

ICTP – [The Abdus Salam International Centre for Theoretical Physics](#), Trieste, Italy

## **smr1343/Announcement**

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EU Advanced Course in Computational Neuroscience  
an I.B.R.O. Neuroscience School

30 July - 24 August 2001

(Miramare - Trieste, Italy)

The EU Advanced Course in Computational Neuroscience introduces students to the panoply of problems and methods of computational neuroscience, simultaneously addressing several levels of neural organisation, from subcellular processes to operations of the entire brain.

The course is an intensive four week combined lecture and laboratory series with two complementary parts. A distinguished international faculty gives morning lectures on topics in experimental and computational neuroscience. The rest of the day is devoted to practicals, including learning how to use simulation software and how to implement a model of the system the student wishes to study on individual unix workstations.

The first week of the course introduces students to essential neuroscience concepts and to the most important techniques in modeling single cells, networks and neural systems. During the following three weeks the lectures will cover specific brain functions, dealing respectively with sensory systems and especially vision, with memory and attention, with motor planning and control. Each week topics ranging from modeling single cells and subcellular processes through the simulation of simple circuits, large neuronal networks and system level models of the brain will be covered. The course ends with a presentation of the students' projects.

The EU Advanced Course in Computational Neuroscience is designed for advanced graduate students and postdoctoral fellows in a variety of disciplines, including neuroscience, physics, electrical engineering, computer science and psychology. Students' English conversation and reading skills should be fluent as all the courses are taught in English. Students are expected to have a basic background in neurobiology, as well as some computer experience.

The Course is supported by the European Commission, the Boehringer Ingelheim Foundation, the International Brain Research Organization, the Abdus Salam International Centre for Theoretical Physics (Trieste) and the Brain Science Foundation (Tokyo).

A total of 32 students will be accepted. Students of any nationality can apply, but the majority of accepted students will be from the European Union and affiliated countries (Iceland, Israel, Liechtenstein and Norway). These students will be supported by the European Commission and we specifically encourage applications from researchers who work in less-favoured regions of the EU and from women. The Abdus Salam ICTP and IBRO will support the participation of students from developing countries (applications from Eastern Europe and Africa are particularly encouraged), while the Brain Science Foundation will support Japanese students. Students receiving support from these sources will receive travel grants and free full board at the Adriatico Guest House. Students from Canada, Switzerland and the USA may be charged for their accommodation and/or may need to obtain national support for their travel.

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More information and a WEB Application Form may be accessed on:

<http://www.neuroinf.org/courses/trieste2001.shtml>  
or by e-mailing to [bruns@cs.tu-berlin.de](mailto:bruns@cs.tu-berlin.de)  
or [smr1343@ictp.trieste.it](mailto:smr1343@ictp.trieste.it), or by mail to:

EU Advanced Course in Computational Neuroscience  
the Abdus Salam International Centre for Theoretical Physics  
(c/o Ms. V. Shaw)  
Strada Costiera 11, I-34100 Trieste, Italy

(Telephone: +39 - 040 - 2240541/Telefax: +39 - 040 - 224163/Telex: 460392  
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E-mail: [SMR1343@ictp.trieste.it](mailto:SMR1343@ictp.trieste.it))

Should applying through the WWW be impossible, the completed request for participation form, appended to this announcement (also obtainable via e-mail: [smr1343@ictp.trieste.it](mailto:smr1343@ictp.trieste.it) by typing on the subject line get index, or via WWW server: <http://www.ictp.trieste.it/>), should be sent to the above address.

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Please apply to: <http://www.neuroinf.org/courses/trieste2001.shtml>  
Alternatively, by e-mail to [bruns@cs.tu-berlin.de](mailto:bruns@cs.tu-berlin.de); and use this paper form only if the first two methods are not accessible to you. Paper applications arriving late (even if mailed before the deadline) may have to be discarded.

## REQUEST FOR PARTICIPATION

( E-mail address: [smr1343@ictp.trieste.it](mailto:smr1343@ictp.trieste.it) )

(Please note that unless all requested personal data are provided, the ICTP cannot process any visa request)  
(If sending an application by e-mail, please save and send file attachments in RTF format)

To be completed (typed or in block letters) and returned to:  
EU Advanced Course in Computational Neuroscience, the Abdus Salam I.C.T.P.,  
Strada Costiera 11, I-34100 Trieste, Italy, before 31 March 2001.

