



אוניברסיטת בן-גוריון בנגב  
Ben-Gurion University of the Negev

The Active Aging Hub Initiative and the Department of Physical Therapy at the Recanati School for Community Health Professions, Faculty of Health Sciences

Invite you to participate in

## **The First International Active Aging School\***

<http://in.bgu.ac.il/en/fohs/Pages/Active-Aging.aspx>

**When?** March 27, 2019 – March 29, 2019

**Where?** Deichmann building (M8), Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva

**What?** Listen to world-leading experts in the fields of ageing, physical activity, balance and gait, as well as brain imaging, and discuss new approaches and challenges to Active Ageing, from basic science to clinical science.

**Registration:**

<https://shop.bgu.ac.il/product/active-ageing-spring-school>

\* sponsored by the HUB initiative at the faculty of health science



# The First International Active Aging School

## PROGRAM AT A GLANCE

Day	Time	Topic
<b>Wednesday March 27<sup>th</sup></b>	8:30	<b>Gathering</b>
	8:50	<b>Opening remarks</b>
	9:00-10:30	<b>"New, personalized exercise interventions for preventing and rehabilitating balance and gait deficits in the second half of life"</b> <i>Michael Schwenk, PhD, Junior Research Group Leader, Network Aging Research (NAR), Heidelberg University, Germany</i>
	10:30-11:00	<b>Coffee break</b>
	11:00-12:30	<b>"Walking with the front of your head: Cognitive control of gait in older adults"</b> <i>Jeffrey M. Hausdorff, PhD, Center for the Study of Movement, Cognition, and Mobility, Neurological Institute, Tel Aviv Sourasky Medical Center. Sagol School of Neuroscience and Department of Physical Therapy, Tel Aviv University. Rush Alzheimer's Disease Center and Department of Orthopaedic Surgery at Rush University</i>
	12:30-13:30	<b>Lunch break</b>
	13:30-15:00	<b>" Step training in older adults"</b> <i>Wiebren Zijlstra, PhD, Institute of Movement and Sport Gerontology, German Sport University Cologne, Germany</i>
	15:00-15:15	<b>Coffee break</b>
	15:15-16:30	<b>Lab tour:</b> <b>The Motor Control and Rehabilitation Cluster (MCRC)</b>
<b>Thursday March 28<sup>th</sup></b>	8:30-9:00	<b>Gathering</b>
	9:00-10:30	<b>"A neuro-psycho-epidemiological approach to the exercise paradox"</b> <i>Matthieu P. Boisgontier, PhD, University of British Columbia, Canada</i>
	10:30-11:00	<b>Coffee break</b>
	11:00-12:30	<b>"Neuroimaging of active walking: challenges, methods, key findings and implications for rehabilitation of mobility in aging and disease populations"</b> <i>Roe Holtzer, PhD, Professor of Psychology and Neurology, Director: PhD Program in Clinical Psychology/Health Emphasis, Ferkauf Graduate School of Psychology, Yeshiva University. Department of Neurology, Albert Einstein College of Medicine. Bronx, NY, USA.</i>
	12:30-13:30	<b>Lunch break</b>
	13:30-15:00	<b>"Balance, gait and falls post stroke: steps towards a better future"</b> <i>Vivian Weerdesteyn, Radboud University Medical Center, Nijmegen, The Netherlands</i>

	15:00-15:30	<b>Coffee break</b>
	15:30-17:00	<b>Lab tour: robotics and biomechanics</b>
<b>Friday March 29<sup>th</sup></b>	8:30-9:00	<b><i>Gathering</i></b>
	9:00-10:30	<b>"Development of new wearable technology to improve gait and balance function using sensory non-invasive neuromodulation"</b> <i>Lars IE Oddsson, PhD CTO, Co-Founder: RxFunction Inc., Eden Prairie, MN, USA. Adjunct Professor: Department of Physical Medicine and Rehabilitation, Medical School, University of Minnesota. Faculty: Technological Leadership Institute, College of Science &amp; Engineering, University of Minnesota. Recanati School for Community Health Professions, Faculty of Health Sciences at Ben-Gurion University of the Negev</i>
	10:30-11:00	<b>Coffee break</b>
	11:00-12:30	<b>"Societal and ethical aspects of robots in rehabilitation"</b> <i>Oliver Müller, PhD. Department of Philosophy, University of Freiburg, Germany.</i>
	12:30-13:00	<b>Conclusion</b>

## **GENERAL INFORMATION**

### **OFFICIAL LANGUAGE**

The Active Aging School will be conducted in English.

### **ARRIVAL INFORMATION**

The best transportation from Tel-Aviv is via train. The closest train/railway station, is the University Station (Beer-Sheva north station), about 5 minutes' walk from the faculty of health sciences (dotted circle), follow the black arrow.



