

## Week's agenda

### Monday

- **Registration**
- **Welcome**  
*P. Martinoli, USI and T. Moccetti, Cardiocentro Ticino*
- **Possible Functions of Embedded Systems in Cardiology**  
*M. G. Sami, USI, ALaRI*
- **Sensing: Basic Concepts in Metrology**  
*M. G. Sami, USI, ALaRI*
- **CardioLunch and Special Lecture**  
*M. Malek, Humboldt-University, Berlin*
- **Valve Repair Using Catheters**  
*G. Pedrazzini, Cardiocentro Ticino*
- **Enhance Patients Compliance**  
*P. Schulz, USI, ICH*
- **CardioProject: Participants' Projects**  
*M. Malek, Humboldt-University, Berlin*

### Tuesday

- **What to Do with Collected Data**  
*A. Ferrante, USI, ALaRI*
- **Model-Based Approaches for Actuation and Control in Cardiology**  
*S. Balemi, SUPSI, DTI*
- **CardioLunch with Industry Experts: Securing Reimbursement for Innovative Medical Devices**  
*M. Siebert, St. Jude Medical*
- **Telemedicine**  
*T. Moccetti, Cardiocentro Ticino*
- **Tailoring Health Communication**  
*S. Suggs, USI, ICH*
- **CardioProject: Participants' Projects**  
*M. Malek, Humboldt-University, Berlin*

### Wednesday

- **Overview of Cardio-Specific Devices**  
*S. Demertzis, Inselspital Bern and Cardiocentro Ticino*
- **Wearable and Ambient Solutions for Medical Application**  
*B. Arrich, ETH Zurich*
- **CardioLunch with Industry Experts: After a Decade of Home Monitoring Development: What Comes Next?**  
*H.-J. Wildau, Biotronik*
- **Heart Failure**  
*A. Auricchio, Cardiocentro Ticino*
- **Benefit and Possible Risks of e-Health Tools**  
*S. Rubinelli, USI, ICH*
- **CardioProject: Participants' Projects**  
*M. Malek, Humboldt-University, Berlin*
- **CardioTalk: Conference Dinner**

### Thursday

- **Regulatory Framework**  
*S. Mohadjer, QS Zurich AG*
- **Artificial Intelligence**  
*J. Schmidhuber, USI*
- **CardioLunch and Finalization of the CardioProjects**  
*M. Malek, Humboldt-University, Berlin*
- **Data Protection**  
*A. Ferrante, USI, ALaRI*
- **Intellectual Property Rights**  
*P. Felder, Schmauder & Partner AG*
- **Presentation of the CardioProjects**

### Friday

- **Idea, Invention, Innovation: From Science to Market**  
*H. Tevaearai, Inselspital, Bern*
- **Medical Innovation and Ethics**  
*A. Mauron, University of Geneva*
- **Feedback and Closing Remarks**  
*M. Malek, Humboldt-University, Berlin*

## Fees and contact details

CHF 3600.--

Registration fees include tuition, hospitality (all lunches, coffee breaks and the conference dinner), and all educational materials.  
Fees are payable in advance on receipt of confirmation of registration.

### Venue

**Università della Svizzera italiana**, Via Giuseppe Buffi 13, CH-6904 Lugano  
Tel.: +41 58 666 40 00, Fax: +41 58 666 46 47

### Contact

Dr Heidrun Flaadt Cervini, Via Lambertenghi 10A, 6904 Lugano  
Tel: +41 58 666 42 68, Fax: +41 58 666 46 19, e-mail: info@cardio.e-tec.unisi.ch

For further information and registration: [www.cardio.e-tec.unisi.ch](http://www.cardio.e-tec.unisi.ch)



Università  
della  
Svizzera  
italiana

  
CARDIOCENTROTICINO

## Cardio e-TeC

Advanced short course in  
Electronic Technologies  
and Communication in  
Cardiology at USI

Lugano: 23-27 November 2009

## Course objectives

This short comprehensive course in Electronic Technologies and Communication in Cardiology aims to update the specific knowledge of health professionals, scientists, industry managers and hospital administrators on the advanced use of implantable and non-implantable (but wearable) medical equipment used for diagnosis, monitoring, prevention and therapy prescription.

The course provides an overview of the technical features and use of medical devices in cardiology as well as specialist training in modern health communication strategies, techniques, and concepts.

Extensive discussions will emphasize the challenging issues that are critical to the biomedical innovation process. During the course, participants will be able to develop a plan for a new medical device as part of an interdisciplinary team. At the end of the session participants should have acquired an in-depth understanding of the use and application of electronic technologies in cardiology and be ready to take on a leading role in the biomedical engineering process.

## Who should attend?

The course is tailored to the needs of individuals planning to participate in, lead, or understand the biomedical engineering process regarding electronic technologies in cardiology. Our target audience includes:

- Cardiologists and health professionals wishing to update their knowledge on the advanced use of medical devices in cardiology
- Scientists and medical doctors wishing to gain a new insight into the application of modern technology to the development of innovative medical products
- Industry managers involved in managing the biomedical engineering process, and the identification of technologies applicable to the development of innovative medical products
- Hospital administrators wishing to further improve their knowledge and understanding of the use and application of electronic technologies in cardiology

## Structure and content of the course

The course is organized in modules with emphasis on new device development and communication in cardiology based on real medical and clinical needs.

Participants will be trained in the application of electronic technologies in cardiology as well as in appropriate health communication strategies. The teaching program also includes the mandatory regulatory and legal frameworks that are instrumental in the development of innovative medical products.

Working in teams participants will be asked to design and develop a plan for a new medical device. Teams will tackle an eminently interdisciplinary project, requiring contributions from various disciplines and offering excellent opportunities for knowledge and skill enhancement.

Lectures will be accompanied by case studies and extensive discussions. Participants will have many opportunities for interaction with experts from medicine, industry, and academia.

Lectures and seminars will be held by a world-class team of lecturers and instructors from medicine, industry, and academia.