Name: \_\_\_\_\_ Nationality: \_\_\_\_\_  
(Surname/family name) (First names)

Please also indicate SURNAME, NAME, on passport, if different from above:

\_\_\_\_\_

Sex: \_\_\_\_\_ Date of birth: \_\_\_\_\_

(year - month - day)

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Permanent Institution (full name address):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone No. \_\_\_\_\_Telefax No. \_\_\_\_\_Telex No. \_\_\_\_\_

E-Mail:\* \_\_\_\_\_

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Present Institution (full name address) - if different from permanent:

\_\_\_\_\_  
\_\_\_\_\_

until date: \_\_\_\_\_

Telephone No. \_\_\_\_\_Telefax No. \_\_\_\_\_Telex No. \_\_\_\_\_

E-Mail:\* \_\_\_\_\_

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Mailing address - please indicate whether: Permanent \_\_\_ or Present \_\_\_

\* I agree that my e-mail address(es) may be made public on the ICTP WWW page: YES \_\_\_ NO \_\_\_

How did you learn about the Trieste Course?

\_\_\_\_\_  
\_\_\_\_\_

Why do you want to take the Trieste Course?  
Your personal reasons and motivations - Maximum 500 Characters

\_\_\_\_\_  
\_\_\_\_\_  
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Education:  
Give institution and highest degree obtained, including year.  
Start with most recent degree - Maximum 700 Characters

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Professional experience:  
Maximum 800 Characters

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Publications:  
List 5 most relevant publications you have, including easily available  
abstracts. Please, no submitted papers or dissertations - Maximum 1200  
Characters

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Outline your background:  
Any information which is not evident from your educational record or  
professional experience. Specify which courses taken, if relevant -  
Maximum 700 Characters

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Experience in experimental neuroscience:  
Specify field, experimental preparation, laboratory, etc. - Maximum 500  
Characters

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Experience in applied mathematics:  
e.g. differential equations, linear algebra, Fourier transforms, dynamical  
systems,  
probability and statistics - Maximum 500 Characters

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Experience in computational or theoretical neuroscience:  
Have you ever used a neural simulation programme; if so, which?  
Have you attended other schools or taken courses on this subject? - Maximum  
500 Characters

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Have you participated in past ICTP activities? Yes \_\_\_ No \_\_\_

If so, which? - Maximum 200 Characters

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Computer experience:

Unix experience	Programming experience	Languages known
None ___	None ___	I can programme in C ___
Some ___	Some ___	I can programme in Fortran ___
___		
Expert ___	Expert ___	Other languages q ___

Indicate below your proficiency in the English language

Reading: Good ___	Writing: Good ___	Speaking: Good ___
Average ___	Average ___	Average ___
Poor ___	Poor ___	Poor ___

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Letters of recommendation:

List e-mail, names and affiliations of two professors (or other faculty) who will send letters of recommendation supporting your entry into the Trieste Course - Maximum 800 Characters

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Your Course Project

You will be expected to start a modeling or theoretical neuroscience project during the course. Try to be as specific as you can (especially if related to your current research). If you have no idea, give a topic of general interest.

Title - Maximum 60 Characters

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Type of approach:

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Short project description - Maximum 800 Characters

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APPLICABLE ONLY FOR CANDIDATES FROM DEVELOPING COUNTRIES  
(Important: Preference in selecting participants will be given to eligible candidates who can guarantee travel coverage by own local sources).

Please tick as appropriate:

- I can definitely find complete travel funds from local sources \_\_\_
- or
- I can definitely find half my travel funds from local sources \_\_\_

I am requesting financial support from the ICTP for:

- Half travel \_\_\_ - Full travel \_\_\_ - Living allowance \_\_\_

I am NOT requesting financial support from the ICTP \_\_\_\_\_

I certify that if granted funds for my travel  
I will attend the whole activity

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Signature

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I certify that the statements made by me above are true and complete. If accepted, I undertake to refrain from engaging in any political or other activities which would reflect unfavourably on the international status of the Centre. I understand that any breach of this undertaking may result in the termination of the arrangements relating to my visit at the Centre.

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Signature of candidate

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Date

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