The Advanced Course in Computational Neuroscience (ACCN) moves to Freiburg for three years

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Building where the ACCN
will take place in Freiburg.

The internationally renowned Summer School «Advanced Course in Computational Neuroscience» (ACCN) will take place at the Bernstein Center for Computational Neuroscience (BCCN) for the next three years (2008-2010). The decision was announced just recently – at the end of this year's Summer School edition in Arcachon (France) – by the ACCN's international scientific board.

The ACCN is a distinguished international four-week summer school in neuroscience designed for carefully selected outstanding students (at the advanced PhD and Postdoc level) from the entire world, with a mixture of lectures, tutorials, and a significant project.

Advanced Course

Its explicit goal is to train experimental neurobiologists and medical doctors together with researchers from mathematics, physics, engineering and computer science fields in the interdisciplinary area of computational neuroscience.

The lectures are given by invited faculty chosen from the established leaders of the field, including both experimentalists and theoreticians. They provide an overview over the entire field of computational neuroscience from the level of cellular physiology over systems neuroscience to the theoretical modelling of single cells, neuronal networks and high-level systems. The tutorials are presented by tutors, who are experienced young investigators, expert in particular technical elements of the field, including neural data analysis, simulation environments, and mathematical techniques. Most importantly, the students spend about half their time in total performing a significant research project, directly advised by a topic-relevant tutor, and also in consultation with the directors of the school and the other faculty, thus learning and practicing cutting-edge methods under the guidance of specialists. Students present their project work in brief seminars at the end of the school.

The school is structured in four thematic weeks, each with a different director. The precise organization of the themes is slightly different each year, but the main topics of neuronal biophysics, single neuron and network dynamics and processing, systems neuroscience and learning are richly covered. Examples of past weekly themes include integrative properties of single neurons and neuronal coding, computational aspects of sensory systems (vision, audition), motor systems and action, as well as high-level processing (system-level models of memory formation and consolidation).

"The black forest"

After the first two weeks, aiming through dedicated lectures and background tutorials at filling in egregious gaps in mathematics or neuroscience, the remainder of the school proceeds jointly to allow maximal cross-fertilization with the intensive work on the personal interdisciplinary project. Informal and formal collaboration between students and faculty, and students and each other are frequent products of the school.

The school started in 1996 in Crete and will be held in 2008 for the thirteenth time. The school has a proud record of achievement in training two scientific generations of participants (yearly 28 -32), and thus exerting significant positive influence on the development of the field. The previous venues of the ACCN were Crete, Trieste, Obidos (Portugal) and Arcachon.

The BCCN was able to prevail in an international competition. We interpret this success as a proof of the international visibility of Computational Neuroscience in Germany and of the attractiveness of the trinational upper Rhine Valley region for the international neuroscience community.

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Directors in 2008:
week 1: John Rinzel, NYU, USA
week 2: Nicolas Brunel, CNRS Paris, France
week 3: Peter Latham, UCL, UK
week 4: Israel Nelken, Hebrew University, Israel

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The course will be open for applications in early spring 2008 (February-mid-April).
More information on the most recent current course's website:
http://www.neuroinf.org/courses/EUCOURSE/A07/index.shtml

■ F.D. ■ S.C.D.O.