## CLIMATE AND CLOTHING

The weather around Israel in April is warming up and you will likely experience a temperatures up to 25°C, lower at night (about 10-15°C). Clothing is informal for all occasions. We suggest bringing a light jacket / sweatshirt for the evenings.

## SPEAKERS



**Lars IE Oddsson**

Lars Oddsson is an experienced biomedical scientist, an inventor, a visionary leader and an entrepreneur. He is Chief Technology Officer and Co-Founder of RxFunction, a start-up based on Oddsson's IP commercializing walkasins®, a wearable sensory prosthetic for balance. RxFunction was semifinalist twice and finalist in the 2013 MN-Cup. Dr. Oddsson teaches in the M.S. in Medical Device Innovation program at the Technological Leadership Institute at the University of Minnesota, where he also holds a position as adjunct professor in the Department of Physical Medicine and Rehabilitation. He is a visiting professor at the Recanati School of Health Professions at Ben-Gurion University in Israel. Previously, Dr. Oddsson initiated and led the Injury Analysis and Prevention Lab at Boston University's Neuromuscular Research Center, where he was a faculty research professor. In Boston, he held temporary adjunct appointments at Harvard Medical School and at MIT. Previously, Oddsson was the founding director of research at the Courage Kenny Research Center at Allina Health. He is co-investigator and consultant to NASA's Johnson Space Center on projects related to the development of sensorimotor countermeasures to long-term spaceflight.

Dr. Oddsson has a broad background in physiology, engineering, rehabilitation sciences and technology development. He has served as a principal investigator and authored numerous papers on various biomedical, neuromotor control and rehabilitation studies. His board services include LifeScience Alley (now Medical Alley), Alley Institute, Swedish-American Chamber of Commerce and the University of MN Senate Governance Disabilities Issues Committee. He received engineering training at Linköping University, his doctorate in Medical Sciences at the Karolinska Institute, both in Sweden, post-doctoral training in biomedical engineering at Boston University and a mini-MBA in medtech management at the University of St. Thomas.



**Michael Schwenk**

Dr. Michael Schwenk serves as a junior research group leader at the Network Aging Research and the Department of Sports and Sports Sciences, Heidelberg University, Germany. With a PhD in exercise science and postdoctoral training in biomedical engineering, he has over 10 years of experience in developing multidisciplinary exercise and physical activity interventions for improving motor and cognitive performances in older adults. He is author of more than 100 scientific publications (> 1500 citations) in international peer-review journals and conference proceedings, has received research awards, and serves as an editorial board member for different journals in the fields of exercise science and gerontology.



**Jeffrey M. Hausdorff**

**Jeffrey M. Hausdorff**, The Cooper Union, New York, NY BSE 1982-1985, Biomechanics Massachusetts Institute of Technology, MA MSME 1986-1988 Mech Eng/ Biomech. Boston University, Boston, MA PhD 1992-1995 Biomedical Engineering Harvard Medical School, Boston, MA Fellowship 1996-1997 Geriatrics



**Zijlstra, Wiebren**

Wiebren Zijlstra is Professor at the Institute of Movement and Sports Gerontology at the German Sport University, Cologne (DSHS). Previously he was Associate Professor at the CHMS of the University of Groningen (UMCG). After graduating in human movement sciences, he received his PhD degree at the Medical Faculty of the University of Groningen (RUG) in 1997. His current research specifically focuses on changes in physical activity and mobility-related activities with ageing and age-related pathology. Main ingredients of his research activities are the development and evaluation of interventions which aim to support or improve mobility in specific groups of older people, and the use of body-fixed-sensors for studying human motor functioning in a natural environment. His work is carried out in co-operation with (inter)national partners. In recent years, he was a work package leader in the EC financed projects ProFaNE (2003-2007) and SENSATION-AAL (2007-2009). He has published more than 50 papers in peer reviewed journals, and additional publications in books and non-reviewed journals. He is member of the editorial board of Gait & Posture and a regular reviewer for other scientific journals and international research organizations.



**Matthieu P. Boisgontier**

Matt Boisgontier is a neuroscientist, a kinesiologist, and a physiotherapist. He achieved his PhD from the University of Grenoble in 2012 (France). Then, did a 6-year postdoc at Leuven University (Belgium) including a 1-year visit at the University of British Columbia (Canada), both supported by the Research Foundation - Flanders (EWO). Since 2016, he has also been using longitudinal data including tens of thousands subjects to investigate the determinants of physical activity such as cognitive resources, neighborhood conditions, and adverse childhood events (University of Geneva, Switzerland). He is passionate about physical activity, health, aging, and how the brain works but always happy to work on other topics.



