



4th International Summer School on Emerging Technologies in Biomedicine

“Advanced Methods For The Estimation Of Human Brain Activity And Connectivity,
Applications to Rehabilitation Engineering”

June 29th-July 4th 2008, Patras, Greece



International Society for
Bioelectromagnetism



Patras, January 18th, 2008

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FIRST ANNOUNCEMENT

Dear Colleagues,

Following the success and positive feedback from the Third Summer School on Emerging Technologies in Biomedicine, held two years ago, we are pleased to announce the organization of the 4th International Summer School that will take place between June 29th-July 4th 2008 in Patras, Greece.

The field of Biomedicine and its associated techniques is experiencing explosive growth. The aim of our Summer School, which is organized every two years, is to inform young students and future scientists about the latest trends in the field. The organizing committee has decided that, from now on, each installment would specifically focus on a special topic. This year's special topic is “*Advanced Methods for the Estimation of Human Brain Activity and Connectivity, Applications to Rehabilitation Engineering*”. Our event is organized in partnership with NEUROMATH, a European COST Action (BM0601).

We are also glad to announce that the COST office will provide several grants to help students covering expenses towards attending the School. Students who wish to apply for grant will have to submit their CV too. Selection will be based on academic merit and research potential. More information will be posted in the website soon.

The goal of the Summer School is to present advanced methods for the estimation of the cortical activity and connectivity in the human brain. Emphasis is put on the current trend in advanced neural engineering techniques, that is, to measure brain signals and interpret them for clinical use, in the rehabilitation context. The presentations will consist of a series of invited talks given by experts of major research groups, within –but not limited to– the neuro-engineering and neuro-rehabilitation fields. The lecturers will introduce theory in mathematical methods for the estimation of cortical activity and

Patras 2008 Summer School Office

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Sponsor

The 4th International Summer School on Emerging Technologies in Biomedicine: "Advanced Methods for the Estimation of Human Brain Activity and Connectivity, Applications to Rehabilitation Engineering", is sponsored by the European programme COST.



The COST action (BM0601) is NEUROMATH.



Technical sponsors



International Society for Bioelectromagnetism



Institute of Electrical and Electronics Engineers



IEEE Engineering in Medicine and Biology Society
(EMBS)

Important Dates

Opening of Early Registrations:
February, 15th 2008
Closing of Early Registrations:
April, 30th 2008
Summer School:
June 29th-July 4th 2008

connectivity in the human brain from non invasive neuro-electric and hemodynamic measurements. Moreover, the talks will address how the utmost techniques in neuro-engineering could meet the challenge of providing better services to disabled people. To complete the picture, the lessons will be combined with hands-on practical tutorials, presenting a Brain Computer Interface (BCI).

The summer school lectures will feature topics of emerging technologies in Biomedicine; specifically it will address the question of how to increase the quality of life of paraplegics in a neuro-engineering framework:

- Brain Anatomy and Electrophysiology
- Wearable Biosensor Technology
- Non Invasive Neuro-Electric and Hemodynamic Measurements
- Molecular Brain Imaging
- Functional Multimodal Neuro-Imaging Techniques
- Advanced Brain Signal Processing Techniques
- Methodologies for Brain Activity and Connectivity Analysis
- Forward and Inverse Problem Methodology in EEG/MEG
- Interfaces between Brain and Computers
- Neuro-Engineering
- Rehabilitation Technologies in Paraplegics
- Hands-on Tutorials

The venue of the 4th Summer School will be the Congress Centre of the University of Patras, situated in the middle of the campus, providing easy access to the university buildings and facilities (University library, restaurant, faculties, etc.) being in the same time within walking distance from the Rio city and seaside.

The high level of scientific presentations combined with the warm traditional Greek hospitality and the many events organized in Patras will make this Summer School an enriching and pleasant experience for both speakers and students.

I am looking forward to seeing you in Patras,

Warm regards

A. Bezerianos, Chairman

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