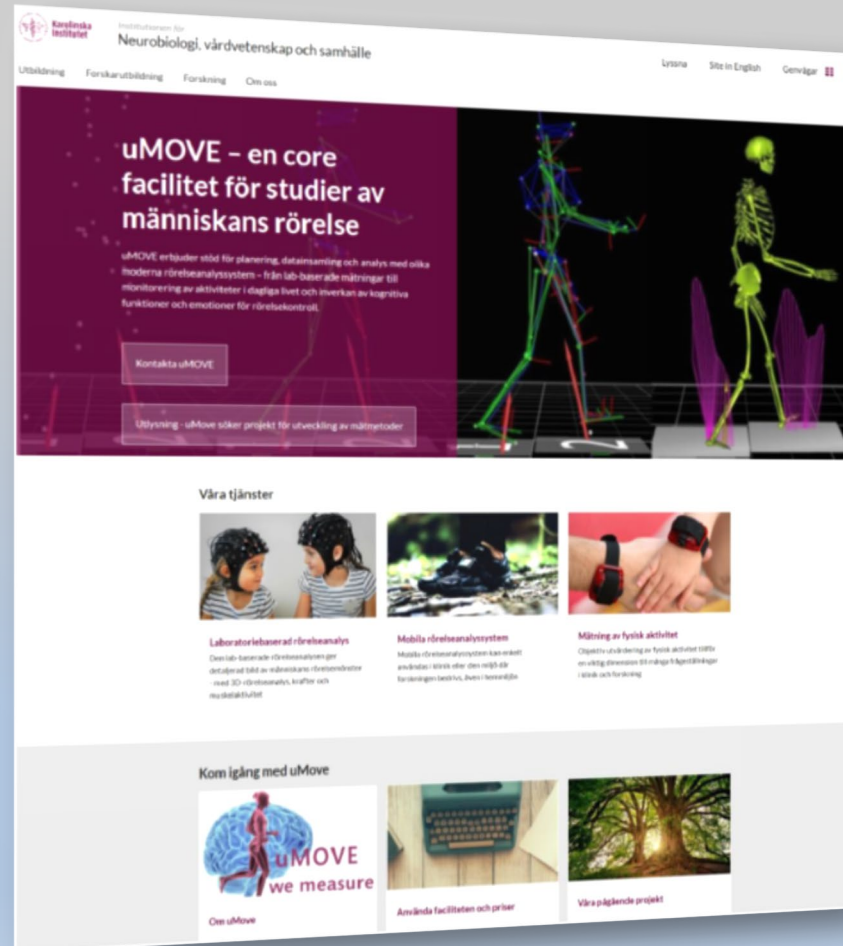
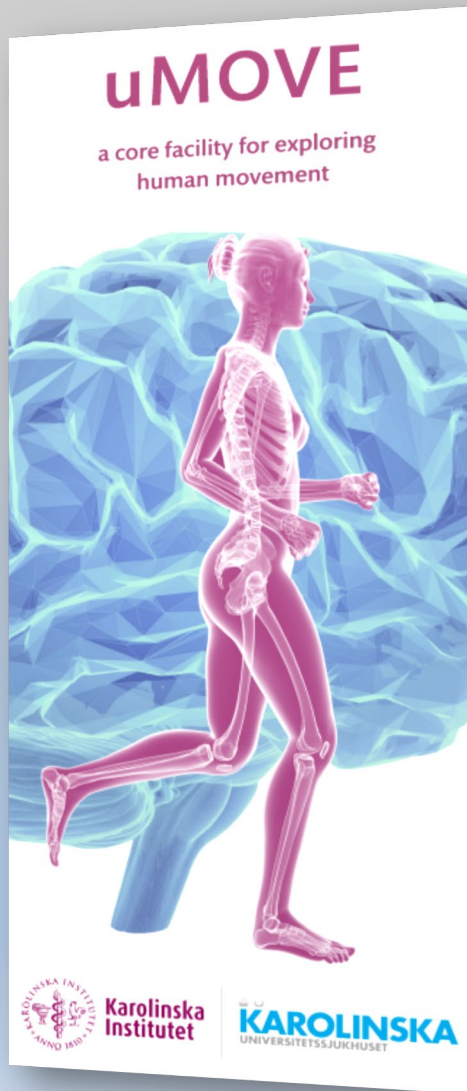


uMOVE – a biobehavioural health care centre for human movement



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58 at KI

By core facility we (KI) mean expensive equipment, resources, databases, installations or such, which has a defined form of operation and is not limited to an exclusive group of users.

