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## **A further award for quantum theoretician Peter Zoller**

**He is one of the trailblazers of quantum physics and his ideas have won him numerous awards. In Japan, tomorrow, Professor Peter Zoller will receive the 6th International Prize for Quantum Communication. The Innsbruck physicist shares the prize with his long-term research colleague Ignacio Cirac for his outstanding contribution in the area of theoretical physics, especially in quantum information processing. This award emphasises Innsbruck's internationally leading role in quantum physics.**

For many years, Peter Zoller worked together with Ignacio Cirac, who now heads the Max-Planck-Institute for Quantum Optics in Garching, Germany. Spanish-born Cirac held a chair at the University of Innsbruck for several years. Together they suggested a model for a quantum computer that was based on the interaction of lasers with cold ions caught in an electro-magnetic trap. They published this idea more than ten years ago. Only in recent years have scientists in Innsbruck and elsewhere succeeded in realising it. At the moment it looks like one of the most promising paths towards a future quantum computer. "We develop theoretical concepts that can be realised in the laboratory with technologies that already exist or soon will," says Peter Zoller. "The main challenge is to define major goals that go beyond our own narrow specialism, such as implementing quantum computers or quantum communication."

In addition to Zoller and Cirac, William K. Wootters and Philippe Grangier will receive the Prize for Quantum Communication, which has been awarded biannually since 1996. Past winners include Charles H. Bennett, Dave Wineland, Richard Josza and David Deutsch. The award is presented at the 8<sup>th</sup> International Conference for Quantum Communication in Tsukuba, Japan. A previous commitment prevents Professor Zoller from taking the prize in person.



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## **A string of accolades**

Peter Zoller is professor at the Institute for Theoretical Physics at the University of Innsbruck and one of the scientific directors of the Institute for Quantum Optics and Quantum Information at the Austrian Academy of Sciences in Innsbruck. He was born in Innsbruck in 1952 and studied physics at the University of Innsbruck. He has been a guest professor at renowned universities across the world and for several years a professor at the Joint Institute for Laboratory Astrophysics (JILA) in Boulder, Colorado, before taking up a chair at the University of Innsbruck in 1994. In 1998 he received the Wittgenstein Prize, the highest Austrian accolade in science. In the same year he was awarded the Schrödinger Prize and the Max Born Prize. In 2005 he received the Max Planck Medal and the Niels Bohr Gold Medal and in 2006 the Dirac Medal.

You can find pictures of Prof. Zoller on: <http://www.iqoqi.at/media/download/>

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