VIRTUAL REHABILITATION 2009
University of Haifa
June 29 – July 2, 2009

Monday, June 29th
Education and Science Building, Rooms 566 and 570

WORKSHOP B: Virtual Humans for Virtual Rehabilitation.  N Magnenat-Thalmann, D Thalmann

12:30-13:30  LUNCH – Conference Registration Opens

13:30-16:30  WORKSHOP C: Integrating Virtual Reality into Clinical Practice.  B Lange, S Flynn, J Wilken
WORKSHOP D: Virtual Reality and Brain Imaging Technologies.  S Slobounov

Tuesday, June 30th
Main Building, Hecht Auditorium

8:00-17:30  Conference Registration Open
9:00 - 9:10  Opening Remarks  T Weiss, E Keshner

9:10-10:30  PLATFORM SESSION I: PSYCHOLOGICAL AND NEUROPSYCHOLOGICAL IMPACT
  Chairs: N Katz, M Safir
The impact of personality traits on the experience of presence.  R Samana, H Wallach, M Safir
Development and clinical results from the virtual IRAQ exposure therapy application for PTSD.  AA Rizzo, G Reger,
  B Newman, K Holloway, B Rothbaum, J Difede Weill, G Gaehm, T Parsons, R McLay, S Johnston, K Graap, J Spitalnick,
  P Bordnick
How do telerehabilitation technologies change clinical practice and interprofessional communication? A
qualitative case-study (S)  D Kairy, L Pascale, V Claude
Eleven months of home telerehabilitation with virtual reality videogames - lessons learned  M Golomb, B Rabin, Mo
  Barkat-Masih, M Abdelbaky, M Huber, G Burdea

10:30-11:00  Refreshment Break
11:00-12:20  PLATFORM SESSION II: SPATIAL NAVIGATION
  Chairs: E Klinger, J Fung
Blind children navigation through gaming and associated brain plasticity.  J Sanchez, A Tadres, L Merabet, A Pascual-
  Leone
Integrate the BlindAid system in a traditional orientation and mobility rehabilitation program.  O Lahav, D Schloerb,
  M Srinivasan
PlayCubes: Monitoring constructional ability in children using a tangible user interface and a playful virtual
  environment (S).  S Jacoby, G Gutwillig, D Jacoby, N Josman, PL Weiss, E Sharlin, M Koike, Y Itoh, N Kawai and Y
  Kitamura
Feasibility of using an immersive driving simulator for rehabilitation: A pilot study.  R Kizony, B Mazer, A Nota, V
  Rubin

12:20-13:30  LUNCH
13:30-14:30  Keynote Speaker Dr. Grigore (Greg) Burdea
  Rubber Ball to Cloud Rehabilitation© - Musing on the Future of Therapy
  Chair  AA Rizzo
Tuesday, June 30th (con’t)

14:30-15:30  POSTER SESSION I
14:30-15:00  Presenters Available
Self Management of Stroke Supported By Assistive Technology. N Nasr, S Mawson, P Wright, G Mountain
Visual Feedback for Mixed Reality Stroke Rehabilitation. (S) N Lehrer, L Olson
Yes Wii Can! Using digital games as a rehabilitation platform after stroke – The role of social support.
W van den Hoogen, W IJsselsteijn, Y de Kort
Nintendo Wii remote and Nunchuck as a wireless data subsystem for digital acquisition of analog physiologic data relevant to motor rehabilitation after stroke; part II. (S) M Matamoros, M Negrete, R Leder
Computer game environment for assessment of self-initiated behavior and measurement of its neural correlates using fMRI. S Preminger, T Harmelech, O Laufer, S Gilai-de-Dotan, A Arieli, R Malach

15:00-15:30  Presenters Available
Virtual environments for the study of the effect of context on dual tasking. R Kizony, O Elion, Y Bahat, I Siev-Ner, J Fung, N Katz
A new perspective for virtual mirror therapy. (S) M Pälmke, T Schüler, H von Piekartz, K Morisse
Probing the behavioral and physiological correlates underlying projection of the body via 3D virtual haptic environments as a basis for developing novel therapeutic interventions. (S) L Raz, PL Weiss, M Reiner
Virtual reality methodology for pruritus and pain. F Magora, V Leibovici, S Cohen