Core Facilities A-Z

Core facilities for research

[Animal Behavior Core Facility \(ABCF\)](#)
[Bioinformatics and Expression Analysis \(BEA\)](#)
[Biomedicum Flow Cytometry Core Facility](#)
[Biomedicum Imaging Core \(BIC\)](#)
[Biosafety Level 3 Facility in Biomedicum](#)
[Biostatistics Core Facility](#)
[Brain Bank](#)
[Cell Therapy Center Karolinska and Vecura](#)
[Chemical Proteomics Core Facility](#)
[Chemical Proteomics and Proteogenomics](#)
[Clinical Proteomics Mass Spectrometry Facility](#)
[Clinical Research Center \(CRF\)](#)
[Comparative Medicine](#)
[Cryo Electron Microscopy Facility](#)
[e-Health Core Facility](#)
[Electron Microscopy Unit \(EmU\)](#)
[Electron Tomography Core Facility](#)
[Eukaryotic Single Cell Genomics Facility](#)
[Flow Cytometry Facility Medi](#)
[Genomic Medicine Center Karolinska \(GMCK\)](#)
[Germ-free Research Core Facility](#)
[Healthcare Research Biobank Karolinska](#)
[High Throughput Genome Engineering \(HTGE\)](#)
[Histological Core Facility - Histo-core](#)
[Import Portal KIMM](#)
[Infingene](#)
[IPS Core Facility](#)
[IVIS-SpectrumCT In Vivo Imaging Core Laboratory](#)
[Karolinska Cell Therapy Center and Vecura](#)
[Karolinska Trial Alliance \(KTA\)](#)
[Karolinska University Laboratory](#)
[KERIC - Karolinska Experimental Research and Imaging Centre](#)
[KI Biobank](#)
[KI Gene - Genetic Analysis at CMM](#)
[KIMM - Karolinska Institutet Mouse Models](#)
[Laboratories for Chemical Biology](#)
[LifeGene](#)
[Live Cell Imaging Core Facility](#)
[Morphological Phenotype Analysis \(FENO\)](#)
[Mouse Clinic KIMM](#)
[MR Center KI/SLL](#)
[Murine Stem Cells Unit](#)
[Mutation Analysis Facility \(MAF\)](#)
[National E-infrastructure for Aging Research \(NEAR\)](#)
[National Mass Cytometry Facility](#)
[NatMEG - National Facility for Magnetoencephalography](#)
[OrganoidCellStem CMM](#)
[Preclinical Imaging Facility \(PIF\)](#)
[Preclinical Laboratory Portal](#)
[Protein Science Facility \(PSF\)](#)
[Proteomics Biomedicum](#)
[Quality Registry Centre Stockholm \(QRC\)](#)
[SciLifeLab](#)
[Swedish Twin Registry \(STR\)](#)
[Transgene Technologies Center Karolinska \(KCTT\)](#)
[VirusTech Core Facility](#)
[uMOVE](#)
[Zebrafish Core Facility](#)

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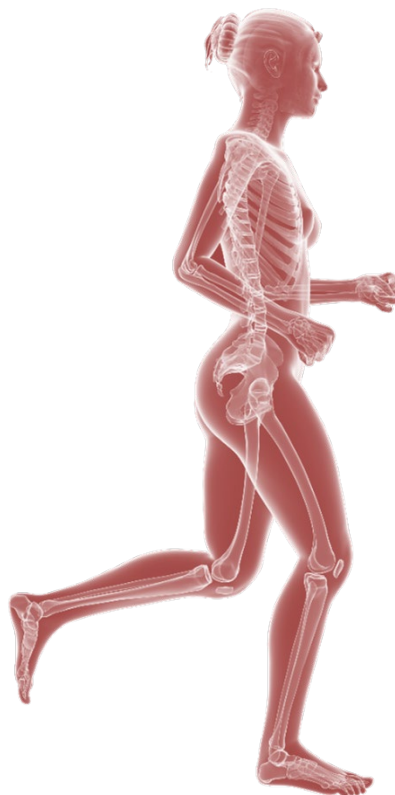
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MOVEMENT



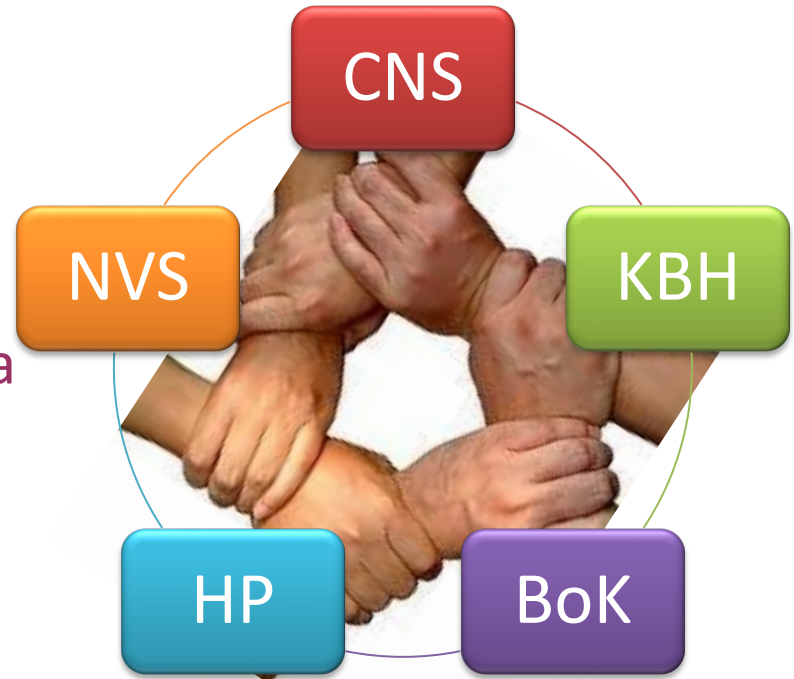
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- Collaboration between Karolinska Institutet and Karolinska University Hospital
- Supported by grants from the Strategic Research Area Health Care Science (SFO-V, 2018-2020) to develop an infrastructure offering services to health care science researchers

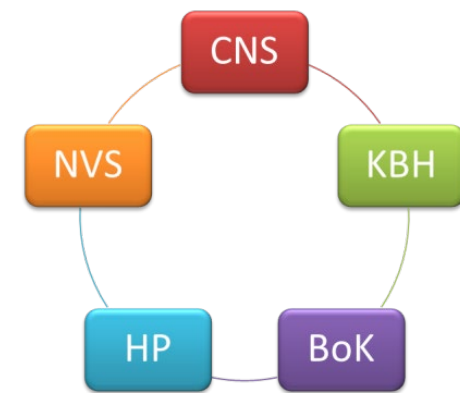




Aim

- To provide new knowledge and evaluation methods of human movement in interplay with psychological aspects
- To provide a state of the art platform for movement analysis for assessment of movement and behavior





