Dear All,

This popular Bio-inspired Robotics talk is open to all ages. Especially since children are out of school they are encouraged to attend. This talk will be fun and educational.

We invite you to participate in the EMBS OC presentations on "Humanlike Robots - The ultimate challenge to biomimetics" by Dr. Yoseph Bar-Cohen PhD, Senior Research Scientist and Group Supervisor, Jet Propulsion Laboratory (JPL), California Institute of Technology, Pasadena, CA on July 31st 2014 (Thursday). Please note that in order to accommodate a larger audience we have moved our meeting to Thursday.

Please RSVP at.
http://ieee-embstalk.eventbrite.com/

Attached is a flyer with the list of presentation and bio/abstract of the next presentation.

Best,

EMBS Team
http://sites.ieee.org/ocs-embs/embs-executive-officers/

IEEE Orange County EMBS Chapter

IEEE Engineering in Medicine & Biology Society

Topic	Speaker	Institute	Date
Microengineered hydrogels for stem cell bioengineering and tissue regeneration	Ali Khademhosseini, Ph.D.	Harvard-MIT	4/30/2014
Stem Cells: Cures or Clones?	Sidney H. Golub, PhD	UCI	5/28/2014
Hands-on Neural engineering workshop	Dr.Greg Gage	Backyard brains	5/31/2014 12 noon-6pm
Nanotechnology for Cancer Diagnostics	Larry A. Nagahara, Ph.D.	NCI	6/25/2014
Humanlike Robots - The ultimate challenge to biomimetics	Yoseph Bar-Cohen PhD	JPL	7/31/2014
Medical device development	Vincent Gau, PhD	GeneFluidics	8/27/2014
Medical device regulatory process	Tibor Juhasz, Ph.D.	UCI/Alcon LenSx	9/24/2014
Intellectual property for medical device companies	William E Hunter JD	Fish & Richardson	10/22/2014
Micro-nano systems for biomedical engineering	Abraham Lee, PhD	UCI	11/19/2014

Venue:

Brandman University,
6355 Laguna Canyon Rd, Irvine, CA 92618

Time:

6:30-7 pm Networking
7-8 pm Presentation

Date:	Wednesday, July 31st 2014	
Topic:	Humanlike Robots - The ultimate challenge to biomimetics	
Speaker Name and Affiliation:	Yoseph Bar-Cohen PhD Senior Research Scientist and Group Supervisor, http://ndeaa.jpl.nasa.gov Jet Propulsion Laboratory (JPL), California Institute of Technology, Pasadena, CA	
Abstract:	Biomimetics is the field of science and engineering that seeks to understand and use nature as a model for copying, adapting and inspiring concepts and designs. Evolution led to effective solutions to nature's challenges that a continually being improved over millions of years. Humans have always made efforts to use nature as a model for innovation and problems solving. In recent years, these efforts have intensified where systematic studies are leading to better understanding of nature and to application of more sophisticated capabilities. As part of the field of biomimetics, scientists are seeking rules, concepts, mechanisms and principles of biology to inspire new engineering possibilities including methods of manufacturing, mechanisms, materials, processes, and algorithms. Some of the benefits that resulted are improved structures, actuators, sensors, interfaces, control, software, drugs, defense, intelligence and many others. The emergence of new technologies are enabling even further acceleration of the capability to mimic and be inspired by nature including the development of humanlike robots with capabilities that used to be considered science fiction ideas. In this lecture, the latest development, the potential and challenges will be reviewed and discussed.	
Biography:	Dr. Yoseph Bar-Cohen is a Senior Research Scientist and Supervisor of the Advanced Technologies Group at JPL. He received his Ph.D. in Physics (1979) from the Hebrew University, Jerusalem, Israel. His research is focused on electro-mechanics including planetary sample handling mechanisms, novel actuators that are driven by such materials as piezoelectric and EAP (also known as artificial muscles) and biomimetics. In his NDEAA lab (http://ndeaa.jpl.nasa.gov/), he led the development of many novel methods and mechanisms. In the materials called composites, he discovered the ultrasonic wave phenomena polar backscattering (1979) and leaky lamb waves (1983). He co-edited and co-authored 8 books, co-authored over 360 publications, made numerous presentations at national and international conferences, co-chaired 45 conferences, and has 25 registered patents. He initiated the SPIE conference on artificial muscles, which he has been chairing since 1999. Dr. Bar-Cohen challenged engineers and scientists worldwide to develop a robotic arm driven by artificial muscles to wrestle with humans and win. He organized the first wrestling contest in 2005. For his contributions to the field of artificial muscles, Business Week named him in April 2003 one of five technology gurus who are "Pushing Tech's Boundaries." His accomplishments earned him two NASA Honor Award Medals, two SPIE's Lifetime Achievement Awards, the SPIE's President's Award and many other honors and awards. Also, he is a Fellow of two technical societies: ASNT and SPIE.	
Time:	6:30-7pm Networking 7-8 pm Presentation	
Date:	Wednesday, July 31st 2014	
Location:	Brandman University Room 111 16355 Laguna Canyon Road, Irvine, CA	
Food	Snacks will be provided	
Educational Credits	With IEEE Educational Services all members participating in the EMBS presentation this year will be provided with 'Professional Development Hours' (PDH) credits	
RSVP	http://ieee-embstalk.eventbrite.com/	