

**Workshop/Tutorial title:** Real-world digital mobility assessment

## Organizers

Andrea Cereatti, Politecnico di Torino  
Silvia Del Din, Newcastle University  
Felix Kluge, Friedrich-Alexander University Erlangen-Nürnberg

## Short Description

Mobility is impaired in various chronic health conditions. The ongoing development of digital measures for mobility assessment using wearable inertial sensor systems aims at capturing real-world walking performance. This enables monitoring of health status, disease progression, and evaluation of interventions in a patient's ecological environment. However, walking assessment in non-standardized environments poses challenges in terms of technology, usability, and validity of digital measures that can be used for disease stage quantification with the ultimate goal of regulatory approval.

## Contents

We will focus on current research topics ranging from the assessment of real-world walking using inertial sensor systems, usability of those systems, to perspectives on their application for mobility monitoring. We will bring together technical, clinical, and regulatory experts to discuss recent advances in the field of real-world mobility analytics and provide a forum for academia, industry, clinicians, and other stakeholders to exchange ideas and promote future collaborations.

## CVs of the Organizers

**Andrea Cereatti** has earned the M.S. degree in mechanical engineering and a Ph.D. in Bioengineering in 2006. He is currently Associate Professor in Bioengineering at the Politecnico di Torino (Italy). He served as board of directors of the Italian Society of Clinical Movement Analysis and of the 3-D Analysis of Human Movement Technical Group of the ISB. **Silvia Del Din** is a NUAAct Fellow at Newcastle University. Her translational research interests are in digital health: using wearable technology and developing analytics for remote monitoring/management in ageing and neurodegenerative diseases. **Felix Kluge** is junior research group leader in the field of digital health and gait analysis. He and his group develop methods for real-world walking quantification for various clinical applications based on unobtrusive sensor systems

**\*Note:** Please add 1-2 pictures related to the workshop topic

