

**Workshop**  
**Computational Neuroscience: New Trends and challenges for the 2030**  
**January 18<sup>th</sup>, 2017**  
**Museo Naval de Valparaíso**

- 09:00** Welcome
- 09:30** **Albert Compte**, IDIBAPS August Pi i Sunyer Biomedical Research Institute, Barcelona, Spain  
*Activity-based and synaptic-based memories in prefrontal cortex during spatial working memory*
- 10:00** **Alain Destexhe**, Centre National de la Recherche Scientifique (CNRS), France.  
*Propagating waves and their collisions in visual cortex*
- 10:30** **Bruno Cessac**, INRIA Sophia-Antipolis, France.  
*Handling the spatio-temporal correlations in neuronal systems*
- 11:00** Coffee Break
- 11:30** **Laurent Perrinet**, Institut de Neurosciences de la Timone Marseille, France.  
*Back to the present: how neurons deal with delays*
- 12:00** **Nelson Trujillo-Barreto**, University of Manchester, UK  
*Identification of switching brain networks using mixtures of linear dynamical systems*
- 12:30** **Tatyana Sharpee**, Salk Institute, California, USA  
*theoretical principles for understanding biological complexity*
- 13:00** Break (lunch on your own)
- 14:30** **Patricio Orio**, Centro Interdisciplinario de Neurociencia de Valparaíso, Chile.  
*Is chaos making a difference? Synchronization transitions in chaotic neural oscillators.*
- 15:00** **Frederique Alexandre**, Institute of Neurodegenerative Diseases, Bordeaux, France  
*What Computational Neuroscience can offer to Machine Learning : Autonomous Learning*
- 15:30** **Wael El-Deredy**, Universidad de Valparaíso  
*Frequency-dependent plasticity.*
- 16:00** Coffee Break
- 16:30** **Open discussion: Challenges for the 2030**
- 17:30** **Final words and Farewell**