



Universität
Basel

Research Project

MIRACLE - Minimally Invasive Robot-Assisted Computer-guided LaserosteotomE

Third-party funded project

Project title MIRACLE - Minimally Invasive Robot-Assisted Computer-guided LaserosteotomE

Principal Investigator(s) [Cattin, Philippe Claude](#) ; [Zeilhofer, Hans-Florian](#) ;

Organisation / Research unit

Departement Biomedical Engineering / Center for medical Image Analysis & Navigation (Cattin)

Bereich Operative Fächer (Klinik) / Kiefer- und Gesichtschirurgie (Zeilhofer)

Department

Project start 01.01.2015

Probable end 30.06.2022

Status Completed

The project *Minimally Invasive Robot-Assisted Computer-guided LaserosteotomE* or in short, MIRACLE, is devoted to the development of an integrated miniaturized system able to perform minimally invasive osteotomies that are less stressful for the patients. The technologies required to master these goals are in the field of laser physics, medical robotics, virtual planning and intraoperative navigation. The project is under the leadership of Professor Hans-Florian Zeilhofer and Professor Philippe Cattin from the Biomedical Engineering Department of the Medical Faculty of the University of Basel. It consists of several sub-projects that focus on laser and robotic technology, the navigation of the robot-guided laser system during surgery, as well as on the development of custom-made implants which have additional functional capabilities.

The Werner Siemens-Foundation of Zug supports this project with a grant of 15.2 million Swiss francs over a period of five years.

Financed by

Private Sector / Industry

Foundations and Associations

Add publication

Add documents

Specify cooperation partners