

Quantum Communications

The first of the quantum industries

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Moderator and Event Chair

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First Discoveries

- S. Wiesner, *Sigact News* **15**, No. 1, 78 (1983).
- C. H. Bennett and G. Brassard, in *Proceedings of the IEEE International Conference on Computers, Systems, and Signal Processing*, Bangalore, India (IEEE, New York, 1984), pp. 175–179.
- A. Ekert, *PRL* **67**, 661 (1991).

Panelists

- Bob Gelfond, MagiQ
- Richard Hughes, LANL
- Prof. Yoshi Yamamoto, Stanford U.
- Colin Williams, JPL

Bob Gelfond

- 1981 University of Virginia
- 1982 – 1989 Founder
Statistical Analysis Research and
Development Co.
- 1989 – 1992 Director of International Trading
D. E. Shaw & Co.
- 1992 – 1998 Managing Director
Millennium Partners, L.P.
- 1999 – Present Founder & CEO
MagiQ

Richard Hughes

- 1978 Ph.D. in Theoretical Elementary Particle Physics from the University of Liverpool, England
- 1993 Distinguished visiting scientist, University of Oslo, Norway
- 1994 Distinguished visiting scientist, Oxford University
- 1985 – Present Laboratory Fellow, Los Alamos National Laboratory
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- 1996, 1998 Los Alamos Distinguished Performance Awards for quantum cryptography research
- 1997 Los Alamos Fellows' Prize for work on quantum information science
- 1999 Fellow of the American Physical Society
- 2001 Co-winner R&D100 Award for “Free-space quantum cryptography”
- 2004 Co-winner of the European Union’s Descartes Prize

Prof. Yoshi Yamamoto

- 1978 Ph.D., University of Tokyo
- 1982 – 1983, 1985 Visiting scientist: MIT, Royal Institute of Technology in Sweden
- 1989, 1991, 1992 Visiting scientist: Bell Laboratories, Stanford University, Tianjin and Fudan Universities
- 1987 – 1992 NTT Basic Research Laboratories
- 1993 – 1998 Director of the Yamamoto Quantum Fluctuation Project, ERATO/JRDC
- 1999 – 2003 Co-leader of the Quantum Entanglement Project, ICORP/JST
- 1992 – Present Prof. Applied Physics and Electrical Engineering, Stanford University
- 2003 – Present Professor, National Institute of Informatics; NTT R&D Fellow, leader of the JST/SORST and JST/CREST project on quantum information

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- 1992 Carl Zeiss Research Award
Nishina Memorial Prize
- 1995 Minister Award of Science and Technology of Japan
- 1999 NTT Fellow Award
- 2000 IEEE/LEOS Quantum Electronics Award

Colin P. Williams

- 1983 – 1985 Research Assistant to Prof. Stephen W. Hawking, University of Cambridge, U.K.
- 1989 Ph.D., University of Edinburgh, U.K.
- 1990 – 1994 Xerox PARC
- 1994 – 1997 Vice President, Research Scientist, Variable Symbols, Inc.
- 1997 – 2000 Technical Group Supervisor, JPL / Caltech
- 2000 – 2002 Associate Professor of Computer Science, Stanford University
- 2002 – 2005 JPL / Caltech
 - Laboratory Senior Research Scientist
 - Program Manager, Advanced Computing Paradigms
 - Business Development, Innovative Partnerships Program