

Curriculum vitae of Chiara Macchiavello

Laurea in Physics in 1991 cum laude and Ph.D. in Physics at the University of Pavia in 1995. Thesis in Quantum Optics (“Quantum amplification of electromagnetic radiation”). Supervisor: Prof. G.M. D’Ariano.

1995/1996: Human Capital and Mobility Research Fellow at the Clarendon Laboratory of the University of Oxford, under the supervision of Prof. A. Ekert.

1996/1997: Marie Curie Research Fellow at the Clarendon Laboratory of the University of Oxford, under the supervision of Prof. A. Ekert.

1998/2007: permanent position as an Assistant Professor at the University of Pavia.

Since 2007: permanent position as an Associate Professor at the University of Pavia.

Referee of international scientific journals, such as Physical Review Letters, Physical Review and Physics Letters.

Editor, with G.M. Palma and A. Zeilinger, of the book “Quantum computation and quantum information theory”, World Scientific (2000), Bestselling Book of World Scientific.

Member of the European Pathfinder Project in Quantum Computation in 1998.

Member of the Editorial Board of Physical Review A in 2000-2002.

Member of the Editorial Board of International Journal of Quantum Information.

Expert for the EC jury evaluating FET-Open short proposals.

Scientist in charge for the Pavia node of the IST European Projects “Entanglement in Quantum Information Processing and Communication” (contract n. IST-1999-11053), “Quantum Properties of Distributed Systems” (contract n. IST-2002-38877), “Development of a global network for secure communication based on quantum cryptography” (contract n. IST-2003-506813) and “Correlated noise errors in quantum information processing” (contract n. ICT-2007-213681).

Involved in the following national and international research projects: TMR European network on “The physics of quantum information”; European Science Foundation PESC Scientific Programme “Quantum Information and Quantum Computation” (1999-2002); Advanced national Research Projects INFN “Generation and detection of quantum mesoscopic superpositions in parametric media (CAT)” (1997-2000) and “Quantum Teleportation and Quantum Cloning by the Optical Parametric Squeezing Process (CLON)” (2002-); National projects MIUR: “Amplification and Detection of Quantum Information” (1997-1998), “Quantum Information Transmission and Processing: Quantum Teleportation and Error Correction” (1999-2000) and

“Entanglement Assisted High Precision Measurements” (2002-2004).

Organiser of the series of lectures “New frontiers of physics” at Collegio Nuovo in Pavia in 1998.

Organiser, with G.M. Palma, of the International Summer School on “Quantum Computation and Quantum Information Theory”, Fondazione ISI, Villa Gualino, Torino, Italy, July 1999.

Director, with S.F. Huelga, G.M. Palma and M. Plenio, of the international conference “Advances in quantum information processing: from theory to experiments”, Erice, Italy, 15-22 March 2003.

Invited to chair/introduce the session “Generic theory” at the “Forth European Quantum Information Processing and Communications Workshop”, Oxford, 13-17 July 2003.

Director, with A. Ekert, R. Fazio and G.M. Palma, of the International Workshop on “Quantum entanglement in physical and information sciences”, Scuola Normale Superiore, Pisa, Italy, 14-18 December 2004.

Recipient of the Prize “Maria Teresa Messori Roncaglia e Eugenio Mari”, by Accademia Nazionale dei Lincei, in 2006.

Teaching activity

Lectures in Quantum Optics for undergraduate students, 1999/2000.

Lectures on “Quantum error correction” at the “International School of Physics Enrico Fermi” on “Experimental quantum information”, in Varenna, Italy, 17-27 July 2001.

Lectures on “Decoherence and quantum error correction” at the “International School on Quantum Computation and Information”, Lisbon, 2-7 September 2002.

Lectures on “Quantum Information” at the National School on Physics of Matter, Torino, Italy, 8-21 September 2002.

Lectures on “Quantum error correction” at the WES Summer School on Fundamentals of Quantum Information Processing, Wittenberg (Germany), 20 July-2 August 2003.

Lectures on “Quantum computing and entanglement” at the Les Houches Summer School of Physics in Singapore (Ultracold gases and quantum information), Singapore, 29 June- 24 August 2009.

Course on Quantum Optics for undergraduate students in Pavia in 2002/2003.

Course on “Quantum physics of computation” for undergraduate students in physics and engineering in Pavia since 2003/2004.

Course on “Physics” for undergraduate students in biology in Pavia since 2007/2008.