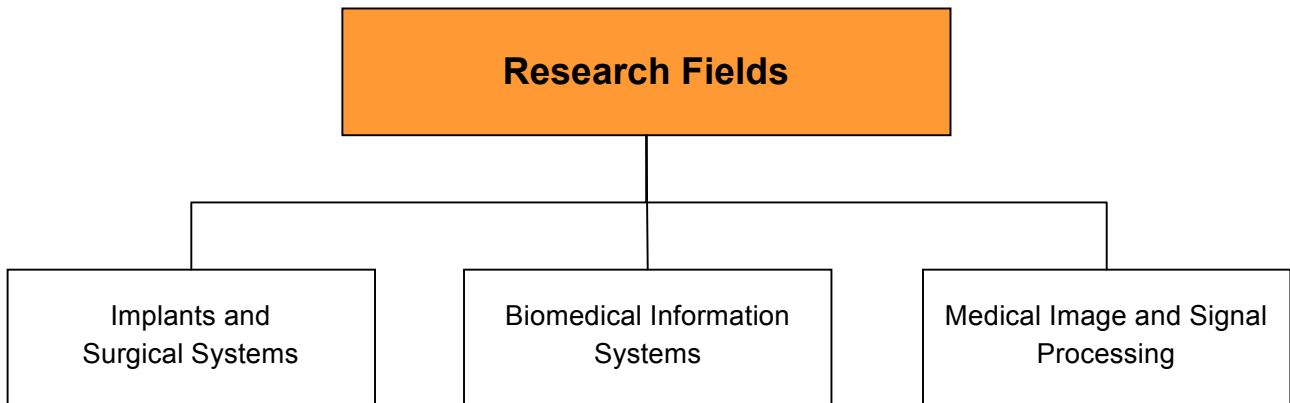


Institute for Medical and Analytical Technologies (IMA)



In the **Institute for Medical and Analytical Technology** we carry out research and development in the innovative environment of medicine, industry and academia in the areas of in vivo diagnostics and therapeutic systems. Our work is focussed on patient-specific solutions and the analysis of medical data. In cooperation with our partners we tackle issues in the field of medicine and develop innovative solutions, from the first idea to functional models. The industry experience of our staff results not only in innovative research, but is also integrated in the teaching program.



Competencies of the IMA	
Medical Image Processing Segmentation, Indexing, Visualisation and Modelling <i>Prof. Dr. Alex Ringenbach</i>	Biosignal Processing Diagnostic Systems for Biosignal Processing <i>Prof. Dr. Michael Stanimirov</i>
Visual Analytics Utilisation of Complex Data and Information with the Aid of Interactive Visualisation <i>Prof. Dr. Dominique Brodbeck</i>	Telemedicine Distributed IT Platforms for Medical Use, Mobile Systems <i>Prof. Markus Degen</i>
Computer-Assisted Surgery Planning, Simulation, Navigation of Surgical Intervention <i>Prof. Dr. Erik Schkommodau</i>	Data Analysis and Modelling Recognition of Patterns, Statistical Methods and Neuronal Approaches <i>Prof. Gianni di Pietro</i>
Medical Additive Prototyping Implant Design and Manufacturing <i>Dipl. Eng. Ralf Schumacher</i>	Materialography Optimisation of Functional Materials and Surfaces, Biomaterials for Implants <i>Prof. Dr. Michael de Wild</i>
Deep Brain Stimulation Pre and Intra-Operative Targeting, Stimulator-Management and Postoperative Electrode Position Analysis <i>Dr. Simone Hemm-Ode</i>	Microsystem Technology Design of Miniaturised Diagnostic and Therapeutic Systems <i>Prof. Dr. David Hradetzky</i>

IMA Facilities	
<ul style="list-style-type: none"> • Image Generating Diagnostics (Ultrasound, Infrared, 3D-Camera, BCI) • Data Visualisation Systems (Vision Dome, Virtual and Augmented Reality Systeme) • Hospital IT Facilities Model (PACS, HL7, DICOM) • Additive Manufacturing Technology (Selective Laser Melting, 3D-Printer, MultiJet Printing) 	<ul style="list-style-type: none"> • Implant-Tests Laboratory (Hydropulser, REM, μCT, Surface Scanner) • Metallography Laboratory • Electronic Laboratory • Medical Image Processing Laboratory • Mechanical Workshop • Clean Room