



The Abdus Salam
International Centre for Theoretical Physics

**Fifth Antonio Borsellino College
on Neurophysics**

**"SPIKE TRAINS TO ACTIONS:
BRAIN BASIS OF BEHAVIOR"**

3 - 14 September 2007

(Miramare - Trieste, Italy)

The College will be a continuation of the series of Borsellino Colleges, which have been held every third year (1995, 1998, 2001, 2004), and is organized by Profs. Mathew Diamond and Raffaella Rumiati (SISSA, Trieste, Italy).

The aim of the College will be to give an in depth introduction to neuroscience systems (how neuronal activity in the brain leads to simple or complex behaviors) designed for students coming into neuroscience from other areas, as well as more experienced students. Knowledge concerning brain organization and function is helpful but not required and students from Physics, Medicine, Engineering/Technology, Biology, etc. are urged to apply. The College will encourage participants to interact with researchers from disciplines ranging across the neurosciences (i.e. neurophysiology, neural modelling, linguistics and functional imaging).

The course will link with the European Brain and Behavior Society (EBBS) meeting to be held on the ICTP campus from 15 to 19 September, and Borsellino participants are welcome to remain on campus to participate in the renowned EBBS meeting. EBBS registration fees waived for Borsellino students.

PROGRAMME:

Four to five lectures will be presented each day, embedded within ample discussion periods.

TOPICS DISCUSSED:

- How are percepts built up in cortex?
- How are judgements of the percept made?
- In what way does information flow within and between cortical regions, and what is accomplished by successive (and reverberating) stages of processing?
- How are decisions made about the percept subsequently acted upon?

PARTICIPATION

Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend the activity. As it will be conducted in English, participants must have an adequate working knowledge of this language. Although the main purpose of the Centre is to help researchers from developing countries through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants are borne by their home institutions. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants, who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only to those attending the entire activity. There is no registration fee.

The **Application Form** is obtainable from the ICTP WWW server: <http://agenda.ictp.it/smr.php?1860> which will be constantly up-dated or from the activity Secretariat (<mailto:smr1860@ictp.it>). It should be completed, signed and returned before **20 April 2007 to:**

Fifth Antonio Borsellino College 2007 (smr.1860)
c/o Ms. Marina de Comelli
the Abdus Salam International Centre for Theoretical Physics
Strada Costiera 11, I-34014 Trieste, Italy

Or

mailto: smr1860@ictp.it (please send file attachments in one of the following formats: PDF (preferably), RTF zipped, or DOC)
(Recent photograph & signature of the candidate are compulsory)

Telephone: +39-040-2240305 E-mail: <mailto:smr1860@ictp.it> Telefax: +39-040-224163

<http://agenda.ictp.it/smr.php?1860>

(Trieste, February 2007)

DIRECTORS

Mathew E. DIAMOND
(S.I.S.S.A., Trieste, Italy)

Raffaella I. RUMIATI
(S.I.S.S.A., Trieste, Italy)

LECTURER / SPEAKERS INCLUDE:

**E. AHISSAR
M. AHISSAR
E. ARABZADEH
E. BALABAN
M.E. DIAMOND
H. ESTEKY
I. HARRIS
J. HARRIS
J. NICHOLLS
U. HASSON
L. MARKSON
C. PADOA-SCHIOPPA
R.I. RUMIATI
T. SHALLICE
A. TREVES
G. VALLORTIGARA
P. ZUCCA**

(Not all speakers are confirmed)

DEADLINE
for requesting participation

20 April 2007

**Applicants who do not request
financial support may apply up to
21 June 2007**