BCAM Workshop
Quantitative Biomedicine for Health and Disease
Bilbao, February 24-25, 2016

PROGRAM

Organizers:

• Luca Gerardo-Giorda
  BCAM - Basque Center for Applied Mathematics, Bilbao, Spain

• Jesus Cortes
  BioCruces Research Institute, Bilbao, Spain

• Sebastiano Stramaglia
  INFN, University of Bari, Italy
Speakers:

1. Paolo Bonifazi (Ikerbasque, Spain)
2. Cesar Caballero (BCBL, Spain)
3. Daniela Calvetti (Case Western Reserve University, Cleveland, USA)
4. Dante Chialvo (Conicet, Buenos Aires, Argentina)
5. Mauro D’Amato (Ikerbasque, Spain, and Karolinska Institute, Sweden)
6. Lulu Ritchie (Imperial College, UK)
7. Íñigo Gabilondo (BioCruces Health Research Institute, Spain)
8. Eugenio Iglesias (BCBL, Spain)
9. Banafshe Larijani (Ikerbasque, Spain)
10. Jose Ignacio Lopez (Cruces University Hospital, Spain)
11. Rafael Molina Soriano (University of Granada, Spain)
12. Maria Perez Zabalza (IDIBAPS Barcelona, Spain).
13. Alessandro Veneziani (Emory University, Atlanta, USA)
Program

Wednesday, February 24, 2016

9:00: Registration


9:30-13:00 Session 1

Chairman: Luca Gerardo-Giorda

09:30-10:15 Jose Ignacio Lopez
Intratumor heterogeneity: a simple approach to complexity

10:15-11:00 Mauro D’Amato
The genetics of irritable bowel syndrome; whatever that means...

11:00-11:30. Coffee Break

11:30-12:15 Banafshe Larijani
Oncoprotein activation and dynamics in Cancer - a quantitative imaging approach

12:15-13:00 Alessandro Veneziani
Patient-Specific Numerical Modeling in the Clinical Practice: Mathematical Challenges of Computer Aided Clinical Trials

13:00-14:30 Lunch

14:30-18:00 Session 2

Chairman: Sebastiano Stramaglia

14:30-15:15 Dante Chialvo
Physiological healthy dynamics is critical, a novel view

15:15-16:00 Lulu Ritchie
Airway modeling from the clinical perspective

16:00-16:30 Coffee Break

16:30-17:15 Paolo Bonifazi
Structural-functional brain resting-state subnetworks: identification, description and application as biomarkers

17:15-18:00 Maria Perez Zabalza
Slow oscillations: laminar dynamics and role of thalamus

20:30 Social dinner
Thursday, February 25, 2016
9:30-13:45  Session 3

Chairman:  Jesus M. Cortes

09:30-10:15  Rafael Molina Soriano
Probabilistic Modeling of Crowdsourcing Problems and applications to large biomed datasets

10:15-11:00  Cesar Caballero
The power of haemodynamic deconvolution for mapping brain dynamics with BOLD functional MRI

11:00-11:30.  Coffee Break

11:30-12:15  Daniela Calvetti
A window on the functioning brain: iterative solvers meet Bayesian inference to solve the inverse problem of magnetoencephalography (MEG).

12:15-13:00  Eugenio Iglesias
Atlas construction and adaptive segmentation of the hippocampal substructures in brain MRI using ex vivo imaging and Bayesian inference

13:00-13:45  Iñigo Gabilondo
Quantitative imaging of the retina as a biomarker of neurodegenerative diseases

13:45-14:45  Lunch

14:45-15:00.  Closing.