Steering
group

Scientific
Director

Facility
Manager

Research
assistant

Technician

Senior Lab
Manager



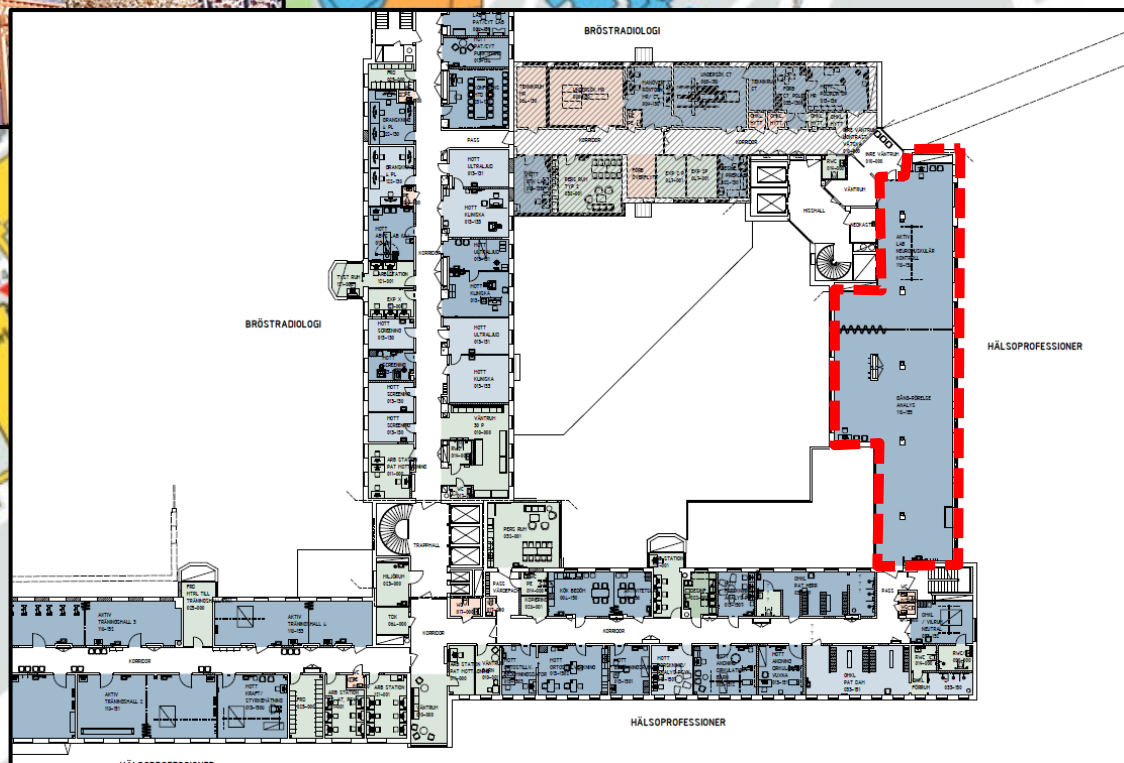
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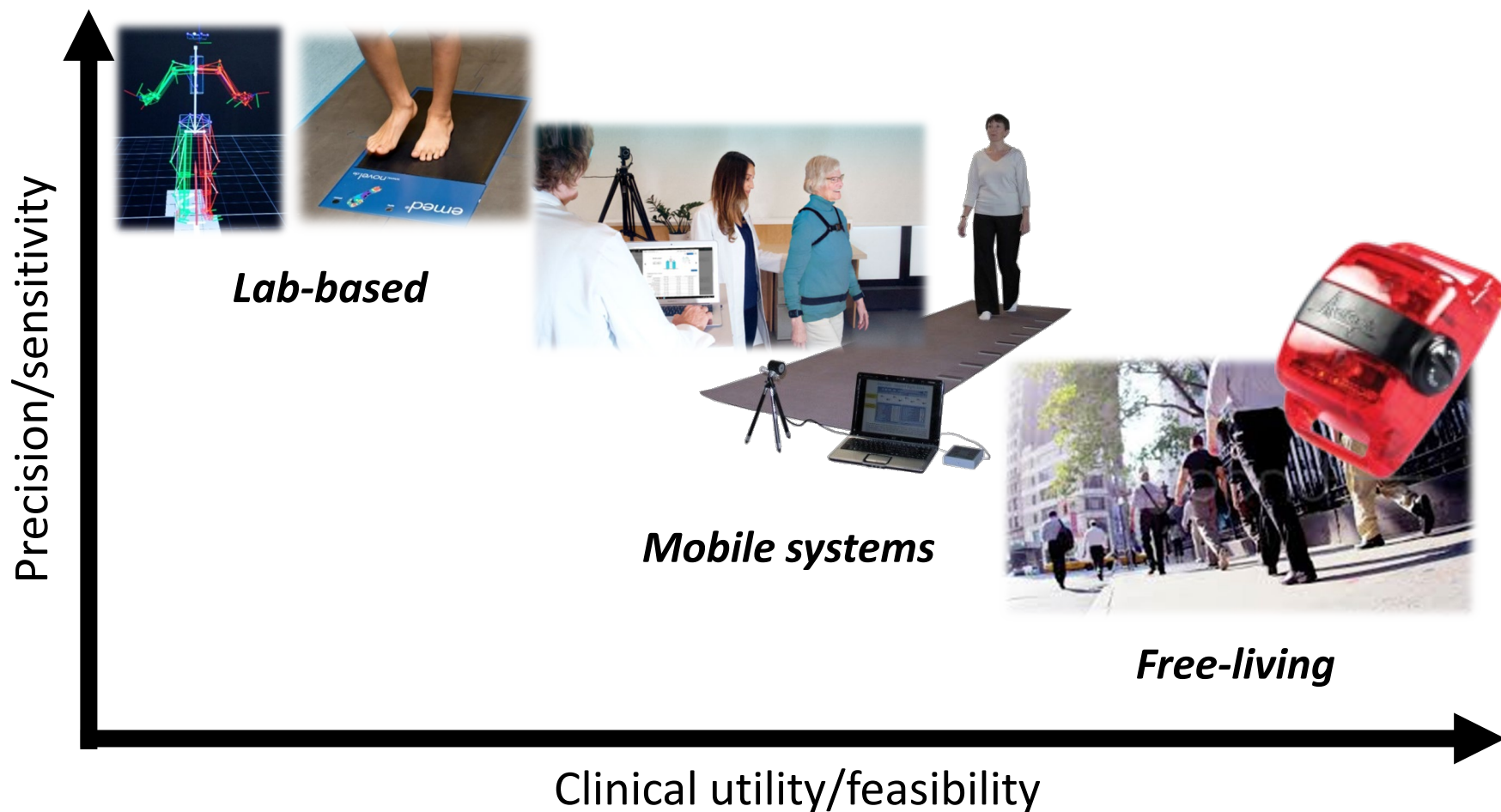
