Lior Shmuelof - Curriculum Vitae

Department of Brain and Cognitive Sciences,
Ben-Gurion University of the Negev, Israel

1. Personal Details

Name: Shmuelof, Lior

Date and Place of Birth: January 14th 1977, Jerusalem, Israel

Address: Work: Department of Brain and Cognitive Sciences, Ben-Gurion University of the Negev P.O.B. 653 Beer-Sheva 841050,1 Israel

Home: 17 Carmel St. Rehovot, 76305, Israel

Phone: 054-7510795

Email: shmuelof@bgu.ac.il

2. Education

2002	B.Sc. in Psychology and Biology - program for outstanding students in life sciences and psychology, Hebrew University of Jerusalem.
2004	M.Sc. in Brain and Behavioral Sciences, Neurobiology Department, Hebrew University of Jerusalem. Dissertation: "Dissociation between ventral and dorsal fMRI activation during action observation".
2009	Summa cum Laude Ph.D. in Brain and Behavioral Sciences, Neurobiology Department, Hebrew University of Jerusalem. Topic: " The dual properties of the parietal cortex in recognition and execution of motor actions: An fMRI study".
2008-2011	Postdoctoral Research Scientist at the Motor Performance Laboratory, Neurology Department, Columbia University Medical Center, NY, USA.
2011- 2013	Postdoctoral trainee at the Department of applied Mathematics and Computer science, Weizmann Institute of Science, Israel.

3. Employment History

2013 – present Lecturer, Department of Brain and Cognitive Sciences, Ben-Gurion University of the Negev, Israel

4. **Professional Activities**

2004-2009   Initiated a pre-surgical fMRI evaluation service in Hadassah Medical Center for localizing language, memory, and motor related areas in patients before removal of brain tumors. This project was conducted under the supervision of Prof. Moshe Gomori.

2011-present Associate Member in Faculty of 1000.

2012-present Guest Associate Editor in Frontiers in Computational Neuroscience and Frontiers in Human Neuroscience.

Ad hoc reviewer for: Acta Psychologica, Experimental Brain Research, Journal Of Neurophysiology, Journal Of Neuroscience, NeuroImage, Neuropsychological Rehabilitation, Plos One, Plos Computational Biology, Frontiers, IEEE.

5. **Educational Activities**

2003-2008   Teaching Assistant in the following courses: "Basic Statistics", "Introduction to Physiology", and "Brain and Behavior", Department of Neurobiology, Hebrew University.

6. **Awards and Fellowships:**

2014   Alon Fellowship for young faculty members from the Israeli Council for Higher Education

2011   Fellowship for Postdoctoral trainee at the Weizmann Institute of Science

2010   Dr. Shlomiuk award from the board of The Hebrew University of Jerusalem for outstanding Ph.D. Research

2009   MACHIAH Foundation/JCF Life science fellowship to support advanced training in the United States.

2008   NCM fellowship, Neural Control of Movement, Florida

7. Scientific Publications

h-index (according to the web of science, May 2013) = 7

1. ***Shmuelof L**, Zohary E. (2005) Dissociation between ventral and dorsal fMRI activation during object and action recognition. Neuron 47:457–470. [Impact Factor – 15.8, Time Cited by others: 102, journal ranked 5 in Neurosciences, Q1].

2. **Shmuelof L**, Zohary E. (2006) A mirror representation of others' action in the human anterior parietal cortex. Journal of Neuroscience 26: 9736-9742. [Impact Factor – 6.9 , Time Cited by others: 54, journal ranked 22 in Neurosciences, Q1]

3. **Shmuelof L**, Zohary E. (2007) Watching others' actions: Mirror representations in the parietal cortex. The Neuroscientist 13: 667-672. Review. [Impact Factor – 5.6 , Time Cited by others: 16, journal ranked 33 in Neurosciences, Q1]

4. ***Shmuelof L**, Zohary E. (2008) Mirror-image representation of action in the anterior parietal cortex. 2008. Nature Neuroscience 11: 1267-1269. [Impact Factor – 15.3 , Time Cited by others: 31, journal ranked 6 in Neuroscience, Q1]

5. *Eisenberg M#, **Shmuelof L**#, Vaadia E, Zohary E. (2010) Functional Organization of Human Motor Cortex: Directional Selectivity for Movement. Journal of Neuroscience 30: 8897-8905. # - equal contribution. [Impact Factor – 6.9 , Time Cited by others: 13, journal ranked 22 in Neurosciences, Q1]

6. *Eisenberg M, **Shmuelof L**, Vaadia E, Zohary E. (2011) The Representation of Visual and Motor Aspects of Reaching Movements in the Human Motor Cortex. Journal of Neuroscience 31:12377-12384. [Impact Factor – 6.9 , Time Cited by others: 3, journal ranked 22 in Neurosciences, Q1]

7. ***Shmuelof L**, Krakauer JW. (2011) Are we ready for a natural history of motor learning? Neuron 72: 469-76. Review. [Impact Factor – 15.8 , Time Cited by others: 16, journal ranked 5 in Neurosciences, Q1]

8. ***Shmuelof L**, Krakauer J, Mazzoni P. (2012) How is a motor skill learned? Change and invariance at the levels of task success and trajectory control. Journal of Neurophysiology 108: 578:594. [Impact Factor – 3.3 , Time Cited by others: 3, journal ranked 22 in Physiology, Q2]

9. ***Shmuelof L**, Huang V, Haith A, Delnicki RJ, Mazzoni P, Krakauer JW. (2012) Overcoming motor "forgetting" through reinforcement of learned actions. Journal of Neuroscience 32: 14617-14621. [Impact Factor – 6.9 , Time Cited by others:5 , journal ranked 22 in Neurosciences, Q1].

