



## VII Annual Meeting

Italian Chapter of the  
European Society of Biomechanics

### Thematic Symposium

Ocular Biomechanics

*28 Sep 2017*

### General Session

Biomechanics in Italy

*29 Sep 2017*

#### ESB-ITA 2017

28-29 Sep 2017

LUMSA - Complesso Giubileo  
Via di Porta Castello, 44  
00193 Rome, Italy

[www.esb-ita.it](http://www.esb-ita.it)

#### Main Organizers

Giuseppe Vairo,  
Università di Roma Tor Vergata



Anna Pandolfi,  
Politecnico di Milano



#### ESB-ITA Executive Board

Michele Conti, Università di Pavia  
Luca Cristofolini, Università di Bologna  
Diego Gallo, Politecnico di Torino  
Michele Marino, Universität Hannover

The VII Annual Meeting of ESB-ITA comprises both a thematic symposium on ocular biomechanics and a general session.

The functioning of the eye in both health and disease involves diverse areas of physics such as solid mechanics, fluid mechanics, and electro-chemistry. Understanding and modelling numerically the complex physics of the eye is fundamental to improve patient outcomes in the current clinic practice. In this thematic symposium, organized under the auspices of the International Society of High-Tech in Ophthalmology, we aim to bring together ophthalmologists and researchers working on the biomechanics of the eye, in order to share experiences, ideas, methods and results.

The general session will cover experimental and computational techniques for the study of the pathophysiological behaviour of biomechanical systems. A broad spectrum of scales will be covered, ranging from the cellular, through the tissue, up to organ scale. Medical devices and their interaction with living tissues will be also addressed. Accordingly, a snapshot of biomechanical research will be provided.

## Day 1 - Thematic Symposium on Ocular Biomechanics

under the auspices of the **International Society of High-Tech in Ophthalmology**



### Invited Lectures

**Prof. Leonardo Mastropasqua**, M.D., Full Professor in Ophthalmology

Head of the Ophthalmology Department, Head of the Center of Excellence, National High-Tech Center and Italian School of Robotic Surgery in Ophthalmology, Università "Gabriele d'Annunzio" di Chieti-Pescara, Italy

President of the Italian Council of University Professors of Ophthalmology

President of the Italian Society of University Ophthalmologists (SOU)

**Prof. Giovanna Guidoboni**, PhD, Chair Gutenberg 2014

Associate Professor, Department of Mathematical Sciences, Indiana University-Purdue University Indianapolis, USA

Adjunct Professor, Ophthalmology, IU School of Medicine

Joint Chair IUPUI-LABEX IRMIA, Strasbourg, France

*Regular Lectures* - Held by ophthalmologists, biologists, mathematicians and engineers with multidisciplinary discussions. Lectures will deal with all aspects of ocular biomechanics covering mechanisms that range from solid mechanics, through fluid mechanics, up to electrochemistry.

## Day 2 - General Session

The state-of-the-art of biomechanics, mainly but not exclusively in Italy, will be presented. Both poster and oral sessions are forecast. Contributions are encouraged on all aspects of biomechanics.

### Topics:

- musculoskeletal biomechanics;
- orthopaedic biomechanics;
- cardiovascular biomechanics;
- tissue constitutive modeling;
- multiphysics modelling;
- mechanobiology;
- growth and remodeling;
- nanomechanics and nanomedicine;
- modeling of drug delivery;
- image-based methods.



**Round table discussion on research projects and post-doctoral opportunities.**

Deadline for abstract submission:

**01 June 2017**

## Prizes and awards for young researchers will be organized.

### Scientific Committee

Federica Caselli, Università di Roma Tor Vergata

Simona Celi, Fondazione Toscana Gabriele Monasterio, Pisa

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### Secretary

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