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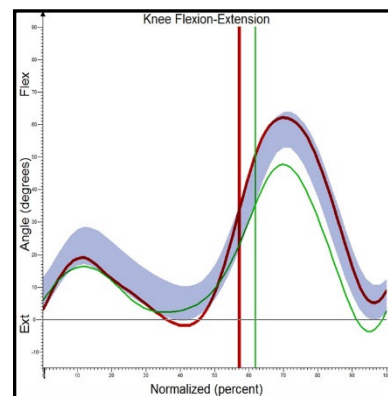
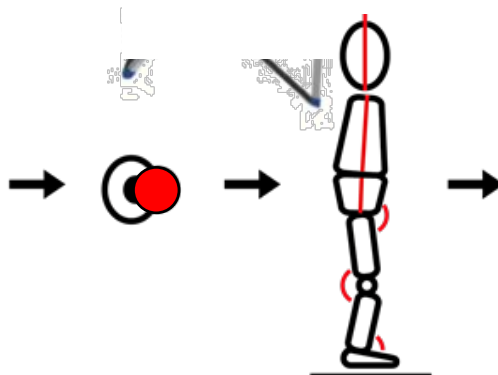
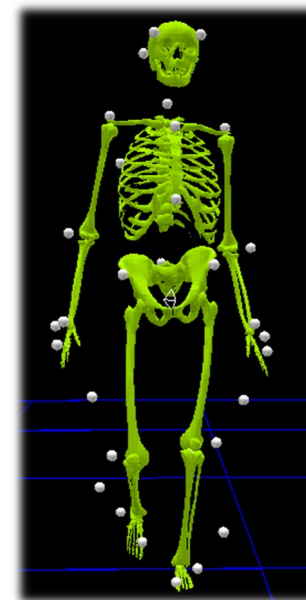
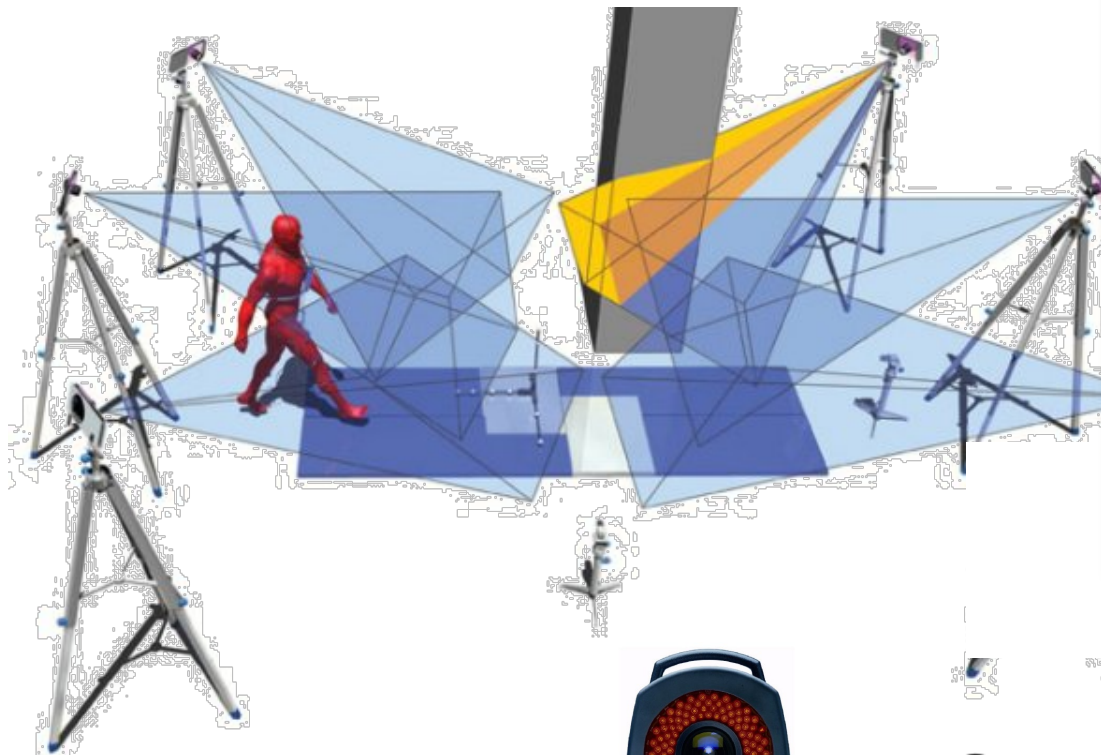
Where?



