



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

The active Ageing 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 Second International Active Aging School* "From Active Aging to Active Neurorehabilitation"

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

When? March 17, 2020

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 contemporary stroke
rehabilitation, and discuss new approaches and challenges to Active Ageing,
from basic science to clinical science.

Registration:

<https://shop.bgu.ac.il/category/%D7%9B%D7%A0%D7%A1%D7%99%D7%9D>

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



The Second International Active Aging School
"From Active Aging to Active Neurorehabilitation"

Time	Topic
8:30	Gathering and registration
9:00-9:15	Opening remarks <i>Prof Amos Katz Dean, Faculty of Health Sciences BGU</i> <i>Prof Itshak Melzer Head, Recanati School for Community Health Professions, BGU</i>
9:15-10:00	"Perturbation-based training to improve proactive and reactive balance strategies for fall-risk reduction in people with cortical stroke" <i>Tanvi Bhatt, PhD, PT, Assistant Professor, Physical Therapy Department, University of Illinois.</i>
10:00-10:45	"Implementing reactive balance training in rehabilitation practice: why and how?" <i>Avril Mansfield, R.Kin, PhD, Toronto Rehabilitation Institute – University Health Network, Associate Professor (status only) in the Department of Physical Therapy, University of Toronto, and an Affiliate Scientist at Sunnybrook Research Institute.</i>
10:45-11:15	Discussion
11:15-11:45	Coffee break
11:45-12:15	<i>Students talks-</i> "Detection of Real-World Trips in At-Fall Risk Older Adults Using Wearable Sensors" <i>Shirley Handelzalts PhD, PT Ben-Gurion University Translational Neurorehabilitation Clinic at Aleh Negev</i> "Uncertainty Shape Behavior" <i>Yogev Koren PhD student , Motor Control and Rehabilitation Lab and BGU Aleh Negev Translational Clinic</i>
12:15-13:00	"Past, Present, and Future of Neurorehabilitation" <i>Carolee Winstein, PhD, PT, Professor Biokinesiology and Physical Therapy, University of Southern California</i>
13:00-13:15	Discussion
13:15-14:00	Lunch break
14:00-14:45	"Role of Lesion-Topography Assessment in Stroke Rehabilitation" <i>Nachum Soroker, M.D. Department of Neurologic Rehabilitation, Loewenstein Hospital, Raanana, and Sackler Faculty of Medicine, Tel Aviv University, Israel.</i>
14:45-15:30	"Can we rely on any part of the motor system to learn a new motor tasks efficiently at an older age?" <i>JJ Orban de Xivry, PhD, Movement Control & Neuroplasticity Research Group, KU Lueven</i>
15:30-16:00	Closing discussion
16:00-16:15	Coffee break
16:15-17:15	<i>Visit to Melzer's Lab</i>
19:00	<i>Dinner</i>

SPEAKERS



Tanvi Bhatt, PhD

Dr. Bhatt is an Associate Professor with the Physical Therapy in the University of Illinois at Chicago. Dr. Bhatt is the director of the Cognitive, Motor and Balance Rehabilitation Laboratory and co-director of the Clinical Gait and Motion Analysis laboratory. Dr. Bhatt's research interest and expertise is in field of adaptive perturbation training for fall prevention. Her research involves investigating neuromechanical basis of balance recovery from external perturbations such as slips and trips and subsequently designing intervention paradigms for reducing fall-risk in healthy and pathological populations. Her research interest and focus also lays in examining effects of alternative cognitive and motor therapies (including virtual reality gaming and dance therapy) for improving impairment, function and participation in community-dwelling people with neurological disorders with an emphasis on stroke survivors. Dr. Bhatt has nearly 70 peer-reviewed publications and has been extramurally funded since 2011. Currently she is the principle investigator of three NIH R01 grants (over \$ 3 million in funding) pertaining to perturbation training for fall-risk prevention and recipient of the UIC's Rising Star Researcher of the Year. Dr. Bhatt's currently coordinates the Adult Neuromuscular Dysfunction course within the DPT program and teaches in areas related to biomechanics, motor control and rehabilitation sciences within the MS program. She is also the program coordinator for the MS in Rehabilitation Sciences program housed within the PT department



Avril Mansfield, R.Kin, PhD

Avril Mansfield is a Scientist with the Toronto Rehabilitation Institute – University Health Network, Associate Professor (status only) in the Department of Physical Therapy, University of Toronto, and an Affiliate Scientist at Sunnybrook Research Institute. Her research aims to determine how aging and neurological injury or disease affect balance control and mobility, and how to exploit principles of optimal learning to develop exercise programs that promote safe independent mobility.

She is particularly focused on developing clinically feasible rehabilitation interventions. Her research is supported by the Natural Sciences and Engineering Research Council of Canada, the Heart and Stroke Foundation of Canada, and the Canadian Institutes of Health Research.



