

Networking for new trends in surgical robotics

From teleoperation to autonomy

Marta Capiluppi, University of Verona, Italy

Sanja Dogramadzi, Bristol Robotic Laboratory, UK

Elena De Momi, Politecnico di Milano, Italy

Objectives of this workshop

- ▶ To present **new challenges in the application** of robotic surgery, with the help of surgeons in different operations
- ▶ To show **ongoing research activities** in the field of robotic surgery, currently addressed by projects with new trending technologies
- ▶ To discuss **how surgical requirements** for new applications can match **current technological evolution**
- ▶ To foster **networking of EU researchers** and create synergies among ongoing projects

Agenda of the workshop

- ▶ 10:45 - 10:55 Introduction to the workshop
- ▶ 10:55 - 11:25 Surgeons' talks (via Skype):
 - **Raimondo Ascione - Challenges in robotic cardiac surgery**
 - **Antonio Toesca - Mastectomy for Breast Cancer, a Pioneering Robotic Approach**
 - **Alberto Arezzo - Can we really automate abdominal surgery? Practical examples**
- ▶ 11:25 - 11:40 Projects presentations
 - **Sanja Dogramadzi - SmartSurg**
 - **Riccardo Muradore - SARAS**
 - **Johannes Lachner - MURAB**
 - **Elena De Momi - EDEN**
 - **Marta Capiluppi - ARS**
- ▶ 11:40 - 12:15 **Interactive session:** How the current technology meets the gaps and needs?

Networking initiatives

We have a LinkedIn group “[European Surgical Robotics Community](#)”

- ▶ Join it!
- ▶ Invite your contacts to join it, the group is a mean to connect the community working on surgical robotics
- ▶ The group is open to anyone interested, whether European or not, from universities, research centres, companies, health and care centres, other institutions
- ▶ Share your comments and opinions about the future of robotic surgery, new trends, applications, technologies, tools and software
- ▶ Share project results, software and hardware tools, repositories, success stories, good practices, innovation products
- ▶ Advertise your workshops, conferences, papers, job positions
- ▶ Ask questions, help, support
- ▶ Search for partners for projects and research developments

Anyone can join and post, but please notice that both membership and posts are moderated for security!

Interactive session

Autonomy

- ▶ Are you developing autonomous procedures?
- ▶ What surgical application do you think will be the first one to adopt (partially) autonomous procedures?

Imaging

- ▶ Current intra-operative imaging?
- ▶ Trends on intra-operative imaging?

Best-practice, open data, shared data/results

- ▶ Establish a common platform is difficult, use social networks to share/communicate data and results?

Instrument design for minimally invasive surgery and haptic feedback development

- ▶ Is anybody working on this?
- ▶ What are the surgical applications?