. 1. The CADENCE Interdisciplinary Circle of Creation & Co-creation  
Fig. 2. View of the Core Facility CADENCE with user walking in the FLOAT (dynamic body weight support)  
Fig. 3. Measuring biomechanical forces in the knee with the HUMAN NORM.*

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