Carolee Winstein, PhD, PT

Carolee Winstein is professor of biokinesiology and physical therapy at the Ostrow School of Dentistry's Division of Biokinesiology and Physical Therapy and a faculty member of the USC Neuroscience Graduate Program. She holds a joint appointment in the Department of Neurology, Keck School of Medicine. Winstein runs an interdisciplinary research program at the intersection of neuroscience, biomedical engineering, and disability studies including clinical trials of non-pharmacologic rehabilitation interventions. A fellow of the American Physical Therapy Association, the American Heart Association, the National Academy of Kinesiology, and the American Society of Neurorehabilitation, Winstein's research program has been funded variously through NIH, NIDILRR and the Foundation for Physical Therapy consistently over the past 30 years. She served as a standing member of the NIH Musculoskeletal Rehabilitation study section from 2015-2019. She serves on the editorial board of the journal Neurorehabilitation and Neural Repair and currently serves as immediate past president for the American Society of Neurorehabilitation and President of the ASNR Education Foundation. A native of Los Angeles, California, Winstein earned her Ph.D degree from the University of California at Los Angeles and was a postdoctoral fellow at the University of Wisconsin, Madison's Waisman Center.



Nachum Soroker, M.D

Nachum Soroker, M.D., studied medicine at the Hebrew University, Hadassah Medical School, Jerusalem, Israel, and specialized in Physical and Rehabilitation Medicine at the Loewenstein Rehabilitation Hospital, Raanana, Israel. Current position: Head, Brain Rehab Lab, Department of Neurologic Rehabilitation, Loewenstein Hospital, Raanana, Israel. Past positions include: Head, Department of Rehabilitation Medicine, Faculty of Medicine, Tel-Aviv University; President of the Israel Association of PRM (IAPRM); Head, Department of Neurologic Rehabilitation, Loewenstein Hospital. Past positions in the International Society of PRM (ISPRM) include: Chair of the Scientific Committee in the 2nd ISPRM World Congress; Regional ISPRM Vice President; Member of ISPRM Executive Board; Chair of ISPRM Website; member of ISPRM Finance, Publications and Clinical Research Committees. In 2017 NS received from the ISPRM the Sidney Licht Award "for outstanding accomplishments in advancing the care of individuals with disabilities and consistent contributions to the advancement of Physical and Rehabilitation Medicine internationally and for his leadership within ISPRM". NS acted as chair/member of the organizing/scientific committees of various national and international PRM congresses. Late roles – Chair of the Scientific Committee - Didactic Track, in the Annual Congress of the Israeli Association of PRM (IAPRM) - 2016, 2017, 2018, 2019. NS edited one book and wrote 7 chapters in books. He published so far 86 original research articles and 3 case studies in peer-reviewed journals, in addition to 2 review papers and 15 other publications. 39 papers were published in short form in conference proceedings or journals. He had 344 presentations made at scientific meetings, many of them as invited lecturer.



JJ Orban de Xivry, PhD

JJ Orban de Xivry obtained a degree in engineering in applied mathematics from the Université Catholique de Louvain (2002) and then embarked on a PhD at the same place. During his thesis, his work focused on internal models used to guide eye movements in the dark and applied his knowledge of eye movements to clinical populations (prosopagnosia – inability to recognize faces and Duane Retraction Syndrome - strabismus). His thesis was completed in Dec. 2007. Jean-Jacques shifted his main research interest towards motor adaptation during his post-doc under the supervision of Reza Shadmehr (Johns Hopkins University, Baltimore, USA). There, his work focuses both on the role of the motor cortex in motor adaptation and on optimal control theory. He learned to master brain stimulation techniques (Transcranial Magnetic Stimulation and Transcranial direct current stimulation). Currently, he is developing a new paradigm to study the optimality of reaching movements and he investigates how aging affects motor adaptation and motor learning in general. This approach will be complemented by the use of non-invasive brain stimulation techniques and neuroimaging. The research of Jean-Jacques Orban de Xivry focuses on how theories of motor control can shed light on brain functions and the associated disabilities and to improve motor functions in elderly and in patients. This research program is multidisciplinary and involves mathematical modeling, brain stimulation techniques and patient studies. All of them are joined together to advance our understanding of the control of movements



Shirley Handelzalts, PhD, PT

Shirley Handelzalts, Ph.D, PT is a Postdoctoral fellow at the Ben-Gurion University Translational Clinic in Aleh-Negev, Israel. She earned her Ph.D degree from the Ben- Gurion University in 2019 and continued her studies as a postdoctoral fellow at the University of Michigan, Ann Arbor, USA. She has been working as a physical therapist in neurological rehabilitation for more than 16 years. In her research she aims to study basic mechanisms underlying impaired balance and gait control in persons with stroke as well as designing and evaluating new intervention methods to improve balance control after stroke. Recently she received a postdoc scholarship from the Ministry of Science and Technology, Israel.



Yogev Koren, PT PhD student

Yogev Koren PT , PhD student at the Laboratory of Motor-Control and Rehabilitation of Walking and BGU Aleh Negev Translational Neurorehabilitation Clinic , Ben-Gurion University. Currently I am investigating gaze behavior and its association with gait in elderly and stroke survivors. Specifically, the interplay between visually guided locomotion and visual control of posture, as reflected by downward gazing behavior.

Organizing committee

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

Shirley Handelzalts, Yogev Koren*

Simona Bar-Haim PhD, PT [director of the Laboratory for Rehabilitation and Motor
Control of Walking](#)

*PhD candidates at



מספר מילים בעברית –

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

בית הספר יתקיים ב- **17/3/2019** (8:30 עד 17:00) בבנין דייכמן (M8), באוניברסיטת בן גוריון (5 דקות הליכה מתחנת הרכבת הסמוכה, תחנת האוניברסיטה).

ספר התקצירים המלא של ההרצאות יפורסם לנרשמים.

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מספר המקומות מוגבל. מהרו להירשם.