

QBio2017 - Program

Tuesday, February 21, 2017

9:30 Registration

9:50-10:00 Opening

10:00-13:30 Session 1 - Heart modeling and methods

Chairman: *Luca Gerardo-Giorda*

10:00-11:00 Javier Saiz Rodriguez

Digital heart. Application to the study of cardiac arrhythmias

11:00-11:30 Coffee Break

11:30-12:30 Mark Potse

Patient-specific modeling to understand cardiac disease

12:30-13:30 Adelaide de Vecchi

Image-based patient-specific modelling for prediction of ventricular haemodynamics after mitral valve replacement

13:30-14:30 Lunch

14:30-18:00 Session 2 - Brain modeling and methods

Chairman: *Jesús Cortés*

14:30-15:30 José Luis Pons

Hybrid Neuroprosthetics and Neurorobotics: assessment and associative therapies

15:30-16:00 Ibai Diez

Neuroimage connectivity methods and brain injury

16:00-16:30 Javier Rasero

Consensus clustering approach to group brain connectivity matrices

16:30-17:00 Coffee Break

17:00-18:00 Daniele Marinazzo

Sensitivity of the resting-state haemodynamic response function estimation to autonomic nervous system fluctuations

20:45 Social dinner

Wednesday, February 22, 2017

9:00-13:30 Session 3 - Heart modeling and methods

Chairman: *Nicole Cusimano*

09:00-10:00 **Oscar Camara Rey**

Mind the translational gap: from sophisticated computational tools to more quantitative clinical routine

10:00-11:00 **Mariano Vázquez**

Cardiovascular organ level simulations on supercomputers

11:00-11:30 *Coffee Break*

11:30-12:30 **Pandelis Perakakis**

How exercising the heart makes a brighter brain: In search of new methodological tools to study brain-heart interactions in the context of physical activity

12:30-13:00 **Julia Kroos**

Patient-specific modeling of the cortical spreading depression

13:00-13:30 **Jean Bragard**

Comparison of defibrillation protocols through a simple cardiac dynamic model

13:30-14:30 **Lunch**

14:30-18:00 Session 4 - Brain modeling and methods

Chairman: *Sebastiano Stramaglia*

14:30-15:30 **Plamen Ch. Ivanov**

The new emerging field of Network Physiology: from complex dynamics of individual systems to networks of organ interactions and the Human Physiome

15:30-16:30 **Marina de Tommaso**

Neurophysiological and clinical correlates of migraine aura

16:30-17:00 *Coffee Break*

17:00-18:00 **Luca Faes**

Multiscale analysis of information dynamics and the brain-heart interactions in wake conditions and during sleep

18:00-18:10 **Closing**