Methods of movements analysis

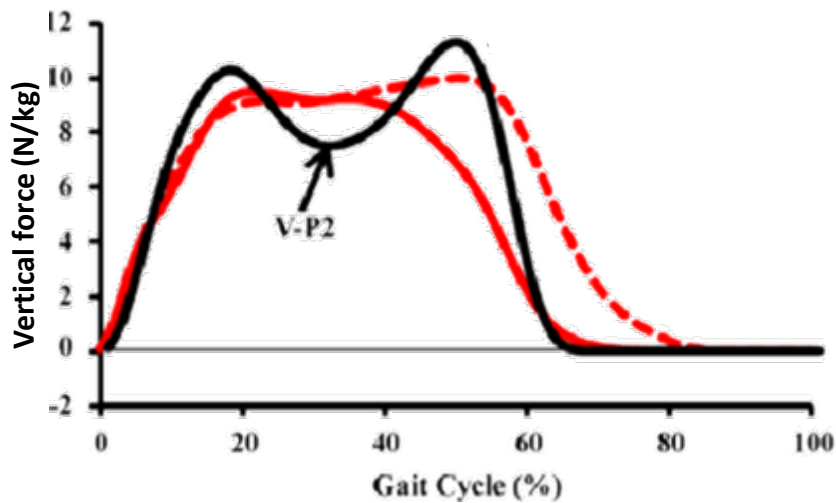
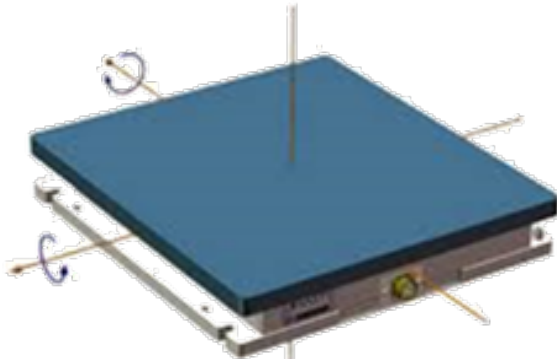


3-D movement analysis

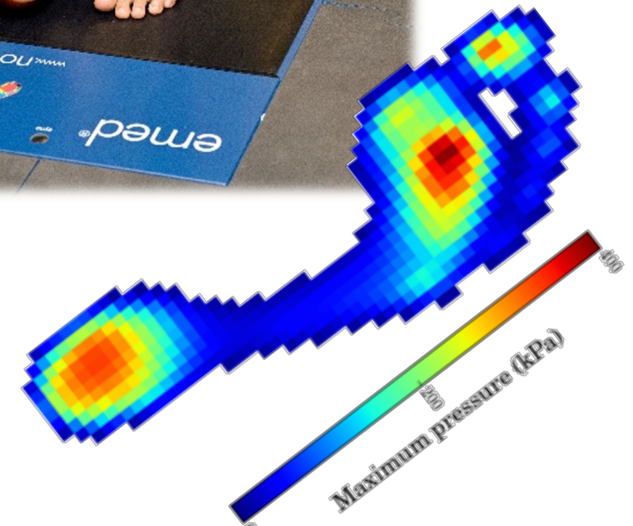


Kinetics

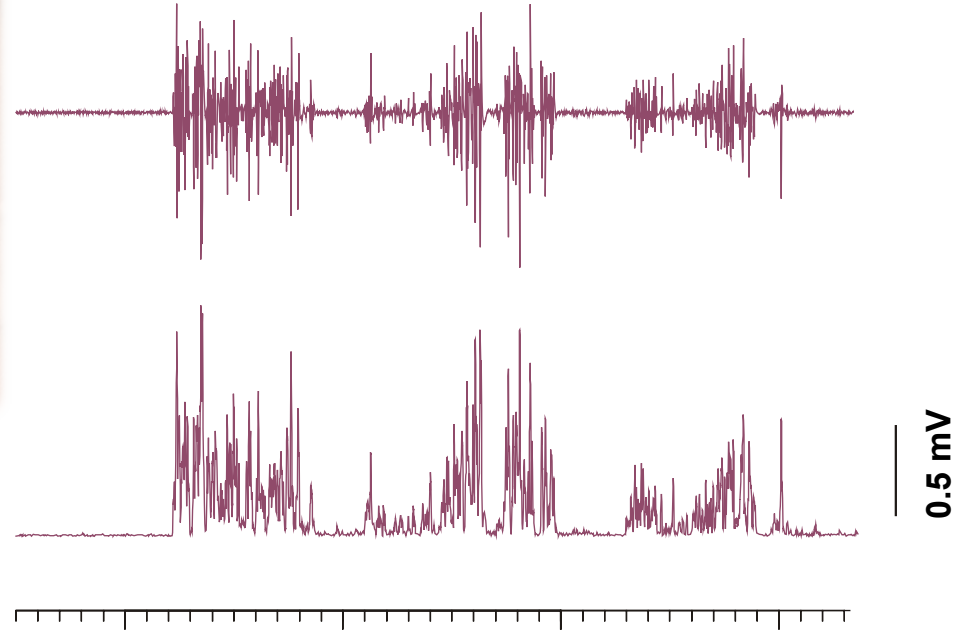
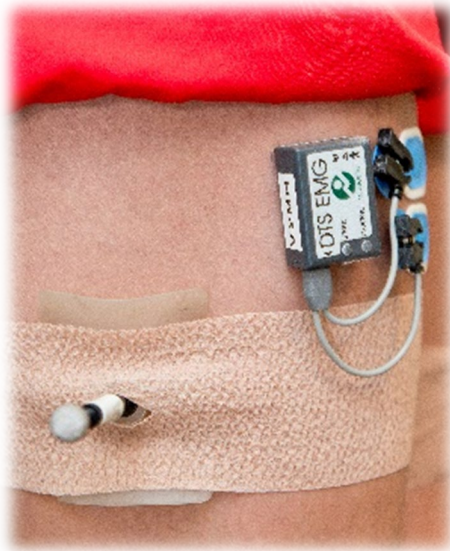
Force plates



Pedobarography



Electromyography (EMG)





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Olika möjligheter att
fånga människan i
rörelse...

