

Modular Surgical Robotics: how can we make it possible?

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Abstract

Computer and Robot Assisted Surgery (CRAS) is an area receiving broad attention worldwide, because of its strong potential to achieve new levels of healthcare. Many researchers and potential users are attracted to the field. However, the market is offering very few products, which cannot be enhanced with add-on components produced by other manufacturers. This inability is not only due to commercial, but also to technical reasons, since an FDA-approved or CE marked surgical device cannot be altered by adding new components.

Motivated by these considerations, the European research project Eurosurge addresses the issues of modularity and integration of different functions into a surgical robot, with a special emphasis on the integration of cognitive functions into robotassisted surgical procedures, and on the satisfaction of regulatory constraints.

This workshop aims at presenting to the robotic community the results of the first six months of the project and to establish a fruitful discussion with experts in the areas of integration, standards, benchmarking, architectures and cognition. The workshop will be divided into three phases: the first summarizing the current status of Eurosurge; the second with presentations from experts outside the project; and the third with a discussion to provide suggestions and opinions about introducing modularity into robotic surgery.