

## 3<sup>RD</sup> WINTER SYMPOSIUM OF "THE HUMAN MOTION PROJECT"



### Is walking really medicine?

Walking as outcome and treatment - using mobile accelerometry

MUNICH  
FRIDAY, MARCH 11<sup>TH</sup>, 2016

#### Venue

Klinikum rechts der Isar Technische Universität München  
Ismaninger Str. 22 - 81675 Munich  
Auditorium B

Register here till Monday, February 29th, 2016

Scan QR-Code or go to:

<http://goo.gl/forms/TEjIRhP39i>



#### Website

<http://www.thehumanmotioninstitute.org/node/208>

Link to information & talks about the previous Symposium

<https://peerj.com/collections/6-humanmotionproject/>



This Symposium is dedicated to Prof. Dr. Dr. Albrecht Neiss (24 December 1938 - 13 February 2016), from 1993 until 2005 Director of the Institute for Medical Statistics and Epidemiology of Technische Universität München (TUM) and founding member of The Sylvia Lawry Centre for Multiple Sclerosis Research e.V.

## PRELIMINARY PROGRAMME

### 08:30 Registration & Coffee

### 09:00 "Extreme ends" of walking & running

Martin Daumer, SLC, Human Motion Institute, Trium, TUM, Munich

### 09:15 Session 1 Clinical aspects

- » The effect of walking/low intensity aerobic exercise on cardiovascular health: evidence from the literature  
Ylva Hellsten, University of Copenhagen
- » Vestibulocerebellar control of gait - what can we learn from in-laboratory and off-laboratory measurements?  
Roman Schniepp, LMU, German Center for Vertigo and Balance Disorders, Munich
- » Heart rate variability and heart rate turbulence  
Georg Schmidt, TUM MRI, Munich
- » Devices in clinical trials  
Thomas M. MacDonald, University of Dundee

### 10:15 Discussion

### 10:30 Session 2 - From clinical to computational aspects

- » Are all strains equal?  
Jörn Rittweger, Space Physiology, DLR, Cologne
- » Impact of fetal movement on fetal state  
K.T.M. Schneider, TUM MRI, Munich
- » Long-term bedrest study and Astronaut training  
Edwin Mulder, Space Physiology, DLR, Cologne
- » Computational aspects of dysregulation - a perspective from dynamic modelling  
Gerald Schuster, Rutgers University, New Jersey

### 11:30 Coffee Break

### 11:45 Session 3 - Computational aspects

- » Pattern recognition of data from movement analysis - from bench to bedside?  
Cauchy Pradhan/Ken Möhwald, LMU, German Center for Vertigo and Balance Disorders, Munich
- » Attractor-based kinematic gait analysis - methodological & clinical considerations  
Manfred Vieten, University of Konstanz
- » Healthy and disturbed sleep: from the laboratory to actigraphy  
Thomas Penzel, Charité, Berlin
- » Individual gait patterns change all the time?  
Wolfgang I. Schöllhorn, Johannes Gutenberg University of Mainz

## PRELIMINARY PROGRAMME

### 12:45 Lunch, Poster & Exhibition

### 14:15 Session 4 - From computational to regulatory aspects

- » MoveLab - physical activity and exercise  
Michael Trenell, Newcastle University
- » Automated assessment of motor dysfunction  
Jonas Dorn, Scripps Research Institute, Novartis, Basel
- » Activity assessment in medical devices  
Raphael Schneider, Medtronic Bakken Research Center, Maastricht

### 15:00 Discussion

### 15:15 Session 5 - Regulatory aspects

- » Philosophy of pharmacology: safety, statistical standards, and evidence amalgamation  
Barbara Osimani, LMU, Munich
- » Medical device safety: investigating contributions of human factors  
Kathrin Lange, BfArM, Bonn
- » Discussion: what next?

### 16:00 Summary, Funding and Outlook Farewell Aperó

The organizers reserve the right for rearrangements

### Interested to present a poster, give a talk or exhibit?

#### Please contact:

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SLCMSR e.V. -  
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## THE VISION

The vision of the Human Motion Project is to become a successful analogue of the Human Genome Project: improving human health by an open collaborative technology platform for the mobile medical monitoring of human motion. The basis is a growing "critical path toolbox" and a biomedical data warehouse for collecting, archiving, analyzing, and disseminating human motion data including a library of algorithms.

In the "3rd Winter symposium of the human motion project" we'll pick out walking as "pars pro toto".

