Date: December 31, 2018

Speaker: Dr. Tal Shafir

Affiliation: Research Fellow, The Emili Sagol Creative Arts Therapies Research Center, University of Haifa
Adjunct Research Investigator, Department of Psychiatry, University of Michigan

Title: Emotion perception and expression through movement in human-robot interaction

Abstract:

One of the main challenges in creating humanoid robots is emotional perception and expression through voice, facial expressions and especially through body movements and posture. Using Laban Movement Analysis we have identified unique sets of whole body movement characteristics which are associated with the four basic emotions: fear, anger, sadness and happiness, and are used for both emotion recognition from movement and emotion expression through movement. Using Kinect in combination with machine learning enabled automatic identification of these motor characteristics in people's movements, paving the way towards implementation of emotional perception and expression in robots. In my presentation I will describe briefly the brain mechanisms underlying movement-emotion interaction, and how to use our understanding of these mechanisms to enable emotional perception and expression through movement in human-robot interaction.

Bio:

After graduating law school at the Hebrew University of Jerusalem, Dr. Shafir followed her passion and studied dance-movement therapy in University of Haifa. Several years of work with children with neurological disorders led her back to school to complete her Masters and PhD in motor control in University of Michigan School of Kinesiology, as well as two postdoctoral fellowships: in brain-behavior interactions in infants with iron deficiency at the Center for Human Growth and Development, and in affective neuroscience at the Molecular and Behavioral Neuroscience Institute, both at University of Michigan. This background enabled her to develop her unique interdisciplinary research, focusing on movement-emotion interaction and its underlying brain mechanisms, behavioral expressions, and therapeutic applications. This research is the topic of her TEDx talk: How your Body Affects your Happiness, which has over a quarter million views, and her 2016 paper which was chosen by the business newspaper 'The Marker' as one of the 26 most inspiring studies of that year.