Summer School Venues

Tenuta Bonzara
Monte S. Pietro Bologna, Italy

Romanic Abbey
Badia Bologna, Italy

The Summer School is primarily addressed to researchers and professionals interested in the most recent advances on assistive and rehabilitation technologies for the neuro-motor function. The program will include topics as portable sensors and systems, wireless communications, biofeedback devices, Virtual Reality-based systems. Several round table discussions and an industry corner will give to all the participants the opportunity to be introduced to different applications.

SUMMER SCHOOL 2006

www.starter-project.com/summerschool.htm

Promoted by
Department of Electronics Computer Science & Systems (DEIS), University of Bologna

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DEPARTMENT OF ELECTRONICS, COMPUTER SCIENCE & SYSTEMS (DEIS)
UNIVERSITY OF BOLOGNA
promotes

1st Summer School on

ADVANCED TECHNOLOGIES FOR NEURO-MOTOR ASSESSMENT AND REHABILITATION

18 – 24 June 2006
Monte S. Pietro
BOLOGNA, ITALY

SUMMER SCHOOL 2006

Scientific Committee

Prof. Lorenzo Chiari
DEIS – University of Bologna – Italy

Prof. Angelo Cappello
DEIS – University of Bologna – Italy

Prof. Peter H. Veltink
BMTI – University of Twente – NH

Prof. Paolo Bonato
Harvard Medical School, Boston – USA

Dr. Laura Rocchi
DEIS – University of Bologna – Italy

Partners

- Institute for Biomedical Technology (BMTI), Faculty of Electrical Engineering, Mathematics and Computer Science, University of Twente, Enschede, The Netherlands
- Department of Physical Medicine and Rehabilitation, Harvard Medical School, Boston, U.S.A.
- STARTER: Strategic Network for Assitive & Rehabilitation Technology in Emilia-Romagna

School Venue

Tenuta Bonzara, Monte S. Pietro (Bologna IT) v. S.Chierlo 37/A

SCIENTIFIC PROGRAM

Sunday 18 June (*Badia Romanic Abbey)*

16,30 **Registration**
17,15 **Opening Ceremony**
18,00 **Opening Lecture**. **Human movement analysis: state of the art and future perspectives**
Prof. Aurelio Cappozzo (IUSM, Rome IT)
19,15 **Welcome Party**

Monday 19 June

9,00 **Neurophysiology of movement and posture**
Dr Antonio Nardone (Fondazione Maugeri, Veruno IT)
10,30 *Coffee Break*
10,45 **Theoretical foundations of technology-based neuroscience research**
Dr Yuri Ivanenko (Osp. Santa Lucia, Rome IT)
12,15 **Discussion**
13,00 Lunch
14,00 **Industry Corner**
14,45 **Round Table 1: The clinical questions to technology**
Dr A. Nardone, Prof A. Cappozzo, Eng A.Davalli and Dr M.Manca-Arcispedale S.Anna Ferrara, IT
16,15 Coffee Break
16,30 **Biomechanics of human movement**
Prof Angelo Cappello (University of Bologna, IT)
18,00 **Discussion**

Tuesday 20 June

9,00 **Inertial sensors for human movement assessment: functioning principles**
Dr Laura Rocchi (University of Bologna, IT)
10,30 Coffee Break
10,45 **Methods of sensory information processing for inertial sensors in human movement studies**
Prof Angelo Sabatini (Scuola Sup. Sant'Anna, Pisa, IT)
12,15 **Discussion**
13,00 Lunch
Afternoon Social Activities

Wednesday 21 June

9,00 **Kalman filtering: theory and applications**
Dr Silvio Simani (University of Ferrara, IT)
10,30 Coffee Break
10,45 **3-D inertial and magnetic sensing of human motion - theoretical and methodological issues**
Prof Peter Veltink (University of Twente, NL)
12,15 **Discussion**
13,00 Lunch
14,00 **Industry Corner**
14,45 **3-D inertial and magnetic sensing of human motion - promising applications**
Prof Peter Veltink (University of Twente, NL)
16,15 Coffee Break
16,30 **Selected presentation from attendees**
18,00 **Discussion**

Thursday 22 June

9,00 **Software design for sensor-based mobile platforms**
Prof Tullio Salmon Cinotti, Dr Luca Roffia (University of Bologna, IT)
10,30 Coffee Break
10,45 **WBANs: Wireless Body Area Networks**
Prof Luca Benini (University of Bologna, IT)
12,15 **Discussion**
13,00 Lunch
14,00 **Industry Corner**
Afternoon Social Activities

Friday 23 June

9,00 **Interactive virtual environments: from design to implementation.**
Tiziano Diamanti, Antonella Guidazzoli (CINECA, IT)
10,30 Coffee Break
10,45 **Ambulatory systems for monitoring physical activity. Technological issues in fall prevention in the elderly**
Dr Kamiar Aminian (EPFL Lausanne, CH)
12,15 **Discussion**
13,00 Lunch
14,00 **Industry Corner**
14,45 **Advances in wearable technology and applications in physical medicine and rehabilitation**
Prof Paolo Bonato (Harvard Medical School, Boston MA)
16,15 Coffee Break
16,30 **Round Table 2: Future & emerging technologies: over and under the skin**
Prof K.Aminian, Prof P.Bonato,
Prof D. De Rossi- University of Pisa, IT
18,00 **Discussion**

Saturday 24 June

9,00 **Closed loop solutions for motor rehabilitation**
Prof. Lorenzo Chiari (University of Bologna, IT)
10,30 Coffee Break
10,45 **Ambient Intelligence systems for disabled people**
Eng Angelo Davalli (INAIL Prosthetic center, Budrio (BO), IT)
12,15 **Discussion**
13,00 **Lunch & Conclusions**

General information

Official language: English
Application procedure: Registration through the website www.starter-project.com/summerschool.htm
Deadline: 15th April 2006
Registration fee: 700 Euro (board, accommodation, coffee breaks and study material included)
Accommodations: A wide network of farm houses will provide accommodation to all participants. A shuttle bus will connect the farm houses and the school venue.
ECTS credits: 2

For more information visit the website or email to ss2006@starter-project.com