



MULTISCALE BRAIN NETWORK ANALYSIS: FROM METHODOLOGICAL ISSUES TO CLINICAL APPLICATIONS

Naples, September 26-27, 2019
University of Naples Parthenope, Piazza Municipio, Naples

September, the 26th

13:00- 14:15 Opening reception & cocktail

14:15 – 14:30 Welcome greetings

Alberto Carotenuto Rettore of University of Naples "Parthenope"

Ivo Rendina Director of Institute of Applied Sciences and Intelligent Systems – National Research Council

Giorgio Budillon Director of Department of Sciences and Technologies, University of Naples "Parthenope"

Vito Pascazio Director of Department of Engineering, University of Naples "Parthenope"

Andrea Soricelli Director of Department of Motor Sciences and Wellness, University of Naples "Parthenope"

SESSION 1 - THE RIGHT MEASUREMENT FOR THE RIGHT QUESTION. Chairs: **Paolo Bifulco** and **Ivo Rendina**.

14:30 – 15:05 **Vittorio Pizzella**, University of Chieti-Pescara, Chieti, Italy.

New developments in biomagnetic instrumentation.

15:05 – 15:35 **Francesco Pavone**, University of Florence; Florence, Italy.

Human brain optical mapping.

15:35 - 16:00 **Marie-Costance Corsi**, CERMEP, Institut du cerveau et la moelle Epinière, Sorbonne University; Paris, France.

Looking for neurophysiological correlates of Brain-Computer Interfaces training.

16:00 – 16:30 Coffee break

SESSION 2 - CLINICAL APPLICATIONS 1. Chairs: **Simona Bonavita** and **Elena Salvatore**.

16:30 – 17:05 **Arjan Hillebrand**, Vrije Universiteit Amsterdam, Amsterdam

Neuroscience, Amsterdam, The Netherlands.

Optimisation of epilepsy surgery through virtual resections in individualised brain network models.

17:05 – 17:40 **Leonardo Gollo**, Queensland Institute of Medical Research, Brisbane, Australia.

Effects of localized brain stimulation in neural activity: Implications for the understanding and treatment of neuropsychiatric disorders.

17:40 – 18:00 **Sirio Cocozza** and **Giuseppe Pontillo**, University of Naples "Federico II", Naples, Italy.

-Resting State fMRI: applications in the study of neurodegenerative and neuroinflammatory disorders of the CNS.

September the 27th

SESSION 3 - TAILORING ANALYSES FOR RELIABLE INFERENCE. Chairs: **Marcello Mancini** and **Anna Prinster**.

09:30 – 10:05 **Alberto Sorrentino**, University of Genoa, Genoa, Italy.

Estimating connectivity from meg/eeg data: the impact of finite data length and biological noise.

10:05 – 10:40 **Denis Schwartz**, CERMEP, Lyon, France.

Deep brain network analysis with MEG: state of art, challenges and future possibilities.

10:40 – 11:00 **Jonathan Hadida**, Oxford Centre for Human Brain Activity (WIN-OHBA), University of Oxford, Oxford, UK.

Optimization of biophysical network models: from theory to practical applications.

11:00 – 11:30 Coffee break

SESSION 4 - CLINICAL APPLICATIONS 2. Chairs: **Mario Quarantelli** and **Alessandro Tessitore**.

11:30 – 12:05 **Maurizio Corbetta**, University of Padua, Padua, Italy.

Stroke, networks, and behavior.

12:05 – 12:40 **Carlos Gomez**, University of Valladolid, Valladolid, Spain.

EEG/MEG analysis for the characterization of Alzheimer's disease.

12:40 – 13:00 **Pierpaolo Sorrentino**, University of Naples "Parthenope", Naples, Italy and Queensland Institute of Medical Research, Brisbane, Australia.

The role of hypersynchrony, network flexibility and topology as markers of brain disease.

Scientific Committee: **Fabio Baselice**, **Giampaolo Ferraioli**, **Rosaria Rucco** and **Pierpaolo Sorrentino**

The workshop is funded by University of Naples Parthenope within the Project "Bando Ricerca Competitiva 2017 (D.R. 289/2017)