10. Mawase F, **Shmuelof L**, Bar-haim S, Karniel A. Savings in locomotor adaptation task explained by dual-rate context-dependent learning process. Journal of Neurophysiology 111: 1444-54. [Impact Factor – 3.3, journal ranked 22 in Physiology, Q2].

11. ***Shmuelof L**, Yang J, Caffo B, Mazzoni P, Krakauer JW. The neural correlates of learned motor acuity. Accepted Journal of Neurophysiology. [Impact Factor – 3.3, journal ranked 22 in Physiology, Q2].

8. Scientific conferences, Lectures, and Presentations:

2008   Shmuelof L, Eisenberg M, Vaadia E, Zohary E. Representation of motor and visual aspects of movement in the human primary motor cortex. Society for Neuroscience Annual Meeting, Washington, DC, USA.

Shmuelof L, Hertz U, Zohary E. Hierarchal representation of observed actions in the parietal cortex. Vision Science Society Annual Meeting, Naples, FL, USA.

Shmuelof L, Hertz U, Zohary E. Mirror-like representation of observed actions. Neural Control of Movement Annual Meeting, Naples, FL, USA.

2009   Shmuelof L, Zarahn E, Krakauer J, Mazonni P. Learning a new motor skill: Generalization, offline learning, and variation in practice strategies. Society for Neuroscience Annual Meeting, Chicago, IL, USA.

2010   Shmuelof L, Zarahn E, Mazonni P, Krakauer J. What can functional imaging tell us about motor skill learning? Israeli Society for Neuroscience Meeting, Eilat, Israel.

Shmuelof L, Zarahn E, Mazonni P, Krakauer J. In search of motor skill representation in the brain: Training-dependent changes in speed-accuracy trade-off functions. Israeli Society for Neuroscience Meeting, Eilat, Israel.

Shmuelof L, Zarahn E, Mazonni P, Krakauer J. Finding the "sweet spot" for motor skill Learning: local versus generalized changes in speed-accuracy trade-off functions. The 2nd International Workshop on Perceptual Learning, Eilat, Israel.

Shmuelof L, Zarahn E, Krakauer J, Mazonni P. Skill learning as training-dependent changes in speed-accuracy trade-off functions. Advances in Computational Motor Control, San Diego, CA, USA.

Shmuelof L, Zarahn E, Mazonni P, Krakauer J. What can functional imaging tell us about motor skill learning? Society for Neuroscience Annual Meeting, San Diego, CA, USA.

2011   Shmuelof L, Defining motor skill learning as improvement in movement execution. 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Boston, USA.

Shmuelof L. What can motor skill learning tell us about brain plasticity? International Conference on Visual & Cross-Modal Plasticity, Toronto, Canada.

Shmuelof L, Huang VS, Haith AM, Delnicki RJ, Mazzoni P, Krakauer JW. Forgetting visuomotor mappings: Adapted states decay back to reinforced states. Israeli Society for Neuroscience Meeting, Eilat, Israel.

Shmuelof L, Delnicki RJ, Huang VS, Haith AM, Mazzoni P, Krakauer JW. Error-based adaptation is suppressed and model-free mechanisms activated when actions and outcomes are uncorrelated. Society for Neuroscience Annual Meeting, Washington, DC, USA.

2012

Shmuelof L, Huang V, Haith A, Delnicki RJ, Mazzoni P, Krakauer JW. Overcoming motor "forgetting": adapted states decay back to reinforced states. Computational Motor Control Workshop, BGU, Israel.

Shmuelof L, Kodl J, Flash T. The compositional representation of trajectory in the motor cortex: An fMRI Study. ISFN, Israel.

Shmuelof, L. The puzzle of Motor learning: Bridging the laboratory real world divide. ELSC special seminar. Jerusalem, Israel.

2013

Shmuelof L, Flash T, Krakauer JW. The neural basis of error-based and reinforcement learning in response to a visuomotor rotation. International Basal Ganglia Society Meeting, Israel.

Kohen D, Karklinsky M, Flash T, Shmuelof L. The building blocks of curved trajectories: studying the effect of shortened preparation time on execution variables. Computational Motor Control Workshop, BGU, Israel.

Shmuelof, L. The puzzle of motor learning: from skill learning to adaptation. Computational Motor Control Workshop, BGU, Israel.

Mawase F, Shmuelof L, Bar-haim S, Karniel A. Savings in locomotor adaptation task explained by dual-rate context-dependent learning process. Computational Motor Control Workshop, BGU, Israel

2014

Kohen D, Karklinsky M, Meirovitch Y, Flash T, Shmuelof L. Shortening preparation time for curved trajectories reveals an ongoing control of movement segments. Neural Control of Movement Annual meeting, Amsterdam, Holland.