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A model for the dynamics of stabilizing biological systems

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A novel biologically inspired theory for brain information processing and encoding is presented for the first time. In this model, the world is described as networks of stabilizers components which claimed to control all biological structures, embedded in and implemented by organic systems of any form. Significant evidence for the theory is first presented in a review, and then the theory is described in an abstract way and how it is connected to information theory and qualia. And finally, preliminary results of using a simulation of the model as unsupervised ML system to solve a task are presented with comparison to classical deep learning algorithms.

Recent Publications:

1. AB Shalom, S Hanassy, L Greenstein, T Remez (2014). System and methods for risk management analysis of a pressure sensing system. US Patent App. 14/372,030.

2. A Amedi, S Hanassy (2014). Infra-Red based devices for guiding blind and visually impaired persons. US Patent App. 13/976,032

3. I Zelman, M Titon, Y Yekutieli, S Hanassy, B Hochner, T Flash (2013). Kinematic decomposition and classification of octopus arm movements. *Frontiers in computational neuroscience* 7, 60.

4. S Maidenbaum, S Hannasi, S Abboud, R Arbel, A Shipuznikov, (2012). The EyeCane-Distance information for the blind.... *Journal of molecular neuroscience* 48, S75-S76.

5. S Levy-Tzedek, S Hanassy, S Abboud, S Maidenbaum, A Amedi (2012). Fast, accurate reaching movements with a visual-to-auditory sensory substitution device. *Restorative neurology and neuroscience* 30 (4), 313-323.

Biography

Shlomi Hanassy is the owner and establisher of Hanassy R&D Ltd. IL. Shlomi is an algorithm developer and neurobiologist specialized in motor control and vision processing. He is also an inventor and experienced developer of several innovations in those fields. In 2011-2012 he worked as algorithm developer at Wellsens tech (http://www.wellsense-tech.com/), developing algorithms for pressure mat while serving as a consultant for the EU "Stiff-flop" project (http://www.stiff-flop.eu/). During 2007-2010 he was a PhD student and algorithm developer of visual substitution devises at Amir Amedi's lab for higher brain functions while serving as a co-worker in Benny Hochner's lab for motor control and at the EU "Octopus project" (http://www.octopusproject.eu/). Since 2007 Shlomi is holding an M.sc in medical neurobiology from the Hebrew University (Hadassah Ein Carem medical school) and a B.A in computer science and administration from the Open University of Israel (since 2003).

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