



COST Action NEUROMATH – Workshop 2009



Second announcement and call for abstracts

NeuroMath Workshop Leuven

12-13 March 2009

Arenberg Castle

Katholieke Universiteit Leuven, Belgium

The objective of the NEUROMATH Workshop is to describe state-of-the-art advanced mathematical methods for the estimation of human cortical activity and connectivity using non-invasive neuroelectric and hemodynamic measurements. In the NEUROMATH Workshop, through lectures and poster sessions, scientists are called to discuss their computational tools in order to offer a comprehensive approach to the problem of the estimation of brain activity and connectivity for sensory and cognitive tasks. The NEUROMATH Workshop will offer a review of the most advanced processing methods for brain activity currently being applied in several leading European research institutions.

Areas of interest:

Scientific contributions will be welcomed in the fields of

- EEG, MEG, functional Magnetic Resonance Imaging
- Mathematical and computer models for neurons and neural tissues
- Theory and algorithms in forward problem
- Inverse problem and source imaging
- Mapping techniques
- Estimation of connectivity techniques from neuroelectric and/or hemodynamic recordings
- Brain-Computer Interfacing (BCI)

Tentative program:

The workshop will be partially organized as a symposium with invited talks from leading experts in the field of neuroscience:

- **Guy Orban** (UZ Leuven, campus Gasthuisberg, Leuven, Belgium): *Mathematical operations in the visual brain*
- **Christian Hesse** (FC Donders, Nijmegen, The Netherlands): *Blind Source Separation Approaches in Neuroscience: Applications and Challenges*
- **Geertjan Huiskamp** (University Medical Center Utrecht, The Netherlands): *EEG-correlated fMRI in epilepsy*
- **Bart Nuttin** (UZ Leuven, campus Gasthuisberg, Leuven, Belgium): *Deep brain stimulation and a neuroprobe*
- **Stefan Sunaert** (UZ Leuven, campus Gasthuisberg, Leuven, Belgium): *The study of brain connectivity through fMRI and DTI*
- **Hans Hallez** (Ghent University, Ghent, Belgium): *Influence of anisotropic conductivities in EEG source estimation in patients with epilepsy*
- **Christian Benar** (INSERM-Université Aix-Marseille, France) : *Integration of EEG and fMRI: methods and pitfalls*
- **Febo Cincotti** (IRCCS Fondazione Santa Lucia, Rome, Italy): *Brain-Computer Interfaces: which one?*

Call for abstracts/papers:

Besides the invited talks there is the opportunity to submit contributions under the form of an abstract for the oral and poster sessions. Afterwards these abstracts can be extended to full papers. **A selection of the best papers will be published in a special issue of the journal Biomedizinische Technik/Biomedical Engineering.**

Submission deadlines:

15th of December 2008: Submission of abstracts of maximally 300 words. The template for the abstracts is available on our webpage (see below). Abstracts can be sent by e-mail to neuromath@esat.kuleuven.be.

19th of December 2008: Notification of acceptance of abstracts.

13th of February 2009: Submission of full papers.



Fee:

The participation fee is 100 Euros, which are intended to cover the cost of beverages, meals (including conference dinner at Beguinage) and the materials distributed at the workshop. The registration tool will be soon made available on the website.

Organizing committee:

Prof. Fabio Babiloni, University of Rome “La Sapienza”, Italy

Prof. Sabine Van Huffel, Katholieke Universiteit Leuven, Belgium
Prof. Steven Staelens, University of Ghent, Belgium
Dr. Bart Vanrumste, Katholieke Hogeschool Kempen, Geel, Belgium
Dr. Borís Burle, CNRS et Université de Provence, France
Prof. Hermann Gilly, Medizinische Universität Wien, Austria, co-editor of special issue
Biomedizinische Technik / Biomedical Engineering

Venue:

The workshop will be held the 12th and 13th of March 2009 at the Katholieke Universiteit Leuven, Belgium in the beautiful Arenberg Castle located close to the engineering faculty.

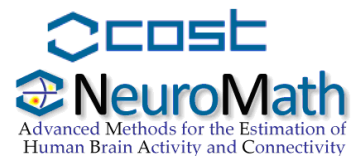


Further information:

More information can be found on www.esat.kuleuven.be/scd/neuromath or by sending an e-mail to neuromath@esat.kuleuven.be.

Workshop sponsors:

The NEUROMATH workshop is organized by the COST Action BM0601 “NEUROMATH”.



Katholieke Universiteit Leuven



Research foundation - Flanders (FWO)



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