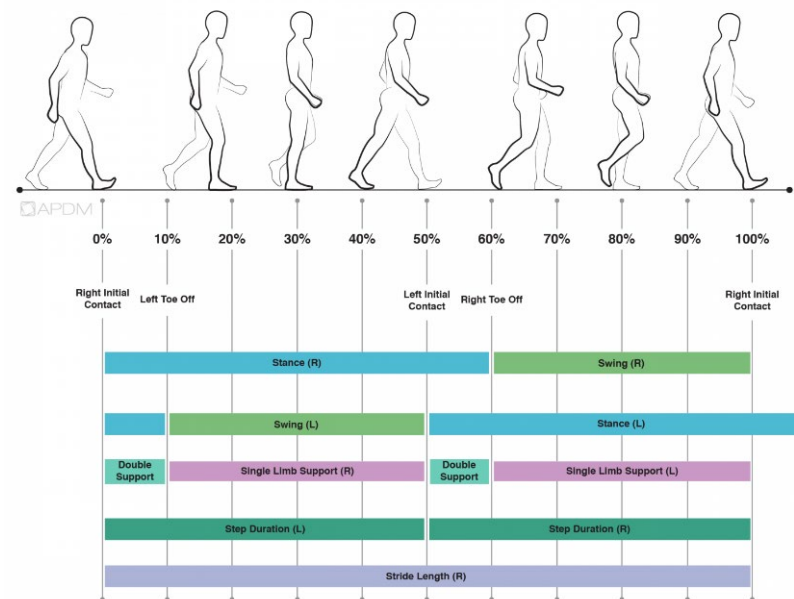
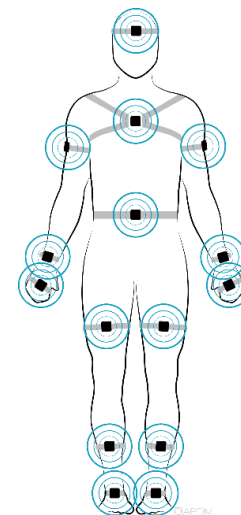
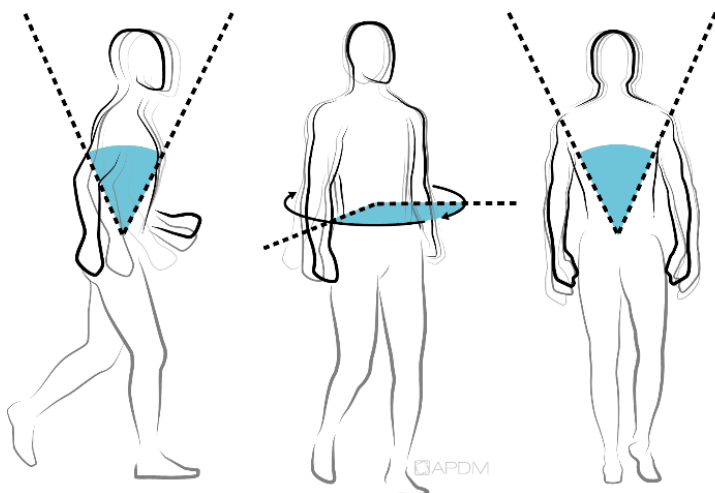
Methods of movements analysis



APDM

Gait and balance

- Gait “steady-state”
- Timed Up and Go
- 360° turns
- Postural sway





GAITRite mat





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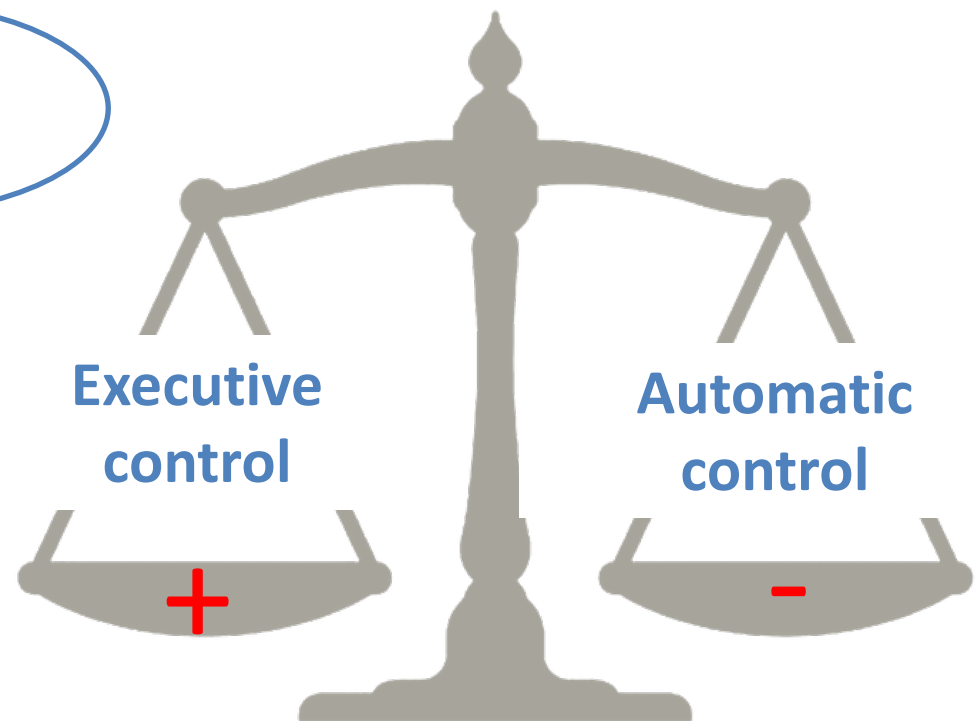
Dual-task paradigm

Primary task: gait

Secondary task: Auditory stroop



High.....
low...



