The CAJAL Advanced Neuroscience Training Programme is a FENS and IBRO initiative in partnership with Bordeaux Neurocampus and the Champalimaud Foundation.

**Behaviour and Neural Systems**

12 July - 1 August 2015
Champalimaud Foundation

Quantitative and qualitative studies of behaviour are fundamental in order to understand brain function and malfunction. Recently, the techniques for studying behaviour, or monitoring and manipulating neural activity during behaviour, have progressed rapidly.

This course provides experience in the experimental use of these advanced methods. Popular model organisms (rodents, drosophila and zebrafish) will be used to demonstrate how modern technology (e.g. video tracking, virtual reality, etc.) can be combined with traditional **behavioural** approaches to perform truly **innovative** neuroscience investigations.

Scientific chairs:
- Florian Engert (Harvard, US)
- Adam Kampff (Champalimaud Foundation and UCL, UK)
- Zachary Mainen (Champalimaud Foundation, PT)

More information?
FENS - Federation of European Neuroscience Societies

- Contact [cajal@fens.org](mailto:cajal@fens.org)
- Visit FENS website [fens.org/Training/CAJAL-programme/](http://fens.org/Training/CAJAL-programme/)

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Advanced Course in Computational Neuroscience

9 - 29 August 2015
Champalimaud Foundation

Computational Neuroscience is a rapidly evolving field whose methods and techniques are critical for understanding and modeling the brain, and also for designing and interpreting experiments. Mathematical modeling is one of the few tools available to cut through the vast complexity of neurobiological systems and their many interacting elements.

Courses objectives:
• Provide an overview of computational neuroscience from both experimental and theoretical angles
• Develop quantitative and modeling skills
• Foster collaboration and good scientific practice through team work

Scientific chairs:
• Máté Lengyel (University of Cambridge, UK)
• Christian Machens (Champalimaud Foundation, PT)
• Gilles Laurent (MPI, Frankfurt, DE)

5 - 7 August 2015: Pre-school for students with little or no programming skills.

Bio-Neuroinformatics for the Neuroscientist

21 September - 2 October 2015
Bordeaux Neurocampus

Many disciplines are engaged in neuroscience, from neurophysiology and structural biology to psychiatry and linguistics; each providing data in a different format. It is important to retrieve information from this entire multidisciplinary arena through available databases.

This course will combine basic bioinformatics with neuroinformatics, and provide students with experience on the analysis of large and complex datasets, and with in-depths descriptions of the different datasets currently available in neuroscience.

Scientific chairs:
• Marie-Claude Potier (CNRS-INSERM-UPMC, FR)
• Nicolas Le Novère (Babraham Institute, UK)
• Macha Nikolski (University of Bordeaux, FR)

Advanced Techniques for Synapse Biology

10 October - 31 October 2015
Bordeaux Neurocampus

The microscopic study of synapses relies on a large array of advanced techniques. Successful research in the field requires technological innovation and the interweaving of a variety of approaches at the molecular, cellular, and functional levels.

The course will allow the students to integrate the basic techniques in molecular and cellular neurobiology with advanced state-of-the-art molecular, imaging and functional methodologies, through direct hands-on experiments.

Scientific chairs:
• Matthijs Verhage (University of Amsterdam, NL)
• Laurent Groc (University of Bordeaux, FR)
• Nathalie Sans (University of Bordeaux, FR)