

How to use movement analysis in research?

Date: 23 February 2024

Time: 09:00 – 15:30

Address: Gävlegatan 55, 171 64, Solna



uMOVE is a core facility that offers support for planning, data collection and analysis with various modern motion analysis systems - from lab-based measurements to monitoring activities in daily life and the impact of cognitive functions and emotions on movement control.

The Tissue and Motion network was established in 2008 at the Karolinska Institutet. The mission of the network is to facilitate and stimulate new alliances, research constellations and interdisciplinary collaborations, especially for junior researchers, and to integrate clinical and pre-clinical research.

Aim

- To introduce uMOVE to the Tissue and Motion network.
- Show opportunities for collaboration between different KI institutions and researchers outside KI.
- Show 'movement analysis' as an objective outcome.

Target groups

PhD students, Teachers, Clinicians, Postdocs, and Researchers working within the field of rehabilitation medicine, movement, and behavioral sciences within and outside of KI. A maximum of 25 participants.

Information:

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Preliminary Schedule:

9:00 – 09:30: Welcome and Introduction to uMOVE

- Prof. Erika Franzén, Director of uMOVE

09:30 – 10:00: Movement Analysis in rehabilitation science and research

- Associate Prof. Wim Grooten, Advisory board to uMOVE

10:00 – 10:30: Introduction to function Near Infrared Spectroscopy (fNIRS)

- Dr Lucian Bezuidenhout, Lab manager of uMOVE

10:30 – 10:50: Coffee break

Presentations from PhD students:

10:50 – 11:10: Alexander Kvist

Title: Understanding complex walking in Parkinson's disease, from gait analysis to neuroimaging

11:10 – 11:30: Jenny Sedhed

Title: To be decided

11:30 – 11:50: To be announced.

12:00 -13:00: Lunch

13:00 – 14:15: Live demonstration of uMOVE movement systems (APDM, fNIRS, gaitrite, accelerometry)

14:15 -14:30: Coffee break

14:30 -15:30: Presentation from invited guest

Roman Kuster: Industrial application of movement sciences

Speakers



Erika Franzén

Erika Franzen, professor in Physical Therapy has a joint position between KI and Karolinska Hospital. Her research area is on balance (postural control) and motor control in elderly and individuals with neurological disorders (>110 publications).



Wim Grooten

Docent (PhD) in physical therapy and a master in Movement science has published >65 papers in the field of biomechanics, motor control and musculoskeletal pain from a biopsychosocial perspective.



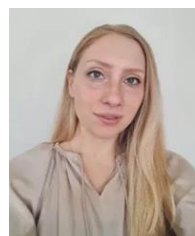
Lucian Bezuidenhout

A master's degree in renewable energy and a PhD in applied physics with expertise in transdisciplinary research, digital signal processing, and the objective assessment of physical activity in different population groups.



Alexander Kvist

A degree in medical engineering from KTH in Stockholm and is currently a PhD student at Karolinska Institutet. There he studies complex walking in Parkinson's disease, incorporating methods from neuroimaging to gait analysis to psychology.



Jenny Sedhed

A master's degree in physiotherapy and is currently a PhD student at Karolinska Institutet. The project involves investigating motor-cognitive training at home using eHealth for people with Parkinson's disease.



Roman Kuster

A PhD and a master's degree in movement sciences, is a specialist in product development for biomedicine, biomechanics and occupational health and currently working for Roche (Switzerland) as a movement analyst.