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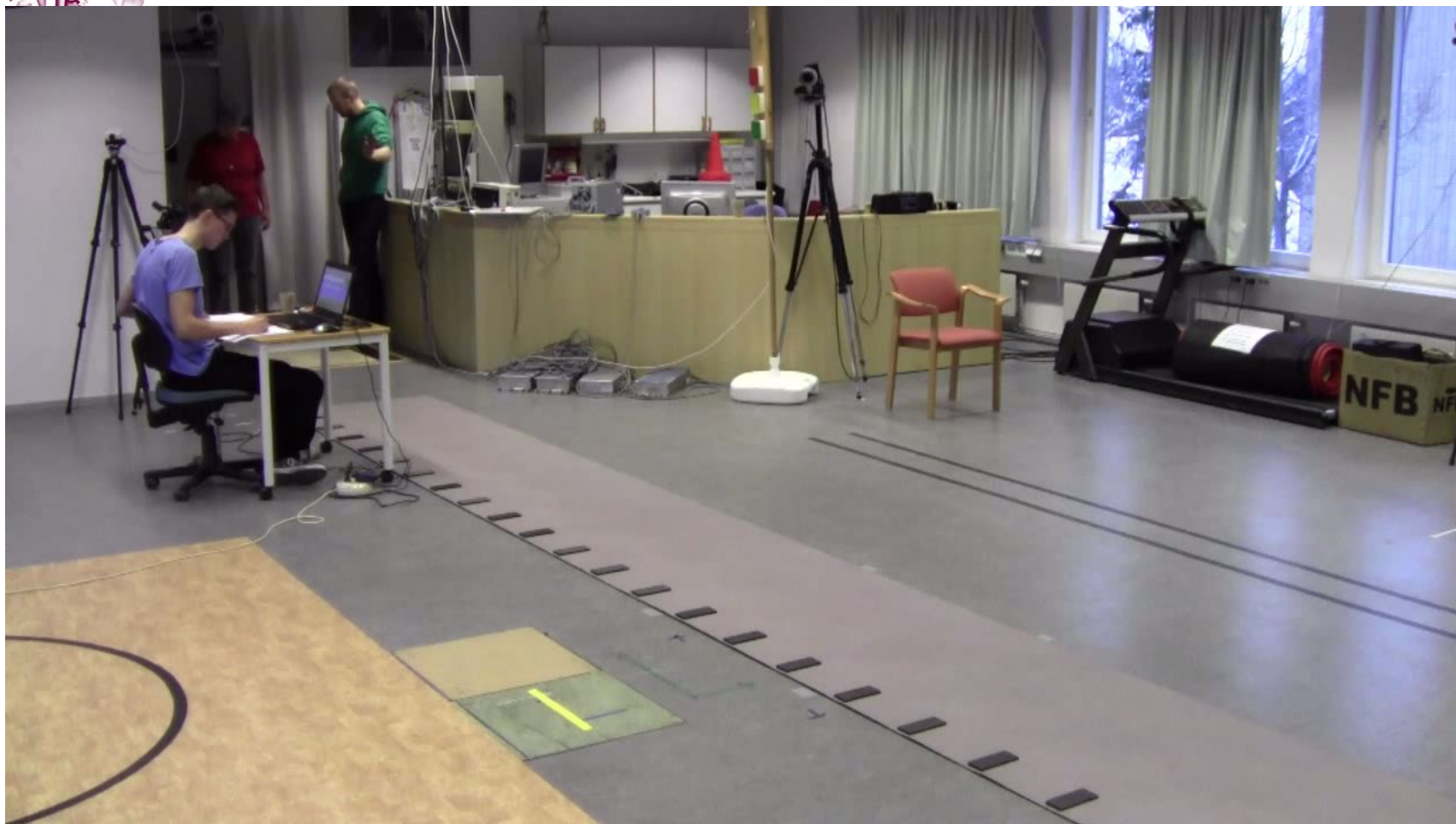


