The 7th Nordic Seminar on Technical Measurements of Physical Activity & Sedentary Behaviour, Uppsala 19-21 March 2025 (PASB)

Conference Program

WEDNESDAY 19th March 2025

Venue: Occupational and Environmental Medicine, Room: Eken

Pre-conference workshop: **Learn how to use ActiPASS and Motus system**

13:30-14:00 Registration

14:00-17:00 Workshop

THURSDAY 20th March 2025
Venue: Humanistiska Teatern (Humanities Theatre), Room: 22-0031

08.30 Registration and coffee

09.00 Welcome and opening words

Magnus Svartengren; Occupational and Environmental Medicine, Department of Medical Sciences, Uppsala University, Uppsala
Jennie Jackson; Department of Occupational Health, Psychology and Sports Sciences, University of Gävle, Gävle

09:15 Keynote 1

'Just right' 24h physical behaviors – where do we go from here?
Andreas Holtermann; Professor, National Research Centre for the Working Environment, Copenhagen
Svend Erik Mathiassen; Senior Professor, University of Gävle

09:45 Leg stretch

09:50-11:45 Session 1: Development of accelerometry (Chair Jennie Jackson)

09:50 The story of accelerometry – Long way for establishing the valid and reliable standard method
Daniel Arvidsson, University of Gothenburg, Sweden

10:05 SENS motion – Accelerometry based system for large scale automated data collection and physical activity interventions
Kasper Lykkegaard, SENS Innovation ApS, Copenhagen, Denmark

10:20-10:40 Coffee break

10:40 Comparison of sedentary time calculated from count- and raw accelerometer data: The Tromsø Study,
Marc Weitz, Department of Computer Science, The Arctic University of Norway, Tromsø, Norway

10:55 To which extent does the sampling strategy influence the accuracy of group differences in 24-hour physical behavior compositions?
Luiz Augusto Brusaca, National Research Centre for the Working Environment, Copenhagen, Denmark; Department of Physical Therapy, Federal University of São Carlos, São Paulo, Brazil

11.10 When Accelerometers aren't enough: A Guide to GPS data collection
Josef Heidler, Department of Sport Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark

11:25 Session 1 discussion

11:45-12:45 Lunch

12:45-13:15 Poster session (see presenters below)

13:15 Keynote 2

A balancing act: Addressing physical overload and enhancing recovery in blue-collar workers using wearable technology and machine learning models
Elin Ekblom Bak; Professor, The Swedish School of Sport and Health Sciences, Stockholm

13:45-15:00 Session 2: Accelerometry in different occupations (Chair David Hallman)

13:45 Physical activity in hospital workers – first results from the Study of New Technology and Health among Hospital employees (STUNTH)
Roar Munkeby Fenne, Department of Neuromedicine and Movement Science, Faculty of Medicine and Health Sciences, Norwegian University of Science and Technology, NTNU, Trondheim, Norway

14:00 Leg stretch

14:05 Patterns of physical behaviours among Swedish ambulance personnel, measurements across three different work shifts and subsequent after-work periods
Anna M. Johnsen, Department of Nursing, School of Health and Welfare, Jönköping University, Sweden.

14:20 To which extent do eldercare workers born in and outside Sweden comply with EU-OSHA recommendations for physical activity at work?
Leticia B Januario, Department of Occupational Health, Psychology and Sports Sciences, University of Gävle, Sweden

14:35 What determines necessity-based physical behaviours at work for childcare workers?
Christian Tolstrup Wester (presented by Luiz Augusto Brusaca), National Research Centre for the Working Environment, Copenhagen, Denmark

14:50 Session 2 discussion

15:00-15:20 Coffee break

15:20 Keynote 3

The Vision of Large-Scale, Accurate, and Feasible Measurement of Physical Behaviors
Nidhi Gupta; Senior Researcher, National Research Centre for the Working Environment, Copenhagen

15:50-17:00 Session 3: Development of accelerometry (Chair Pasan Hettiarachchi)

15:50 Improving thigh-worn accelerometry estimates of physical activity intensity using slope-based analysis by using heart rate reserve as a criterion
Johan Rydgård, Occupational and Environmental Medicine, Uppsala University Hospital, Sweden

16:05 Leg stretch

16:10 Developing a Method for Whole-Body Vibration Exposure Detection Using Thigh-Worn Accelerometers: Preliminary Findings
Adrian Gomez, Department of Medical Sciences, Occupational and Environmental Medicine, Uppsala University, Sweden

16:25 Calibration of the Saltin-Grimby Physical Activity Level Scale into accelerometer-based leisure time physical activity compositions
Melker S. Johansson, Center for Muscle and Joint Health, Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Denmark; Research Unit of General Practice, Department of Public Health, University of Southern Denmark, Denmark

16:40 Session 3 and day 1 summarizing discussion

17:15 Guided walk (preliminary)

18:00 Diner at "Nedre Slotts", Nedre Slottsgatan 6, Uppsala

FRIDAY 21st March 2025

Venue: Humanistiska Teatern (Humanities Theatre), Room: 22-0031

08:40 Keynote 4

From data to discovery: Lessons learned from device-measured sleep and physical activity in the HUNT Study

Paul Jarle Mork; Professor, Norwegian University of Science and Technology, Trondheim

09.10 Leg stretch

09:15 Keynote 5

An Ergonomist's Wish List for Relevant Biomechanical Measurements

Jens Wahlström; Associate Professor, Umeå University

09.45 Leg stretch

09:50-11:45 Session 4: Accelerometry and health (Chair Teresia Nyman)

09:50 Physical activity behavior during worktime and well-being after work among hybrid workers
Miika Tuominen, Department of Public Health, University of Turku and Turku University Hospital, Turku, Finland; Centre for Population Health Research, University of Turku and Turku University Hospital, Turku, Finland

