



**Nordic Seminar on Technical Measurements of
Physical Activity & Sedentary Behaviour**

4.-6.10.2023, Turku

PROGRAMME

WEDNESDAY 4th October 2023 Room: *Medisiina D, Säätiö hall (D1024)*

13.30 Registration

14.00 **Pre-seminar workshop:** Processing accelerometer and GPS data, introduction to HABITUS system
Prof. Jasper Schipperijn, University of Southern Denmark, Odense, Denmark

In this 2-hour workshop prof. Jasper Schipperijn from the University of Southern Denmark will introduce HABITUS (Human Activity Behavior Identification Tool and data Unification System), which is an online service for processing physical activity behaviour data collected with wearable devices. More information on HABITUS:
<https://www.sdu.dk/en/habitus>

16.00 Free time

18.00 City reception / Get-together
Venue: Turku City Hall, Aurakatu 2, Turku

THURSDAY 5th October 2023 Room: *Medisiina D, Säätiö hall (D1024)*

9.00 Registration and coffee

9.30 Welcome and opening words
Prof. Sari Stenholm, University of Turku, Finland

Session 1: Accelerometers in epidemiological studies (Chair prof. Andreas Holtermann)

9.40 The journey of the methodologist riding on the accelerometry wild horse
Ass. prof. Daniel Arvidsson, University of Gothenburg, Sweden

10.10 The latest developments of The ProPASS consortium
Ass. prof. Vegar Rangul, Norwegian University of Science and Technology, Trondheim, Norway

10.30 Coffee break



- 10.50 Population-based data and some of the recent methodological developments
MSc Henri Vähä-Ypyä and Dr. Pauliina Husu, UKK Institute, Tampere, Finland
- 11.10 Physical activity among young children
Dr. Tuija Tammelin and MSc Janne Kulmala, Jamk University of Applied Sciences,
Jyväskylä, Finland
- 11.30 Session 1 discussion
- 11.40 Lunch

Session 2: 24-h movement behaviors (Chair Ass. prof. Daniel Arvidsson)

- 12.45 Sedentary and physical activity behavior profiling with machine learning and deep
learning
Ass. prof. Vahid Farrahi, TU Dortmund University, Germany & Postdoctoral fellow,
University of Oulu, Finland
- 13.05 Changes in 24-hour movement behaviors during retirement transition and
associations with health outcomes
Dr. Kristin Suorsa, University of Turku, Finland
- 13.25 Developing Machine Learning Models to Classify Sleep-Wake Time
Prof. Kerstin Bach, Norwegian University of Science and Technology, Trondheim,
Norway
- 13.55 Sleep identification from thigh worn accelerometers with ActiPASS- now with
improved precision
Dr. Peter Johansson, Uppsala University, Sweden
- 14.15 Session 2 discussion
- 14.25 Coffee break

**Session 3: Early career researchers' sessions (Chairs Prof. Sari Stenholm, Dr. Tuija Leskinen
& Dr. Kristin Suorsa), Rooms *Medisiina D, Säätö hall (D1024), Lauren 1 hall (D1017) & Blokki
2 (D1054)***

- 15.00 Short presentations by early career researchers
- 16:30 Closing of the day
- 18.30 Social gathering by the Finnish Swan, Linnankatu 72, Turku
- 19.00 Dinner at Restaurant Göran, Linnankatu 72, Turku



FRIDAY 6th October 2023 Room: Medisiina D, Säätö hall (D1024)

Session 4: Applications of activity behavior research (Chair Ass. prof. Vahid Farrahi)

- 8.45 Using GPS and accelerometers to evaluate the behavioral effect of changes to the built environment
Prof. Jasper Schipperijn, University of Southern Denmark, Odense, Denmark
- 9.05 Gait characteristics in GPS-determined free-living level outdoor walking bouts and laboratory-assessed 6-min walk: concordance between "preferred" and free-living gait among older adults
Dr. Timo Rantalainen, University of Jyväskylä, Finland
- 9.25 Accelerometer measurements: from research to practice
Prof. Andreas Holtermann and MSc Tonje Ludvigsen, The National Research Centre for the Working Environment, Copenhagen, Denmark
- 9.45 Evaluating an accelerometry based system to measure posture and movements in children (*virtual presentation*)
Dr. Charlotte Lund Rasmussen, Curtin School of Allied Health, Curtin University, Perth, Australia
- 10.00 SENS motion - Accelerometry based system for large scale automated data collection and physical activity interventions
Co-founder and CEO, M. Sc. Robotics Kasper Lykkegaard, SENS Innovation ApS
- 10.15 Session 4 discussion
- 10.25 Coffee break

Session 5: Accelerometers and other sensors (Chair prof. Sari Stenholm)

- 10.45 Characterising children's daily behaviour using different accelerometry and muscle activity metrics
Dr. Arto Pesola, XAMK University of Applied Sciences, Mikkeli, Finland
- 11.05 Can thigh worn accelerometers be used to measure exposure to whole body vibrations?
Dr. Pasan Hettiarachchi, Uppsala University, Sweden
- 11.25 Combined heart rate and acceleration sensing to define absolute and relative intensity of activity in older adults
Dr. Laura Karavirta, University of Jyväskylä, Finland
- 11.45 Session 5 discussion
- 11.55 Closing words and future meeting
Prof. Sari Stenholm, University of Turku, Finland
- 12.05 Lunch