

Medical Robotics Days, June 14th&15th, 2018

Université Libre de Bruxelles - ULB
50 avenue FD Roosevelt, B-1050 Brussels
Solbosch Campus, Building R42.5.103¹

Organizers: Pierre LAMBERT (ULB) & Brahim TAMADAZTE (CNRS)

We are pleased to announce that the ULB and CNRS will organize the “*medical robotics days*” in Brussels, Belgium. The aim is to bring together academic, clinical and industrial experts who have been working for several years on different issues in robotics assisted surgery also known as computer-assisted surgery (CAS) and related fields. These days will provide a review of current achievements/advances and future developments as well as the scientific and technological obstacles to raise to result in clinical added-value and reliable robotics systems. The “*medical robotics days*” will also act as a platform for wider discussions and encourage multidisciplinary collaboration between academic, clinician and industrial experts of both sides of the border (Belgium-France).

The “medical robotics days” are free but require a registration for logistic reasons and limit of available places.

Topics

- Surgical robots: state of the art, current research efforts
- Soft robots, continuum mechanisms
- Endoscopic surgery
- Teleoperation in clinical contexts
- Actuation and stiffening mechanisms
- Biomedical microrobotics
- Medical imaging (registration and multimodal data fusion)
- Soft / stiffness controllable manipulators for minimally invasive-surgery
- Kinematics and dynamics modeling of continuous devices, control
- Sensing, including tactile, force and torque, stiffness sensing
- End user interface

Day 1: June, 14th

10h00 – 10h10	<ul style="list-style-type: none">• Medical robotics days’ overview and introduction Pierre Lambert (ULB) & Brahim Tamadazte (CNRS)
10h10 – 10h45	<ul style="list-style-type: none">• Surgical endoscopy: 15 years of collaboration between doctors and engineers at ULB Alain Delchambre, Prof. (ULB)
10h45 – 11h00	Coffee break
11h00 – 11h35	<ul style="list-style-type: none">• Vision-Based Sensing of External Forces Acting on Soft Robots Using Finite Element Method Jérémie Dequidt, Ass. Prof. (Inria Lille)

¹ <http://www.ulb.ac.be/campus/solbosch/plan-R42.html>

11h35 – 12h00	<ul style="list-style-type: none"> AmaRob: Spin-off for intracorporeal laser surgery Sergio Lascano, PhD (AMAROB spin-off)
12h00 – 13h45	Lunch [offered by the organizers]
14h00 – 14h40	<ul style="list-style-type: none"> <i>Adaptive robotic assistance for reconstructive microsurgery</i> Benoit Herman, Prof. (Université Catholique de Louvain)
14h40 – 15h20	<ul style="list-style-type: none"> Enhanced laparoscopic surgery: seeing beyond the visible to better care Sandrine Voros, PhD (INSERM, TIMC-IMAG)
15h20 – 16h00	<ul style="list-style-type: none"> Smart Materials for Flexible Medical Devices Pierre Lambert, Ass.-Prof. & Loïc Blanc, PhD Student (ULB)
16h00 – 16h20	Coffee Break
16h20 – 17h00	<ul style="list-style-type: none"> Recent Results in Computer-Assisted Medical Interventions at LIRMM" Nabil Zemiti and Yassine Haddab (LIRMM)
17h00 – 17h40	<ul style="list-style-type: none"> Mesoscale continuum robots: dexterity in confined spaces Taha Chikhaoui, Post-Doc, (Lab. for Continuum Robotics (LKR), Hannover)
20h00 - ...	Dinner [offered by the organizers] Place to be communicated

Day 2: June, 15th

09h00 – 09h35	<ul style="list-style-type: none"> Robotics and Urology: from revolution to evolution Ranan Dasgupta, MD (Imperial College Healthcare NHS Trust)
09h35 – 10h10	<ul style="list-style-type: none"> A surgical cockpit to ease laparoscopic surgery Guillaume Morel, Prof. (ISIR)
10h10 – 10h25	Coffee break
10h25 – 11h00	<ul style="list-style-type: none"> Robot-assisted eye surgery made in Europe, recent advances within the EurEyeCase project Emmanuel Vander Poorten, Prof. (KULeuven)
11h00 – 11h35	<ul style="list-style-type: none"> Microrobotics for highly selective cell sorting: towards the development of new innovative medicines Aude Bolopion, PhD (CNRS, FEMTO-ST)
11h35 – 12h10	<ul style="list-style-type: none"> Robotic assistance to intraluminal surgery for colorectal cancer treatment Florent Nageoette, Ass.-Prof. (ICUBE)
12h10 – 12h40	<ul style="list-style-type: none"> L'approche endoscopique du nodule pulmonaire périphérique Leduc Dimitri, MD (Hôpital Erasme – ULB)
12h40 – 12h45	End of the medical robotics days Pierre Lambert (ULB) & Brahim Tamadazte (CNRS)

Access map (the meeting will take place in room R42 surrounded by a circle see map below)

<http://www.ulb.ac.be/campus/solbosch/plan-R42.html>

> Campus du Solbosch

