

Prof. Dr. Claudius Stern

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Prof. Dr. Claudius Stern graduated in Computer Science at University of Paderborn in 2007. Directly following, he got a faculty member of the Faculty of Computer Science, Electrical Engineering and Mathematics. There, he worked in the collaboration laboratory C-LAB of University of Paderborn and a Siemens division (later Atos). There, he worked in the funded European project LOMS, which dealt with location-based services and their underlying technologies.

Prof. Dr. Stern has received funding from the Federal Ministry of Education and Research (BMBF) for the national research project SOGRO (Instant rescue at big accident with masses of casualties). In the course of this research project, he dealt with an approach to register images of an unmanned aerial vehicle (UAV) to a map of an incident area. Therefore, a special equipment has been built, enclosing a visual light camera, a thermal imaging camera and an embedded control system to synchronize and stabilize the two cameras. Exploiting computer vision algorithms, the images of the two cameras got fused. A novel method for image registration, using virtual forces for image alignment and image distortion, has been used to quickly generate an overview map of an incident area. This novel method is the core of the PhD thesis, which Prof. Dr. Stern finished in 2014. During his PhD studies, he published 19 scientific contributions (papers, chapters), mainly focused on embedded systems development.

In 2013, Prof. Dr. Stern left the university and started his work as development engineer in a national research project at Opsolution GmbH in Kassel. There, he focused mainly on the development of electronic circuits, printed circuit boards (PCBs) and data acquisition software. The purpose of the project was the transformation of a lab version of a biomarker measurement device into a consumer product. In the course of the project, the basic design fundamentally changed, and Prof. Dr. Stern designed a completely different circuit, designed the according PCB, developed the embedded firmware, the data acquisition software and the data science part to calculate the results. The focus of the development was on mass manufacturability and low energy consumption to allow a battery-driven measurement device. From the time since 2013, the product has been continuously developed and Prof. Dr. Stern got the head of embedded systems development at biozoom services GmbH, a related company.

With the successful completion of his PhD thesis, Prof. Dr. Stern started teaching at FOM University of Applied Sciences in Hannover as a secondary professional activity. This activity grew over time, and he finally became a Professor at the FOM University of Applied Sciences in Kassel. There, he gives lectures about programming in different languages, algorithms, database systems, operating systems, big data and data science and embedded systems and IoT.