

2016 IEEE Life Sciences Grand Challenges
“BioRobotics and Bionics: new Frontiers of Biomedical Engineering”
January 24 – 26, 2016, Abu Dhabi, UAE

Conference Program

Sunday, January 24

12:00 – 15:00 Registration and Technical Visit of Khalifa University

Monday, January 25

8:00 – 09:30 Registration

09:30 – 10:00 Opening Remarks

10:00 – 11:40 SESSION 1: Frontiers of Robotic Surgery

10:00 – 10:50 Marc O. Schurr, Director of Institute of Healthcare Industries, Steinbeis University, Berlin, Germany

Medical aspects of biorobotics and MEMS in surgery

10:50 – 11:40 Arianna Menciassi, SSSA, Pisa, Italy

Robots for minimally invasive surgery: the importance of targeting

11:40 – 12:10 *Coffee Break*

12:10 – 12:40 Poster Teasers

12:40 – 14:00 *Lunch and Poster Viewing*

14:00 -15:40 SESSION 2: Frontiers of Neurocontrol, Movement Analysis and Rehabilitation

14:00 – 14:50 Igo Krebs, MIT, USA

Robotic Assistive Steppers for Locomotor Training: Trotting Back to the Starting Gate

14:50 – 15:40 Eugenio Guglielmelli, Campus Biomedico University, Italy

From Preliminary HTA Analysis of Rehabilitation Robots to Next Grand Research Challenges

15:40 – 16:10 *Coffee Break*

16:10 – 17:10 Poster Teasers

17:10 – 18:00 *Poster Viewing*

18:30 – *Visit to the Grand Mosque and free time to discover Abu Dhabi*

Tuesday, January 26

09:30 – 12:30 SESSION 3: Frontiers of Bionics

09:30 – 09:40 Toshio Fukuda, Nagoya University, Japan

Introduction to the session by conference call

9:40 – 10:30 Adam Feinberg, CMU, USA

Bottom-up Engineering of 3D Human Muscle: Towards Bio-Hybrid Soft Robotics and Regenerative Technologies

10:30 – 11:00 Nicolas Christoforou, Khalifa University, Abu Dhabi

3D Printing Technology to Fabricate Micro-Molds for the Generation of Biologically Relevant Tissue Engineered Skeletal Muscle

11:00 – 11:30 Coffee Break

11:30 – 12:20 Hugh Herr, MIT, USA

On the Design of Bionic Leg Devices: The Science of Extreme Interface

12:20 – 13:20 Poster Teasers

13:20 – 14:20 Lunch and Poster Viewing

14:20 – 16:00 SESSION 4: Frontiers of Soft and of Biomimetic Robots

14:20 – 15:10 Cecilia Laschi, Scuola Superiore Sant'Anna, Italy

Bioinspiration and Soft Robotics: lessons from Nature for new frontiers of robotics

15:10 – 16:00 Kaspar Althoefer, King's College, UK

Taking inspiration from biology to create soft robots for minimally invasive surgery

16:00 – 16:30 Poster Teasers

16:30 – 17:30 Coffee Break and Poster Viewing

17:30 – 18:30 Panel Discussion on Healthcare Challenges in the Middle East

Moderators: Hasan Al Nashash and Tim McGloughlin

18:30 2016 IEEE Life Sciences Grand Challenges Conference Adjourns