CMUP- WORKSHOP on Signal Processing and Data Analysis

Continuous estimation methods for cardiovascular dynamics

6 - 7 December 2018

Gaetano Valenza, PhD
University of Pisa, Pisa, Italy
g.valenza@ieee.org
http://www.centropiaggio.unipi.it/~valenza

Riccardo Barbieri, PhD
Politecnico di Milano, Milano, Italy
barbieri@neurostat.mit.edu,
http://users.neurostat.mit.edu/barbieri/

Thursday, 6 December, 16h30, FCUP, FC1 (DM)

Scientific Framework - Theory I - Gaetano Valenza, 16h30-18h30, FC1 Room 0.31

Friday, 7 December, 9h, FCUP, FC1 (DM)

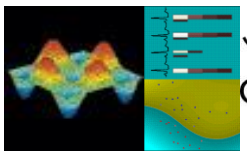
Scientific Framework - Theory II - Gaetano Valenza, 9h -11h, FC1 Room 0.31
Hands-on application I - Riccardo Barbieri , 11h30 -13h30, FC1 Room 1.19
Hands-on application II - Riccardo Barbieri - 14h30 -16h30, FC1 Room 1.19

FREE but subject to REGISTRATION on the link **https://goo.gl/forms/2gUjYwY1Kza9nOcS2**
Registration Deadline: 20 November 2018 – 12h (subject to availability, detailed programs and outline next 2 pages)

GENERAL DESCRIPTION: This WORKSHOP will introduce interested faculty and students to effective estimation methods for cardiovascular dynamics, with a special emphasis on the point process mathematical framework endowed with orthonormal expansion of model kernels. It will guide them throughout examples of analytical derivation and algorithmic development, from programming steps to hands-on application to experimental data.

Riccardo Barbieri, received the M.S. in Electrical Engineering from the University of Rome "La Sapienza", Rome, Italy, in 1992, and the Ph.D. in Biomedical Engineering from Boston University, Boston, MA, in 1998. He is Associate Professor of Bioengineering at Politecnico di Milano (Italy) and Research Affiliate at Massachusetts General Hospital and at the Massachusetts Institute of Technology. His broad research interests are in the development of signal processing algorithms for the analysis of biological systems. He is currently focusing his studies on computational modeling of neural information encoding, and on application of nonlinear and multivariate statistical models to characterize heart rate variability and cardiovascular control dynamics. He is author of more than 150 peer-reviewed publications in these fields since 1994. Dr. Barbieri is a Member of the American Association for the Advancement of Science, the European Society of Hypertension, the Society for Neuroscience, and Senior Member of IEEE and the Engineering in Medicine and Biology Society.

Gaetano Valenza, M.Eng., Ph.D., is currently Assistant Professor of Bioengineering at the University of Pisa, Pisa, Italy, and Principal Investigator of the Computational Physiology and Biomedical Instruments group of the University of Pisa. His research interests include statistical and nonlinear biomedical signal and image processing, cardiovascular and neural modeling, and wearable systems for physiological monitoring. Applications of his research include the assessment of autonomic nervous system activity on cardiovascular control, brain-heart interactions, affective computing, assessment of mood and mental/neurological disorders. He is author of more than 150 international scientific contributions in these fields and is official reviewer of more than 60 international scientific journals and research funding agencies. He has been involved in several international research projects, and currently is the scientific co-coordinator of the European collaborative project H2020-PHC-2015-689691-NEVERMIND. Dr. Valenza is Senior Member of the IEEE, a Member of the IEEE Technical Committees on Cardiopulmonary Systems and on Biomedical Signal Processing, and has been guest editor of several international scientific journals.



CMUP Centro de Matemática Universidade do Porto

FCT Fundação para a Ciência e a Tecnologia MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

COMPETE QREN QUADRO DE REFERÊNCIA ESTRATÉGICO NACIONAL UNIÃO EUROPEIA Fundo Europeu de Desenvolvimento Regional

Workshop info: aprocha@fc.up.pt

CMUP, FCUP – Dep.Matemática (R Campo Alegre, 687)