



**FLORIDA-ISRAEL INSTITUTE**

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**NEWSLETTER FROM THE INSTITUTE'S CO-DIRECTORS**

February 2008

**Israeli Speakers at the FAU Neuroscience Seminar Series**



Dr. Emmanuel Donchin (USF) Dr. Avishai Henik (Ben-Gurion Univ.)

The Florida-Israel Institute, in collaboration with the FAU College of Biomedical Science, is bringing world renowned Israeli Neuroscience researchers to the FAU Neuroscience Seminar Series.

**Dr. Donchin's February 12, 2008 lecture "The Brain as a Finger: The P300 Based Brain Computer Interface"** focused on a novel technology that allows a person to use the electrical activity of the brain as a substitute for lost motor control. He and co-workers at the University of South Florida began in 2003 to test the system with ALS patients with considerable success. More recently Dr. Donchin's team adapted the system to allow a user to control a wheelchair-mounted robotic arm. **Emanuel Donchin** grew up in Tel-Aviv, studied Psychology at the Hebrew University in Jerusalem, received his Ph.D. from the University of California, Los Angeles in 1965. Between 1965 and 1968 he was a research associate at Stanford's Department of Neurology and at the Neurobiology Branch at NASA-Ames Research Center. In 1968 he joined the Department of Psychology at the University of Illinois in Urbana-Champaign as an Associate Professor. He remained at the UIUC till 2001, serving as head of the department between 1980 and 1994. He is currently a Professor Emeritus at the UIUC and a professor and Department Chair in the University of South Florida Department of Psychology. His field of professional interest is cognitive psychophysiology.

**Dr. Avishai Henik's March 11, 2008 lecture** is titled "**Neurocognitive Mechanisms of Number Processing and Developmental Dyscalculia**". **Avishai Henik's** research encompasses cognitive systems dealing with numerical processing, word processing, attention (spatial and selective), and synesthesia. In all of these areas he investigates the brain- behavior relationship both in normal and brain-injured populations. To this

end, he uses behavioral methods as well as various neuroimaging techniques like fMRI and ERP. He also uses transcranial magnetic stimulation (TMS) with non-injured participants. He was born in Tel Aviv in 1945 and was a member of the first class of psychology students at what was then called the Institute for Higher Education of the Negev, later to become Ben-Gurion University of the Negev. Henik continued his studies at Hebrew University. He received his doctorate in Cognitive Psychology with a concentration in Visual Attention. Over the years he served as Chairman of the Department of Behavioral Sciences, Chairman of the Zlotowski Center for Neuroscience, and most recently as Dean of the Faculty of Humanities and Social Sciences, all at Ben-Gurion University.

### Featuring a Florida-Israel Institute Spring 2008 Scholarship Recipient

This month we feature FII scholarship recipient **Sharon Barak (University of Florida)** who tells us in her own words about her life in Israel and studies in Florida:



My name is **Sharon Barak**. I was born in Haifa, Israel. In the army, I served in commanding and instruction duties. Last role: Deputy of Females Officer Course. Discharge Rank: Lieutenant. Upon discharge from the army, I started my academic career. I have a Teaching Diploma & Bachelor of Education degree in Physical Education from the Zinman College in the Wingate Institute. Upon graduation, I moved to Florida in order to obtain a Master's in Exercise and Sports Sciences from the University of Florida. Currently, I am a Rehabilitation Sciences (RS) Doctoral student (RSD) at the University of Florida. The RS program's goal is to prepare rehabilitation scholars to address the need for faculty in the rehabilitation disciplines. This Ph.D. program is the only one of its kind in the

Southeast, and the largest in the United States. RS students prepare for an academic/research career in rehabilitation science by developing skills in teaching, research, and interdisciplinary teamwork. Students design their own specialty areas within one of three broad categories (Movement Science, Communication and Swallowing Science, and Disability Science). My specialty area is Movement Science. I expect to complete my Ph.D. degree requirements by August 2008

I worked as a research assistant for Dr. Pamela Duncan, who is recognized nationally and internationally as a leader in stroke rehabilitation outcomes research and practice. In 2005, Dr. Duncan received a National Institutes of Health grant for 13 million dollars, in order to improve stroke patients' ambulation. As her research assistant, I partook in grant efforts and learned the most up-to-date techniques known to improve ambulation post-stroke.

Inspired by my work with Dr. Duncan, my research interests include evaluation of outcomes of geriatric rehabilitation, development of health outcome measures, measurement of physical performance in the geriatric population and stroke survivors, and enhancing mobility and community ambulation of frail elderly and stroke victims through physical rehabilitation. Accordingly, my dissertation examines the potential of using accelerometry as a physical activity and community ambulation outcome measure post-stroke.