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Press Release

Carl Zeiss Research Award 2009 for Professor Ignacio Cirac

The General Advisory Board of the Ernst Abbe Fond of Carl Zeiss AG (Oberkochen) has given the Carl Zeiss Research Award to Prof. Ignacio Cirac, Director at Max Planck Institute of Quantum Optics and head of the Theory Division, and Prof. Rainer Blatt, Chair of Experimental Physics at the University of Innsbruck, for their outstanding contributions to quantum communication and quantum computing. This prize was founded by the Carl Zeiss Foundation in 1988 and is dedicated biannually to scientists for their excellent work in optical research.

Professor Ignacio Cirac was born in the City of Manresa in 1965. He studied theoretical physics at the Universidad Complutense de Madrid where he received his PhD in 1991. He started his scientific career at the Universidad de Castilla-La Mancha, from which he received an honorary doctorate in 2005. He worked as a research associate at the University of Colorado and then became head of the department of Theoretical Physics at Leopold Franzens University Innsbruck. Since 2001 he is Director at Max Planck Institute of Quantum Optics and head of the Theory Division.

One goal of his research is to propose and analyze experiments that aim at observing and discovering interesting quantum phenomena in atomic systems. Under certain conditions e.g. atomic gases can take on exotic properties once they reach very low temperatures. Another focus is to investigate, how atomic systems can be controlled and manipulated at the quantum level using lasers. Professor Cirac is also leading in the development of a theory of Quantum Information which will be the basis of several applications in the world of communication and computation once microscopic systems can be completely controlled at the quantum level. The concepts developed in the field of Quantum Optics and Quantum Information are also applied to other fields, in particular to Condensed Matter Physics.

Professor Ignacio Cirac has been the recipient of several scientific awards. In 2005 he was awarded the renowned "Quantum Electronics Prize" of the European Science Foundation. In May 2006 he was the ever youngest winner of the renowned Royal Spanish Prince of Asturias Prize, and in the same year he shared the International Quantum Communication Award with Professor Peter Zoller (University of Innsbruck, Austria). The Carl Zeiss award which is endowed with 25000 Euro will be given to the prize winners during a special ceremony in the fall of 2009. *Olivia Meyer-Streng*

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