15:00-15:30  Refreshments available

15:30-16:50  PLATFORM SESSION III: DEVELOPMENTAL DISABILITY
Chairs: A Merians, J Sanchez
A new virtual environment paradigm for high functioning autism intended to help attentional disengagement in a social context. O Grynszpan, J Nadel, N Carbonell, J Simonin, J Constant, F Le Barillier, JC Martin
Virtual reality in rehabilitation of attention deficit / hyperactivity disorder. (S) R Anton, D Opris, A Dobrean, D David, AA Rizzo
e-Empowerment of young adults with special needs. (S) C-N Shpigelman, PL Weiss, S Reiter
Lessons learned towards a best practices model of virtual reality intervention for individuals with intellectual and developmental disability. M Lotan, S Yalon-Chamovitz, PL Weiss

17:00-21:30  WELCOME BANQUET/CRUISE on the SEA OF GALILEE (tickets are required)

WEDNESDAY, JULY 1ST
Main Building, Hecht Auditorium

8:00-17:30  Conference Registration Open
9:10-10:00  PLATFORM SESSION IV: Short Paper Presentations
Chairs: N Josman, O. Even-Zohar
Ethnicity/gender and sense of presence in a virtual environment. I Almog, H Wallach, M Safir
VirHab - A virtual reality system for treatment of chronic pain and disability. U Feintuch, Z Meiner, M Tuchner, A Lorber-Haddad, S Shiria
PREVIRNEC: A telerehabilitation system for neuropsychological disorders. D Tost, M Ferré, P García, J-M Tormos, T Roig, A García
Breath: A game to motivate the compliance of postoperative breathing exercises. B Lang, S Flynn, M Silverman, A Huerta, M Bolas
Wednesday, July 1st (con’t)

10:00-11:00 Keynote Speaker Professor Mordechai Shani
The Impact of Technology on Health Care: A Global Perspective
Chair: W Greenleaf

11:00-11:30 Refreshment Break

11:30-12:30 PLATFORM SESSION V: MODELS FOR ASSESSMENT AND RECOVERY
Chairs: P Sharkey, M Levin
Modeling the dynamics of the recovery process in robot therapy. M Casadio, P Morasso, V Novakovic, V Sanguineti
Using virtual reality to assess neck pain. (S) H Sarig-Bahat, PL Weiss, Y Laufer
Proximodistal gradient in the perception of delayed stiffness. (S) I Nisky, A Karniel

12:30-13:30 LUNCH (ISVR Board Meeting)

13:00-16:00 EXHIBITOR PRESENTATIONS - Sponsored by MOTEK BV www.motekmedical.com

14:00-16:00 POSTER SESSION II

15:00-15:30 Refreshments available

14:00-14:30 Presenters Available
The role of the physical embodiment of a music therapist robot for individuals with cognitive impairments:
Longitudinal study. A Tapus
Collaborative Puzzle Game. Fostering collaboration in children with Autistic Spectrum Disorder (ASD) and with
typical development. (S) A Battocchi, F Pianesi, P Venuti, A Ben-Sasson, E Gal, PL Weiss
Issues in the design of a virtual instrumental Activity of Daily Living (VIADL) for executive functions exploration.
X Cao, A-S Douguet, P Fuchs, E Klinger
Vital Mind: An interactive set-top box platform for cognitive training applications. A Miotto, J Lessiter

14:30-15:00 Presenters Available
Simulation as part of rehabilitation. S Ilnai, Y Munz, A Ziv, G. Zeilig
Construct validity of the VAP-S -Comparison between healthy controls and 3 clinical populations. N Josman,
E Klinger, R Kizony
Reo assessment to guide the REOGO therapy: Reliability and validity of novel robotic scores. O Einav, D Yoeli,
S Faran, S van Kaick, M Kerzher, G Magnzi, K-H Maurit
Implementation of the Multiple Errand Test in a NeuroVR-supermarket. (S) S Raspelli, L Carelli, F Morganti,
PL Weiss, R Kizony, N Katz
Gait training using virtual reality and real-time feedback in a person with a transfemoral amputation B Darter,
J Wilken, M Brawner, E Sinitski

15:00-15:30 Presenters Available
Application of virtual reality in postural stability rehabilitation. L Czerwosz, J Blaszczyk, M Mraz, M Curzytek
Games-based biofeedback training - Applications in rehabilitation and fall prevention. (S) E Heiden, Y Lajoie,
A Nativ
Real-time feedback signal represents the underlying coordination mode of sit-to-stand. (S) E Heiden, T Cluff,
B Richardson, R Balasubramaniam
Influence of optic flow on a sit-to-stand task in healthy children and adults. (S) J Slaboda, E Keshner
Wednesday, July 1st (con’t)

