

Moran Furman

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Education

- 1997-2004 **PhD in Biomedical Engineering**
Technion – Israel Institute of Technology, Haifa, Israel
Advisor: Prof. Moshe Gur
Thesis: "A Neural Model for Motion Processing in the Visual Cortex during Pursuit Eye Movements"
- 1991-1994 **BSc in Physics and Mathematics, Cum Laude**
Tel-Aviv University, Tel-Aviv, Israel

Research Experience

- 2008-pres. Postdoctoral Fellow with Prof. Michael C. Crair
Department of Neurobiology, Yale University School of Medicine
- 2006-2008 Postdoctoral Fellow with Prof. Xiao-Jing Wang
Department of Neurobiology, Yale University School of Medicine
- 2004-2005 Research Fellow, Technion Research and Development Foundation Ltd.

Honors and Awards

- 2006-2008 Swartz Fellowship for Postdoctoral Research in Computational Neuroscience
- 2006 Best Paper Award, EuroHaptics Conference, Paris
- 2003 Travel award to attend the 29th Göttingen Neurobiology Conference, Israeli Ministry of Science and Technology
- 2002, 2005 Excellence in Teaching Award, Department of Mathematics, Technion IIT
- 2002 Gutwirth Award for Excellence in Graduate Research
- 1997-2003 Ph.D. Scholarship, Technion IIT
- 1994 B.Sc. Cum Laude, Tel-Aviv University

Teaching Experience

- 2002-2006 Lecturer, Physics and Mathematics
Center for Pre-academic Education, Technion IIT
- 2000, 2003 Teaching Assistant
Department of Biomedical Engineering, Technion IIT
- 1997-2006 Teaching Assistant
Department of Mathematics, Technion IIT

Other Experience and Professional Membership

- 2008-pres. New York academy of sciences
- 2006-pres. Society for Neuroscience
- 2003 Society for Neuroscience
- 1998-2002 Israeli Society for Neuroscience
- 1994-1997 Scientific Research Officer
Directorate of Research and Development, Israeli Ministry of Defense

Publications

Peer reviewed papers (in neuroscience)

- Furman M** and Wang X-J (2008) Similarity effect and optimal control of multiple-choice decision making. *Neuron*, 60: 1153-1168.
- Furman M** and Gur M (2005) Alteration of the perceived path of a non-pursued target during smooth pursuit: Analysis by a neural network model. *Vision Research*, 45: 1755-1768.
- Furman M** and Gur M (2003) Self-organizing neural network model for motion processing in the visual cortex during smooth pursuit. *Vision Research*, 43: 2155-2171.

Peer reviewed papers (in physics)

- Perelmutter L, Sudai M, Alimi R, **Furman M** et al. (1999) Plasma propagation and ignition of propellant in the chamber of a SPETC gun. *IEEE Transactions on Magnetics*, 35(1): 213-217.

Conference Proceedings

- Furman M** and Wang X-J (2008) A continuous attractor network model of spiking neurons for multiple-choice decisions. *Society for Neuroscience Abstracts*. (Talk)
- Furman M** and Wang X-J (2008) A biophysically-based neural model for multiple-choice decisions. *Sloan-Swartz Centers for Theoretical Neuroscience Annual Meeting*. (Talk)
- Furman M** and Wang X-J (2008) A line-attractor network model of multiple choice decisions. *Computational and Systems Neuroscience (COSYNE)*.
- Furman M** (2006) Size and position invariant recognition by a neural network with adaptive fractal-like connectivity patterns. *Society for Neuroscience Abstracts*. (Talk)
- Furman M** (2006) A neural network model of invariant feature recognition in the visual cortex. *28th International symposium of computational neuroscience, Montreal, CA*
- Reiner M, Hecht D, Halevy G, **Furman M** (2006) Semantic Interference and Facilitation in Haptic Perception. *EuroHaptics Conference, Paris, France*. (Best Paper Award).
- Reiner M, **Furman M**, Halevy G, Hecht D, Pidgany L, and Vainsencher D (2005) Presence and Haptics. *The Caesarea Rothchild conference on Virtual Environments. Haifa University, Israel*.
- Dikovsky L, Reiner M, Pratt H, Halevy G, **Furman M**, and Vainsencher D (2005) Neurophysiological Correlates of Breaks in Presence in Virtual Environments. *Reviews in the Neurosciences*. 16: S16-S16 Suppl. 1
- Reiner M, **Furman M**, Halevy G, Hecht D, Pidgany L, and Vainsencher D (2005) The role of haptics in the sense of presence. *Computational Motor Control Workshop, Ben-Gurion University, Israel*
- Reiner M, Halevy G, Hecht D, **Furman M** and Vainsencher D (2004) Discrimination among three types of anomalies in visual-haptic virtual environment. *Proceedings of the 7th Annual International Workshop on Presence, Valencia, Spain*.
- Furman M** and Gur M (2003) Motion perception during pursuit eye movements: A neural network study. *Proceedings of the 29th Göttingen Neurobiology Conference*.
- Furman M** and Gur M (2002) Unsupervised neural network model for pursuit-related MST cells. *Society for Neuroscience Abstracts*, 28:364.15.

(Publications – continued)

Furman M and Gur M (2001) A neural model for motion processing in the visual cortex: Analysis of induced motion phenomenon. *Neural Plasticity*, 8(3):172.

Furman M and Gur M (1999) A neural model for motion processing in the visual cortex during pursuit eye movements. *Neuroscience Letters*, S16-S16 Suppl. 54.