**Roe Holtzer,**

Dr. Holtzer is a Professor of Psychology at the Ferkauf Graduate School of Psychology and of Neurology at the Albert Einstein College of Medicine of Yeshiva University. He holds an MA and a Ph.D. degree from the State University of New York at Binghamton. Dr. Holtzer completed his internship training in clinical psychology at the Rusk Institute of New York University. He also completed a T-32 post-doctoral fellowship in neuropsychology and cognition in aging at the cognitive neuroscience division of the Sergievsky Center of Columbia University Medical Center. He is licensed as a psychologist in New York State



**Vivian Weerdesteyn**

Dr. Vivian Weerdesteyn is Associate Professor - Donders Centre for Medical Neuroscience. Associate Principal Investigator - Donders Institute for Brain, Cognition and Behaviour she has a background in Physiotherapy (BSc, 1996) and Human Movement Science (MSc, 1999). She obtained her PhD (2005) in Medical Science from the Radboud University Nijmegen on the development and evaluation of a falls prevention program for the elderly ('Vallen Verleden Tijd'). She currently holds an associate professorship at the Radboud University Medical Centre, Department of Rehabilitation, where she is chairing the balance and gait laboratories. Since 2012, she has been a junior principal investigator in the research institutes Radboud Institute for Health Science (RIHS) and Donders Centre for Neuroscience (DCN; [www.ru.nl/donders](http://www.ru.nl/donders)) of the Radboud University. In her research, she aims to elucidate the pathophysiological mechanisms underlying impaired balance and gait control in people with neurological conditions, and to design and evaluate novel interventions to ameliorate these problems. She has served on the board of the International Society for Posture and Gait Research (ISPGR), and has recently been appointed as the co-host of the upcoming World congress of ISPGR in Miami (2017). She is an editorial board member of Gait & Posture and has published about 100 papers in peer-reviewed journals.



**Oliver Müller**

Oliver Mueller obtained the doctoral degree in 2005 and his 'Habilitation' in 2012. Müller specializes in the fields of philosophy of technology, philosophical anthropology, and ethics. He is currently working on the foundations of a phenomenological and hermeneutical framework that helps to understand how modern technology shapes our thinking, feeling and acting. In this context, he also systematically reflects on developments in Artificial Intelligence and on current (bio)-technological developments such as neurotechnology, synthetic biology, and reproductive medicine. Since 2018 he is member of the interdisciplinary research Focus „Responsible AI“ at the Freiburg Institute for Advanced Studies where he investigates philosophical and ethical questions of autonomous weapons systems and robots in rehabilitation. Furthermore, he initiated and heads Nexus Experiments, a platform that designs and curates participatory projects and events at the interface of science and art to foster public dialogue on the ethical and societal implications of technoscientific research.

### Organizing committee

Hadas Nachmani\* (Chairwoman); Uri Rosenblum\*; Inbal Pharan\*; Shani Batcir\*, and Itshak Melzer PhD, PT [director of the Schwartz Movement Analysis & Rehabilitation Laboratory.](#)

\*PhD candidates at [the Schwartz Movement Analysis & Rehabilitation Laboratory](#)

## מספר מילים בעברית -

המטרה העיקרית של בית ספר זה היא להרחיב והעמיק את הידע במחקר העדכני בתחום בקרת מוטורית, שיווי משקל והליכה, וטכנולוגיות חדשניות ולקדם את שיתופי הפעולה הקיימים כחלק בפקולטה למדעי הבריאות באוניברסיטת בן גוריון בנגב. Active aging HUB מפעילות ה-  
. תכנית בית ספר תתמקד במדעים בסיסים <http://in.bgu.ac.il/en/fohs/Pages/Active-Aging.aspx>  
וקליניים ופתוחים חדשניים בתחום אשר יהיה במרכז האתגר המדעי והקליני בעשורים הקרובים.

(, באוניברסיטת M8 בית הספר יתקיים בין התאריכים **27-29/3/2019** (9:00 עד 16:00) בבנין דייכמן )  
דקות הליכה מתחנת הרכבת הסמוכה, תחנת האוניברסיטה).בן גוריון )

ספר התקצירים המלא של ההרצאות יפורסם לנרשמים.

מחיר השתתפות בשלושת ימי הסמינר הינו 150 ₪. ישנה אפשרות להגיע לימים ספציפיים בתשלום של 70 ₪ ליום מלא ו-50 ₪ ליום שישי. הרישום יתבצע און ליין בלינק המצורף:  
<https://shop.bgu.ac.il/category/%D7%9B%D7%A0%D7%A1%D7%99%D7%9D>

מספר המקומות מוגבל. מהרו להירשם.