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 industrials 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 | Medical robotics days’ overview and introduction  
| Pierre Lambert (ULB) & Brahim Tamadazte (CNRS) |
| 10h10 – 10h45 | Surgical endoscopy: 15 years of collaboration between doctors and engineers at ULB  
| Alain Delchambre, Prof. (ULB) |
| 10h45 – 11h00 | Coffee break |
| 11h00 – 11h35 | 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
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| 11h35 – 12h00 | • AmaRob: Spin-off for intracorporeal laser surgery  
                     Sergio Lescano, PhD (AMAROB spin-off) |
| 12h00 – 13h45 | Lunch [offered by the organizers]                                      |
| 14h00 – 14h40 | • Adaptive robotic assistance for reconstructive microsurgery  
                     Benoit Herman, Prof. (Université Catholique de Louvain) |
| 14h40 – 15h20 | • Enhanced laparoscopic surgery: seeing beyond the visible to treat better  
                     Sandrine Voros, PhD (INSERM, TIMC-IMAG) |
| 15h20 – 16h00 | • Smart Materials for Flexible Medical Devices  
                     Pierre Lambert, Ass.-Prof. & Loïc Blanc, PhD Student (ULB) |
| 16h00 – 16h20 | Coffee Break                                                          |
| 16h20 – 17h00 | • Design of a microbiota sampling device using bistable mechanism  
                     Mouna Ben Salem, PhD student (LIRMM) |
| 17h00 – 17h40 | • Mesoscale continuum robots: dexterity in confined spaces  
                     Taha Chikhaoui, Post-Doc, (Lab. for Continuum Robotics (LKR), Hannover) |
| 20h00 – …    | Dinner [offered by the organizers]                                    |

**Day 2: June, 15th**

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| 09h00 – 09h35 | • Robotics and Urology: from revolution to evolution  
                     Ranan Dasgupta, MD (Imperial College Heathcared NHS Trust) |
| 09h35 – 10h10 | • A surgical cockpit to ease laparoscopic surgery  
                     Guillaume Morel, Prof. (ISIR) |
| 10h10 – 10h25 | Coffee break                                                          |
| 10h25 – 11h00 | • Robot-assisted eye surgery made in Europe, recent advances within the EurEyeCase project  
                     Emmanuel Vander Poorten, Prof. (KULeuven) |
| 11h00 – 11h35 | • Microrobotics for highly selective cell sorting: towards the development of new innovative medicines  
                     Aude Bolopion, PhD (CNRS, FEMTO-ST) |
| 11h35 – 12h10 | • Robotic assistance to intraluminal surgery for colorectal cancer treatment  
                     Florent Nageotte, Ass.-Prof. (ICUBE) |
| 12h10 – 12h40 | • 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