

University
of Basel

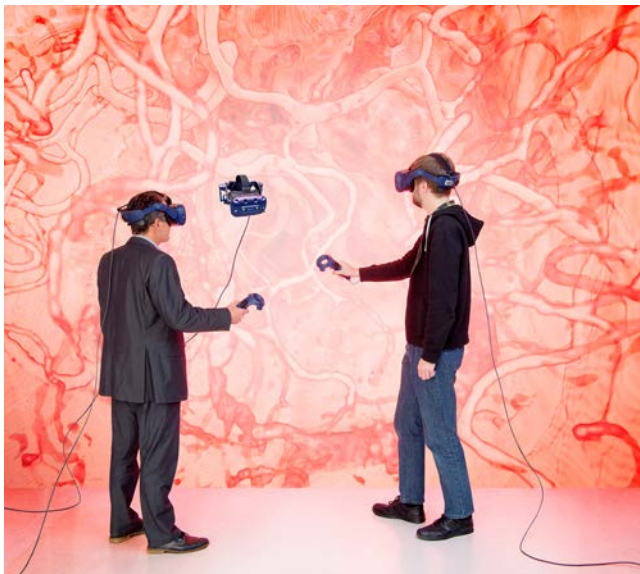
Department of
Biomedical Engineering

From Scientific Discoveries to Clinical Application



Close collaboration between the University Hospital Basel, the University Children's Hospital Basel and the DBE (picture: google/R. Wendler)

The Department of Biomedical Engineering collaborates closely with the University Hospital Basel and the University Children's Hospital Basel in order to guarantee a direct transfer of scientific developments to real-world applications for the benefit of patients. During development medical doctors support DBE research projects as advisors as well as co-supervisors of PhD and Master's students.



SpectoVR technology used at the University Hospital Basel (picture: WSS/F. Brüderli)

One of many examples highlighting the direct clinical application of DBE research products is the use of medical technology developed in the MIRACLE project. For several years now, the University Hospital in Basel has been working with a tool developed by the Planning and Navigation Group of the MIRACLE team, the ground-breaking software called SpectoVR. SpectoVR renders three-dimensional medical data such as Computer Tomography (CT) data sets, it enables images to be visualized in three dimensions using virtual reality. Since January 1, 2018 all operations for patients undergoing elective aneurysm repair at the University Hospital have been prepared using SpectoVR technology. At the beginning of 2018 surgeons also started using virtual reality glasses and SpectoVR to inform patients about their upcoming operation. The system gives patients the opportunity to get a better understanding of why a certain surgery is necessary and how it is to be done. Both sides benefit from this: physicians can explain complex cases more clearly and patients can better understand what is happening in their bodies.

Department of
Biomedical Engineering
Gewerbstrasse 14
CH-4123 Allschwil
+41 61 207 54 02
news-dbe@unibas.ch
www.dbe.unibas.ch

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Department Head:

Prof. Dr. Philippe Cattin
philippe.cattin@unibas.ch

