



December 19, 2016

Dear ICS members,

It is my great pleasure announcing that the 2016 Tenne Family Prize in memory of Lea Tenne for Nanoscale Sciences will be awarded to Prof. Ernesto Joselevich of the Weizmann Institute of Science (ernesto.joselevich@weizmann.ac.il) for his work on synthesis, organization and characterization of one-dimensional nanostructures, and for their integration into functional nano-systems.

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Prof. Ernesto Joselevich
The Weizmann Institute of Science

Ernesto was born in Buenos Aires, Argentina (1968) and moved to Israel in 1986. In 1989 he received his B.Sc. from the Hebrew University of Jerusalem and in 1997 obtained his Ph.D. with Itamar Willner at the Hebrew University. Following a postdoc research with Charles M. Lieber at Harvard University (1998-2000) he joined the Department of Materials and Interfaces at the Weizmann Institute. Since 2014 he is the Director of the Helen and Martin Kimmel Center for Nanoscale Science at the Weizmann Institute. His list of prizes includes the 2007 ICS Excellent Young Scientist Prize. In 2014, he was awarded an ERC Advanced Grant.

Prof. Joselevich has pioneered the guided growth of horizontal nanotubes and nanowires on surfaces as a way of producing ordered arrays and well-defined geometries. This new approach of bottom-up assembly enabled the controlled formation of a variety of previously unattainable nanotube and nanowire structures, including highly straight, kinked, wavy, crossed, serpentine and coiled nanotubes, and highly controlled semiconductor structures with potential applications not available by other means, including the "self-integration" of nanowires into circuits and photo-detectors via guided growth. His group has also pioneered the field of nanotube torsion. Starting with the first study of the effect of torsion on the electronic properties of carbon nanotubes, they found that torsion can induce metal-semiconductor periodic transitions in these nanostructures. Torsional electromechanical studies were then extended to inorganic nanotubes, leading to the observation of torsional stick-slip behavior and strong electromechanical effects in WS₂ nanotubes, ultra-high torsional stiffness in BN nanotubes, and electromechanical effects in BCN nanotubes. These phenomena have led to the development of miniaturized gyroscopes and other nano-electromechanical systems (NEMS).

The award ceremony will take place during the first day of the 82nd ICS Annual Meeting, on February 13, 2017.

Congratulations to Ernesto for his achievements!

Ehud Keinan