10.05 The "Physical Activity Paradox" and register-based musculoskeletal pain-relief prescribed medication among blue-collar workers
Stavros Kyriakidis, National Research Centre for the Working Environment, Copenhagen, Denmark; Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense

10.20 Session 4 Discussion (a)

10:30-10:45 Coffee break

10.45 Step-based Metrics Retain Most Health-related Information from Accelerometer Data in Middle-aged Adults
Jonatan Fridolfsson, Department of Molecular and Clinical Medicine, Sahlgrenska Academy, University of Gothenburg/Sahlgrenska University Hospital, Gothenburg, Sweden

11.00 Velocity trends in free-living sit-to-stand transitions and their association with fatigue and physical limitations among community-dwelling older adults
Antti Löppönen, Faculty of Sport and Health Sciences and Gerontology Research Center, University of Jyväskylä, Jyväskylä, Finland

11.15 Session 4 discussion (b) and summarizing discussion

11.45-12:00 Closure of the seminar

Pasan Hettiarachchi; Occupational and Environmental Medicine, Department of Medical Sciences, Uppsala University, Uppsala
David Hallman; Department of Occupational Health, Psychology and Sports Sciences, University of Gävle, Gävle

12:00 Lunch (or take away)

POSTER Presentations

1. Sitting time during work and leisure and associations with cognitive dysfunction,
   Frida Bergman, Department of Public Health and Clinical Medicine, Umeå University

2. Exploring the interplay of internalized weight stigma and physical activity in women with overweight seeking pregnancy: Baseline findings from the PRE-STORK trial,
   Julie Hagstrøm Danielsen, Clinical Research, Steno Diabetes Center Copenhagen, Herlev Hospital, Herlev, Denmark

3. Effects on Physical Behaviors of a Workplace Intervention Aiming at Promoting Recovery in Office Workers with Flexible Work,
   Johanna Edvinsson, Department of Occupational Health, Psychology and Sports Sciences, Faculty of Health and Occupational Studies, University of Gävle, Gävle, Sweden

4. Association between Sleep, Sedentary Behaviours and Physical Activity with Risk of Chronic Low Back Pain: The HUNT Study, Norway,
   Rayane Haddadj, Department of Public Health and Nursing, Norwegian University of Science and Technology, Trondheim, Norway

5. More light physical activity in absolute and relative terms is associated with better cardiorespiratory fitness, perceived health, and mental quality of life,
   Pauliina Husu, The UKK Institute for Health Promotion Research, Tampere, Finland

6. The effect of physical activity bout duration on different indicators of intensity during prolonged walking in older people,
   Laura Karavirta, Gerontology research center and Faculty of Sport and Health Sciences, University of Jyväskylä, Jyväskylä, Finland

7. Physical activity and motor skills in Finnish 4-6-years old boys and girls: Cross-sectional associations using compositional analyses,
   Janne Kulmala, Likes, School of Health and Social Studies, Jamk University of Applied Sciences, Jyväskylä, Finland; University of Jyväskylä, Finland

8. Worktime physical activity among hybrid workers,
   Tuija Leskinen, University of Turku and Turku University Hospital, Finland; Centre for Population Health Research, University of Turku and Turku University Hospital, Finland

9. Temporal patterns of time on feet and sitting in homecare and nursing home workers
   Nestor Lögdal, Department of Occupational Health, Psychology and Sports Sciences, University of Gävle, Gävle, Sweden

10. Human Observations No More: Measuring Playground Use with Computer Vision,
    Jasper Schipperijn, Department of Sport Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark

11. Associations between leisure and work time activity behavior and 24 h ambulatory blood pressure among aging workers,
    Jooa Norha, Turku PET Centre, University of Turku and Turku University Hospital, Turku, Finland

12. Validation and comparative study of Motus's (alias SurPASS) performance in identifying physical activity and sedentary behaviour using different sampling frequencies,
    Tonje Pedersen Ludvigsen, National Research Centre for the Working Environment, Copenhagen, Denmark

13. Differences in prolonged walking performance between older people reporting difficulty, modifications or no difficulty in walking 2 km distance,
    Heli Peltomaa, Gerontology research center (GEREC), Faculty of Sport and Health Sciences, University of Jyväskylä, Jyväskylä, Finland

14. Gait variability outdoors and association with life-space mobility among community-dwelling older adults
    Merja Rantakokko, University of Jyväskylä, Faculty of Sport and Health Sciences, Gerontology Research Center, Jyväskylä, Finland; The Wellbeing services county of Central Finland, Jyväskylä, Finland; JAMK University of Applied Sciences, Institute of Rehabilitation, Jyväskylä, Finland

15. Automated Detection of Sit-to-Stand Transitions Using Thigh-Worn Accelerometers in the SCAPIS2 Cohort: A Work in Progress
    Johan Sleman, Occupational and Environmental Medicine, Uppsala University Hospital, Uppsala, Sweden

16. Associations between knee pain and accelerometer measured knee-loading physical activities at work and leisure – a cross-sectional study
    Margareta Törnblom, Department of Clinical Sciences, Section of Rheumatology, Lund University, Lund, Sweden.; Spenshult Research and Development Centre, Halmstad, Sweden

17. Higher maximal oxygen consumption protects nurses from physical strain
    Henri Vähä-Ypyä, The UKK Institute for Health Promotion Research, Tampere, Finland

18. Validation of sleep-wake estimation from thigh-worn accelerometers against polysomnography in adolescents with and without mental disorders
    Martin Wilms, CORE – Copenhagen Research Center for Mental Health, Mental Health Center Copenhagen, Mental Health Services in the Capital Region of Denmark