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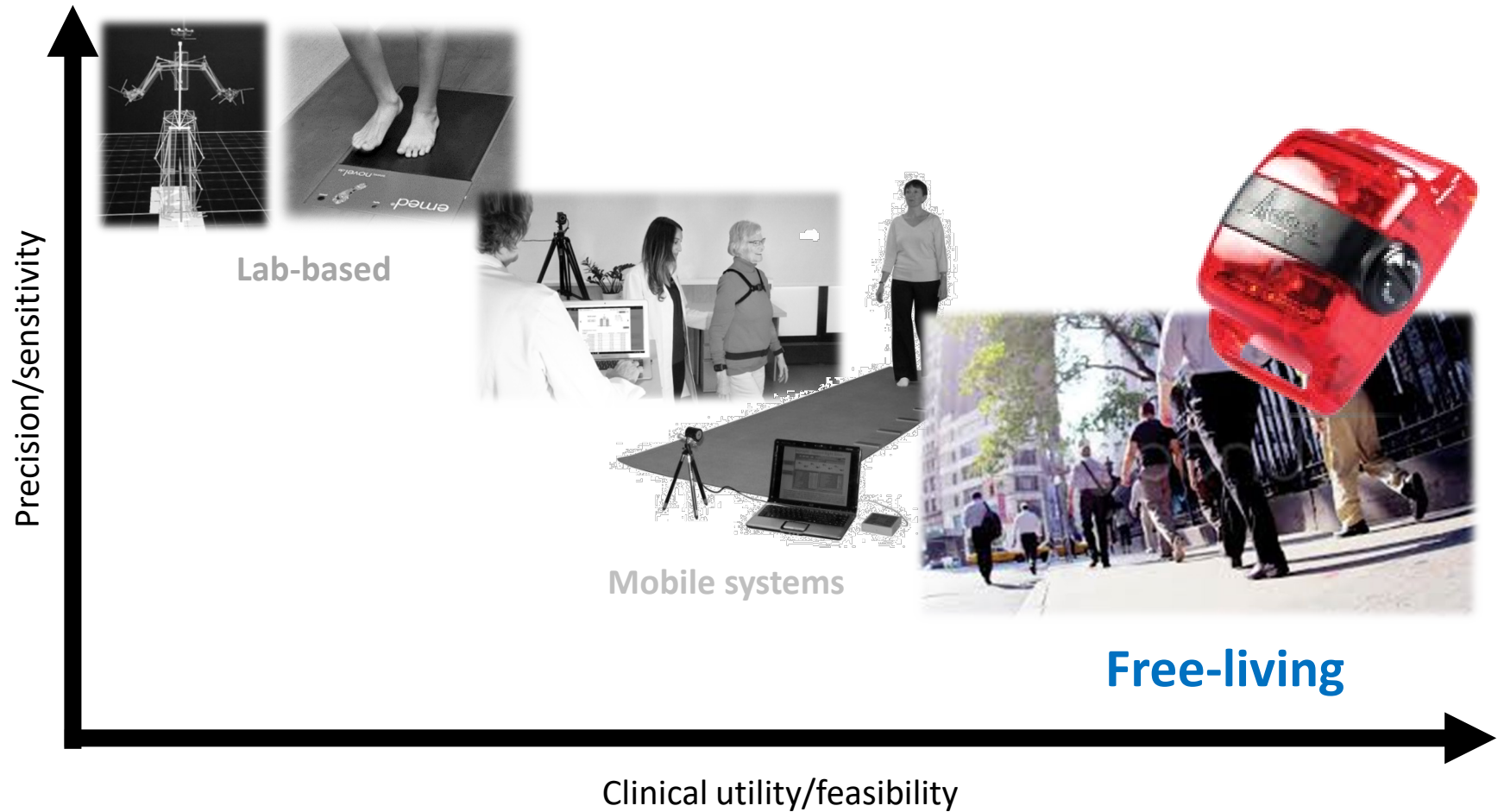
Erika Franzén



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Methods of movements analysis



Activity monitors - Accelerometry



Actigraph



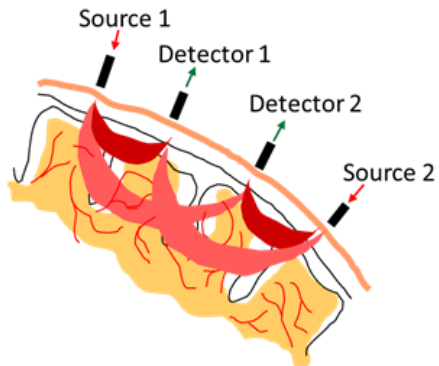
ActivePal





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fNIRS - functional Near-InfraRed Spectroscopy



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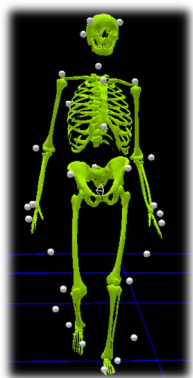
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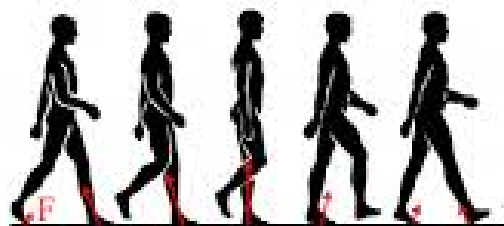


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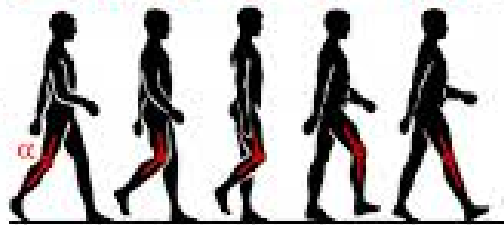
Teaching & learning



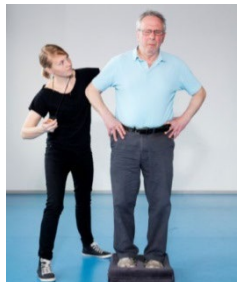
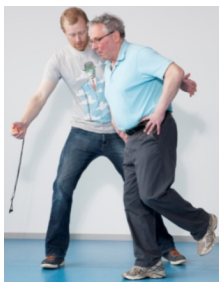
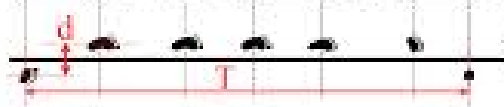
KINETICS



KINEMATICS



SPATIO-
TEMPORAL



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Future development

- What are our future issues/questions/needs in your field?
- How can movement analysis be combined with psychological variables?
- Development of the facility in relation to clinical needs?





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uMOVE – we measure!

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