

2011 Summer School on Neurorehabilitation

Emerging technologies

<http://www.iai.csic.es/hyper/hss/index.html>



Steering Committee:

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On behalf of the organizers of the **1st Summer School on Neurorehabilitation** we have the pleasure to invite you to join us at Salamanca (Spain) where will be hold the conference *Emerging technologies*.

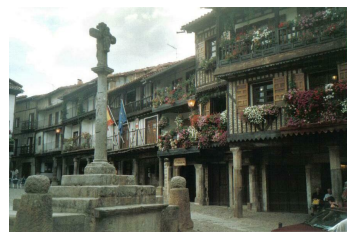
Restoring human motor functions has been a fascinating yet frustrating research area during the last century. The possibility of interfacing the human nervous system with mechatronic devices, and then employ these devices to restore neurological function, has long fascinated scientists.

It is in this context that Neurorobots (NRs) and Motor Neuroprostheses (MNPs) emerge. Both seek to obtain motor command signals from motor control regions of the nervous system via Brain-Machine interfaces (BMIs). MNPs constitute an approach to restoring function by means of artificially controlling human muscles or muscle nerves with Functional Electrical Stimulation (FES).

This school proposes a revision of all these technologies and its direct application in the medical context (SCI, Stroke, CP). The main goal is understanding how emerging technologies can help in medicine, what rehabilitation robotics is, its history and its applications.

Location:

The school will take place in La Alberca, Salamanca (Spain), 18th-23rd September, 2011.



Topics

- How can emerging technologies help in medicine?
- Understanding rehabilitation robotics and its goals

2011 Summer School on Neurorehabilitation will also include three workshops to provide hands-on experience with brain machine interface, neural rehabilitation, motor control and modeling. The workshops defined are: 1) design and test a BCI system, 2) design and evaluate a FES system, and 3) Develop an upper limb model based on OpenSim and simulate it with Simulink.

Speakers

- Dr. Jonathan R. Wolpaw** (Wadsworth Center, NY)
- Dr. Silvestro Micera** (Scuola Superiore Sant'Anna, IT)
- Dr. Andrea Caria** (Univ. of Tübingen, Germany)
- Dr. Eduardo Fernández** (Univ. of Elche, Spain)
- Mr. Freygardur Thorsteinsson** (OSSUR, Iceland)
- Dr. Marco Molinari** (Fondazione Santa Lucia, IT)
- Dr. Paolo Bonato** (Spaulding Rehab Hospital, USA)
- Dr. Lee Miller** (Northwestern Univ., Chicago)
- Dr. W. Zev Rymer** (Northwestern Univ., Chicago)
- Dr. Ilse Jonkers** (K.U. Leuven, Belgium)
- Dr. Etienne Burdet** (Imp. College London)
- Dr. Thierry Keller** (Tecnalia, Spain)
- Dr. Metin Akay** (Univ. of Houston, USA)
- Dr. Romulo Fuentes** (IINN, Brazil)
- Dr. Belinda Lange** (ICT, USC, California)
- Dr. Ángel Gil** (HNPT, Spain)

Important deadlines:

▪ **June 30, 2011**

Deadline for submission of applications

• **July 15, 2011**

Notification of acceptance

Registration

The registration fee is 600 € (VAT not included) and includes full accommodation for five days at the Abadía de los Templarios hotel, transport Madrid-La Alberca, meals, coffee breaks and lecture materials. Prospective applicants must send the information described in the Application section, by E-mail, by June 30th, 2011. The admission to the School will be decided upon a selection made by the General Conference Committee. Notification of the acceptance will be made by July 15th, 2011.