15:30-16:00 Presenters Available
Virtual reality as adjunctive therapy for upper limb rehabilitation in cerebral palsy. R Guberek, S Schneiberg, H Sveistrup, P McKinley, M Levin, F Cosentino
Upper limb rehabilitation using augmented feedback. E Carmeli, S Peleg, G Bartur, E Elbo, J-J Vatine
The Rutgers Arm II Rehabilitation System. A case series. D Cioi, G Burdea, M Holenski
Evaluation of a system for real-time analysis of muscle function: shoulder and elbow muscles. AJ van den Bogert, T Geijtenbeek, O Even Zohar

16:15-17:00 PANEL DISCUSSION: Facilitating Multidisciplinary Research for Rehabilitation
E Keshner, moderator with panel members D Chen, W Greenleaf, M Levin, I Siev-Ner

17:00-18:00 ISVR BUSINESS MEETING - all conference attendees welcome

18:00-21:00 RECEPTION sponsored by the Mayor of Haifa followed by a complementary tour of the city of Haifa (ALL ARE WELCOME)

THURSDAY, JULY 2ND
Main Building, Hecht Auditorium

8:00-15:00 Conference Registration Open

9:00-9:45 Keynote Speaker Professor Sheizaf Rafaeli
Personal Computing to Communal Communication: Virtual Communities and the Net
Chair: PL Weiss

9:45-10:45 PLATFORM SESSION VI: Short Paper Presentations
Chairs: U Feintuch, S Mawson
Wii-based compared to standard of care balance and mobility rehabilitation for two individuals post-stroke. J Deutsch, D Robbins, J Morrison, P Guarerra-Bowby
Virtual reality task for telerehabilitation dynamic balance training in stroke subjects. I Cikajlo, M Rudolf, N Goljar, Z Matjačić
Virtual reality enhanced rehabilitation for a service member with bilateral lower extremity amputations: A case study. S Kruger, J Bell, B Schnall
Real-time movement biofeedback for walking gait modification in knee osteoarthritis. T Wrigley, M Simic, M Hunt, R Hinman, K Bennell

10:45-11:15 Refreshment Break

11:15-12:55 PLATFORM SESSION VII: BALANCE and GAIT REHABILITATION
Chairs: J Deutsch, S Adamovich
No transfer of gains after a single training session within a virtual environment to fundamental tests of stability. (S) O Elion, Y Bahat, I Sela, I Siev-Ner, PL Weiss, A Karni
Postural behaviors to combined disturbances of the visual field and base of support. E Keshner, J Slaboda
Gait improvement in patients with cerebral palsy by visual and auditory feedback. Y Baram, R Lenger
Virtual reality and gait rehabilitation - Augmented feedback for the Lokomat. (S) L Zimmerli, A Duschau-Wicke, A Mayr, R Riener, L Lünenburger
Development of a force-sensing cane instrumented within a treadmill-based virtual reality locomotor system. (S) C Perez, A Oates, L Hughey, J Fung
Thursday, July 2nd (con’t)

12:55-14:00  LUNCH  (VR2009 steering committee meeting)

14:00-16:00  PLATFORM SESSION VIII: UPPER EXTREMITY REHABILITATION AND ROBOTICS
Chairs: D Liebermann, V Sanguineti

Emotion-Aware System for upper extremity rehabilitation. M Mihelj, D Novak, M Munih

Manual motor control during “virtual” self-motion: Implications for VR rehabilitation. WG Wright, E Schneider

Upper limb and grasp rehabilitation and evaluation of stroke patients using HenRiE device. J Podobnik, M Munih, M Mihelj

Kinematic features of arm and trunk movements in stroke patients and age-matched healthy controls during reaching in virtual and physical environments. DG Liebermann, S Berman, HP Weingarden, MF Levin, PL Weiss

Robotically facilitated training of the hemiparetic upper extremity as an integrated functional init in virtual environments. A Merians, G Fluet, Q Qiu, S Adamovich

Robot-assisted virtual rehabilitation (NJIT-RAVR) system for children with upper extremity hemiplegia. G Fluet, Q Qiu, S Saleh, D Ramirez, S Adamovich, D Kelly, H Parikh

16:00-16:30  Refreshment Break  (awards committee meets)

16:30-17:00  CLOSING CEREMONY WITH AWARD PRESENTATIONS