Biomechanical Studies of Human Reproduction Events

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Date: November 29, 2013 (Friday)
Time: 11:00am (Tea Reception at 10:45am)
Venue: B6619 (MBE Conference Room), 6/F, AC1

Abstract

Human reproduction is the outcome of a series of complex events, which act in concert to produce a living offspring. These events are driven by synchronized activation of molecular and biochemical procedures, which are integrated with transport phenomena and dynamic equilibrium of physical forces. The term reproductive bioengineering was proposed for any physical component (e.g., structural, mechanical, and electrical) involved in the functional processes of the reproductive system from the molecular to organ levels. The presentation will include studies on events during early human life such as the role of non-pregnant uterine peristalsis in reproduction and pre-implantation transport characteristics of embryos, laboratory simulations of maternal-to-fetal trans-placental transport and biomechanics of breastfeeding.

About the Speaker

Dr. David Elad is a professor of biomedical engineering at Tel Aviv University. He received his DSc in biomedical engineering from the Technion in 1982. His research activities include
experimental and computational problems in the respiratory and reproductive systems from cell to organ levels, as well as transport phenomena in the nasal cavity. Dr. Elad has been a visiting scholar at Imperial College London, MIT, Northwestern University, Drexel University, Georgia Tech, City College NY and Columbia University. He is a fellow of the AIMBE and BMES, and a member of the World Council for Biomechanics.

All are welcome!
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