University of Basel
Department of Biomedical Engineering

Selected research topics in Biomedical Engineering:
Robot- & Computer-Assisted Surgery

Location: DBE, Hegenheimermattweg 167B, Lecture Hall 02.097
Date & Time: Wednesday 17.01.2024 13:15 – 15:00

Robots with a Gentle Touch – New Approaches and Established Designs

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Abstract
Medical robots are on their way to establishment in the operating theatre. For the last 20 years we have seen diverse approaches and indications. Still, the robot is a large and even foreign object in the surgical field due to its size, stiffness, and potential harm. Novel approaches for minimally invasive visceral surgery but also for the gastrointestinal tract will involve kinematics, sensors, and actuation concepts that allow for elasticity, tissue awareness, and control concepts that make robots a little bit ore gentle and suitable for everyday surgery.

Biosketch
Peter P. Pott is full professor and director of the Institute of Medical Device Technology at Stuttgart University in Germany since 2017. In 2016&17 he was head of the Mechanical Design Department at Leica Microsystems in Mannheim, Germany. Before that he was scientific director at the Institute of Electromechanical Design at Technische Universität Darmstadt, Germany, where he finished his habilitation in Mechatronics in 2015. He received his Dr. rer. nat. (Ph.D.) in automatic control in 2008 from the University of Mannheim while working as a research assistant at the Laboratory for Biomechanics and Experimental Orthopaedics at the University Medical Center in Mannheim, Germany. In 2000 he received his Dipl.-Ing. degree in mechanical engineering from Mannheim University of Applied Sciences.