ETH zürich

# Press release

FET Flagship on Quantum Technologies

# Successful ETH quantum researchers

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**In mid-2017, the European Commission launched a flagship project in the field of quantum technology. After the Human Brain Project and the Graphene Flagship, the Quantum Flagship is the EU's third major research programme dedicated to promoting particularly forward-looking technologies in Europe (Future and Emgerging Technologies). Among the sub-projects that have now been selected are six that involve ETH researchers.**

The EU is planning to invest around EUR 1 billion over the next ten years to secure Europe a leading position in the field of quantum technologies. The ambitious initiative aims to contribute towards eventually turning the findings of quantum physics into marketable products. It is currently hoped that completely new applications can be developed from quantum technology, particularly in the areas of supercomputing, secure data transmission and sensor technology. Real competition has emerged in this field in recent years: in addition to the EU, for example, major American companies and China are investing huge sums in research.

"Quantum technology will open up new horizons in all scientific disciplines and offer new approaches to previously unsolvable questions, thereby changing our society for the better," says Professor Detlef Günther, ETH Vice President Research and Corporate Relations, of the importance of this research field. "We are therefore all the more delighted that the expertise of our scientists is in demand through the European Commission's Quantum Flagship." At ETH Zurich, a network of 18 research groups in various departments is working on these technologies.

The first three-year project phase of the Quantum Flagship begins in October 2018. A total of 140 different project proposals throughout Europe were submitted for it, and the EU has now announced which of these projects will benefit from the funding. Out of the 20 successful entries, six projects involve researchers from ETH Zurich. These are projects from the areas of quantum computing, quantum simulations and quantum sensors involving the ETH researchers Professor Christian Degen from the Laboratory for Solid State Physics, Professor Jérôme Faist and Professor Jonathan Home from

the Institute for Quantum Electronics, Professor Sebastian Kozerke from the Institute for Biomedical Engineering, Professor Matthias Troyer from the Institute for Theoretical Physics, and Professor Andreas Wallraff from the Laboratory for Solid State Physics.

The six projects will be supported with a total of CHF 6.5 million. Andreas Wallraff is very pleased with the number of successful entries from ETH researchers: “Together with our partners at ETH Zurich and in the wider Zurich region, we expect to make a major contribution to developments in quantum computing. For years, Swiss researchers and SMEs have been making significant, innovative contributions to this rapidly developing new IT field.”

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