



"Advancements in surgical robotics" PhD course



Bioengineering Department -
Politecnico di Milano

NearLab
Building 2 - 2nd floor
Via Giuseppe Colombo 40

9 - 13 July, 2012



fondazione
cariplo

Progetto Cariplo: "Azioni di internazionalizzazione per il post-laurea nell'ambito delle tecnologie dell'ICT e biomediche"

Aim of course

The course is aimed at providing students (with basics knowledge about robotics) with topics related to an exemplary application, the surgery, with highly demanding performance requirements.

The course is expected to provide knowledge and tools on the following topics:

- current state of the art of surgical robotics (addressing potentialities and limitations)
- medical robots design and control
- field overview through the analysis of the current research topics in the EU
- point of view of the end user

Program

Monday 9th July

- 10.00 – 12.00 Ferdinando Rodriguez y Baena – Overview of surgical robotics
- 12.00 – 13.30 *Lunch break*
- 13.30 – 18.00 @Nearlab – Demo sessions on navigation and surgical robots

Tuesday 10th July

- 9.00 – 10.30 Brian Miller - Surgical Robotics - Past, Present and Future
- 11.00 – 12.00 Paolo Fiorini - Robotic surgery, EU projects and Future Perspectives
- 12.00 – 14.30 *Lunch break*
- 14.30 – 16.30 Andreas Tobergte - Design and Control of a surgical Teleoperation system

Wednesday 11th July

- 9.30 – 10.30 Patrick Finlay – novel applications of robotics in medicine and healthcare
- 11.00 – 12.30 Thomas Neff - The KUKA lightweight robot: Technical features and possible medical applications
- 12.30 – 14.30 *Lunch break*
- 14.30 – 18.00 @Nearlab – Lab practice

Thursday 12th July

- 9.30 – 12.00 Mauro Sette - Catheters and sensors, geometrical modeling
- 12.00 – 14.30 Lunch break
- 14.30 - 16.30 @Nearlab – Test

Friday 13th July

- 9.30 – 12.30 Francesco Cardinale – Demo session: intracerebral electrodes implantation, planning and phantom surgery

Speakers

Ferdinando Rodriguez y Baena - Imperial College of London, UK

Brian Miller – Intuitive Surgical, Inc., USA

Paolo Fiorini – Università di Verona, IT

Andreas Tobergte - German Aerospace Center, Germany

Patrick Finlay – Medimatton - Medical Technology, UK

Thomas Neff – KUKA Roboter GmbH, Germany

Mauro Sette - Robotic Assisted Surgery Group Katholieke Universiteit Leuven, Belgium

Francesco Cardinale - Ospedale Niguarda Milano, Centro per la chirurgia dell'epilessia "C. Munari", IT

How to reach us [here](#)

Please contact carla.benoldi@gmail.com for **registration**

