



Sponsorship running into the millions on the path to excellence

The Carl Zeiss Foundation supports Ulm and Stuttgart quantum technology

In the first round of the strategy for excellence, quantum technology researchers from Ulm and Stuttgart have already been able to make a convincing impression and have made a full application for a cluster of excellence. At the end of September the decision on this application will be announced. The Carl Zeiss Foundation has already selected the research project "TQuant", in which findings from quantum science are put into practice, for sponsorship running into the millions.

In the next six years the foundation will be funding the activities of the interdisciplinary research group, which is already pooled in the joint, cross-location center IQST, with a sum of up to eight million Euros. The physicists, engineers, life scientists as well as mathematicians and experts from other specialist disciplines want to use the laws of quantum mechanics for innovative biomedical applications. In concrete terms they are working on optimizing imaging techniques such as magnetic resonance imaging and developing high-performance sensors.

The three partners, the Universities of Ulm and Stuttgart as well as the Max Planck Institute for Solid State Research (Stuttgart), are already leading in quantum technology.

Minister Theresia Bauer, chairperson of the foundation administration of the Carl Zeiss Foundation, had this to say about it, "This development is to be continued and sustainably strengthened through our funding".

Both locations have an excellent infrastructure in which internationally renowned researchers work. Research buildings for quantum-

University Communication

**Head of University Communication
and Press Spokesperson**
Dr. Hans-Herwig Geyer

Contact
T 0711 685-82555
hkom@uni-stuttgart.de
www.uni-stuttgart.de



biosciences that are exactly aligned to meet the needs of the researchers are being built or are already operational in both university cities.

“The funding decision by the foundation further strengthens us in our research project. The combination of quantum technology with biomedicine is unique and will lead to innovative applications for research and diagnostics”, said Professor Joachim Ankerhold, Vice President of the University of Ulm for Research and Information Technology, who together with Professor Tilman Pfau from the University of Stuttgart is a Director of IQST. Professor Jörg Wrachtrup from the University of Stuttgart and Spokesperson for the TQuant project emphasized, “The generous funding by the Carl Zeiss Foundation will allow us to transfer the new possibilities of quantum sensor technologies to the field of medical application and research.”

The Carl Zeiss Foundation funds scientific projects primarily from the fields of mathematics, computer science, natural sciences and technology. It finances its funding activities from the dividend payments from both foundation companies Carl Zeiss AG and SCHOTT AG. By funding the project “TQuant” the Carl Zeiss Foundation wants to further strengthen the excellence of the project and thus increase the chances of a successful application in the excellence strategy.

Further information:

Professor Dr. Joachim Ankerhold (University of Ulm):

joachim.ankerhold@uni-ulm.de, 0731/50-22831,

Professor Dr. Tilman Pfau (University of Stuttgart):

T.Pfau@physik.uni-stuttgart.de,

0711/685-68025

Professor Dr. Jörg Wrachtrup (University of Stuttgart):

j.wrachtrup@physik.uni-stuttgart.de,

0711/685-65278

The University of Ulm, youngest in Baden-Württemberg, was founded in 1967 as a University of Medicine and Natural Sciences. Since then the range of subjects has been significantly expanded. The current number of around 10 000 students are spread across four faculties



(“Medicine“, “Natural Sciences“, “Mathematics and Economics“ as well as “Engineering Sciences, Computer Science and Psychology“).

The University of Ulm is the engine and focus of the science city in which a diverse research environment comprising clinics, technology companies and other facilities has developed. Life sciences and medicine, bio, nano and energy materials, financial services and their mathematical methods as well as information, communication and quantum technologies are considered the research focuses of the university. In the *Times Higher Education Young University Ranking* the University of Ulm 2017/18 is the best German university under 50 years and among the top 10 worldwide.

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The University of Stuttgart is a leading technically oriented university with worldwide standing. The Stuttgart Way stands for interdisciplinary integration of engineering, natural sciences, humanities and social sciences on the basis of disciplinary cutting edge research.

Founded in 1829, the former technical university has turned into an educational and research institute in international demand with around 27,700 students and around 5,200 employees. Its outstanding position is among other things reflected in the “Simulation Technology“ (SimTech) Cluster of Excellence and the Graduate School “Advanced Manufacturing Engineering“ (GSaME), the Research Campus ARENA2036 as well as in numerous special research fields. In the research program at the University of Stuttgart the simulation sciences, the production technologies, the digital humanities as well as the topic of adaptive construction stand out as special beacons.