"Walking is man's best medicine" was known in ancient Greece (Hippokrates - c. 460 – c. 370 BC) - but is it really true? How would one measure and determine the right - effective and safe - dose for an individual and how would one measure the outcome? Mobile sensors, in particular mobile accelerometers that can measure various aspects of physical activity in the clinic and the "real world", will probably play an important role in this field.

As a fundamental element of "human motion" we will focus during this day on various aspects and consequences of walking/not walking for human health - with or without drug treatment. We'll go from the clinical aspects to computational aspects (devices/sensors, data, algorithms, analysis, transmission) to the very important regulatory aspects of clinical trials and medical devices (safety, efficacy, feasibility). Experts from University hospitals, research centers, rehabilitations centers, manufacturers of medical devices, pharmaceutical companies, patients\* and regulatory bodies will cover the broad spectrum of topics with a clear focus: to help the field to jointly establish a new set of meaningful clinical endpoints linked to objective measures of human motion.

Abstracts and Talks are expected to be published by our partner PeerJ in the "human motion collection", as in previous symposia and workshops.  
<https://peerj.com/collections/6-humanmotionproject/>

Martin Daumer/Roman Schniepp/Jörn Rittweger  
Organizing Committee

\* we expect almost everyone in the audience to have "experience" as a patient in one way or another.

## REGISTRATION

### Registration fee

Industry:	400€
Public research institution:	250€
PhD students:	100€
Students:	50€
Students presenting poster:	free
Interested patients:	free
Press:	free



Scan QR-Code or go to:  
<http://goo.gl/forms/TEjiRhP39i>

Last minute registration: plus 20%  
All Fees include 19% VAT  
Fee includes drinks & Lunch

### Payment of Fees

All fees for registration should be paid in Euro (€) in advance to Sylvia Lawry Centre e.V. – The Human Motion Institute, stating the participant's name and address. Bank charges are the responsibility of the payer and should be paid in addition to the registration fees. Payment can be effected by bank transfer to:

Account holder/beneficiary:  
Sylvia Lawry Centre for Multiple Sclerosis Research e.V.  
Financial institution:  
HypoVereinsbank Munich  
Innere Wiener Str. 60 - 81667 München  
SWIFT/BIC HYVEDEMMXXX  
IBAN-Code DE70 7002 0270 00 36 198 214

### Confirmation

Upon receipt of the correct registration fee, each participant will receive a confirmation of registration. Please bring this confirmation to the registration desk as proof of your registration.

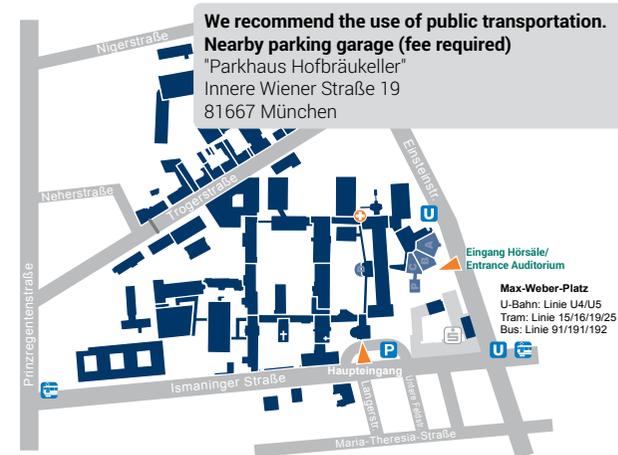
### Cancellation Policy

Refund of registration fees will be as follows:  
- until end of January 2016: 100% refund  
- until end of February 2016: 50% refund  
- No refund on cancellations after March 4th, 2016

**REGISTRATION CLOSING DATE**  
**MONDAY, FEBRUARY 29<sup>TH</sup>, 2016**

## GERNARAL INFORMATION

### Site Map



### Academic Partners



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### Press



### Organizing Committee

Martin Daumer (PhD), SLC, Human Motion Institute, Trium, TUM, Munich  
Jörn Rittweger (MD), Space Physiology, DLR, Cologne  
Roman Schniepp (MD), LMU, German Center for Vertigo, Munich

### WLAN access in Auditorium B:

SSID ("WLAN-Name"): mwn-events  
UserID: "THMP"  
PW: "j22heoWu"  
Please follow the instruction of the LRZ  
<http://www.lrz.de/services/netz/wlan-en/mwn-events-en/>