Our Research

The health service sector is becoming more and more expensive, life expectancy is rising, providing care in the country is becoming increasingly difficult and the number of chronic illnesses is growing. Digital technologies can help us handle the medical challenges facing our society.

Scientists at the Campus Research Focus “Digital Medicine and E-Health” are involved in investigating, re-shaping and establishing digital solutions and innovative technologies in the health service sector. They are using technologies to optimise patient care and treatment such as Virtual Reality, 3D-printing, sensor technology, telemedicine and big data and are establishing infrastructures for safe, secure and sustainable data archiving and analysis.

Our Key Questions

- How can telemedicine revolutionise care in the public health sector?
- How can big data be used for a better diagnosis and more accurate prognoses? — Better therapies at a lower cost?
- How can we guarantee data safety and security in the public health sector?
- How can we use modern technologies to optimise patient care and treatment?
Current Research Projects

- Federal Ministry of Education and Research: Deep-iAMR — Identification of new antimicrobial resistance targets by high-throughput deep learning
- Innovation Committee of the Federal Joint Committee: Big Data — eHealth: Improving Care for Children and Young Adults with Chronic Inflammatory Bowel Disease
- MIRACUM — Medical Informatics in Research and Care in University Medicine (funded by the Federal Ministry of Education and Research)

Research Infrastructure

- Competence Center for Telemedicine and E-Health Hesse, funded by the Hessian Ministry for Social Affairs and Integration
- University Center for BioMedical Informatics
  Joint facility of Justus Liebig University Giessen and Technische Hochschule Mittelhessen University of Applied Sciences
- BiGi — The Bielefeld-Giessen Resource Center for Microbial Bioinformatics (Part of the German Network on Bioinformatics Infrastructures (de.NBI))
- de.NBI-Cloud, offering all three cloud computing software service models
  - Infrastructure as a Service (IaaS)
  - Platform as a Service (PaaS)
  - Software as a Service (SaaS)
- Modern research lab featuring 3D-printers, 3D-scanners, virtual reality systems and a sleep laboratory with polysomnography

Research Environment and Cooperation Partners

- University Hospital of Giessen and Marburg GmbH (UKGM) of the Rhön-Klinikum AG

Contact Persons

- Justus Liebig University Giessen
  Prof. Dr. med. Henning Schneider
  Faculty of Medicine
  Department of Medical Informatics
  +49 641 99-41361
  www.uni-giessen.de/imi

- Technische Hochschule Mittelhessen
  University of Applied Sciences
  Prof. Dr. Keywan Sohrabi
  Faculty of Health Sciences
  Medical Informatics
  +49 641 309-6600
  www.thm.de/ges

More Information

fcmh.de/digmed/en

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