

PERSONAL INFORMATION

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Date of birth 12NOV1962 | Nationality Italian

CURRENT POSITION

Full professor of Physics

Fellow of the Istituto Veneto di Scienze Lettere e Arti (SCR)
Research Associate to CNR - Consiglio Nazionale delle Ricerche
Istituto di Fotonica e Nanotecnologie - UdR Padova
Research Associate to INFN Istituto Nazionale di Fisica Nucleare -
Sezione di Padova

WORK EXPERIENCE

2021-2025

President of the Strategic Technical Committee of Veneto Region

Since 2020

University of Padova

Director of Padua Quantum Technology Research Center, Padova

Since 2015

Ordinarius (Professore Universitario di ruolo di Prima Fascia) - Physics
University of Padova

- Coordinator of 3 Space Quantum Communication projects from Italian Space Agency
- PI of ESA Space QKD project
- Node Coordinator for of European and ASI Space Quantum Communications projects
- Coordinator of national QKD application projects

Previous Activities

- Coordinator of Space Quantum Communication projects by ASI
- Coordinator of QKD application projects
- QuantumFuture Research Group leader
- Attosecond Physics - 130 attosecond pulse generation world record
- Coordinator of Space Quantum Communication project UniPD (2003-2005)
- Ultrafast optics
- Multiphoton ionization with few-femtosecond pulses
- Extreme ultraviolet optics
- High-order harmonics generation
- Adaptive Optics

EDUCATION AND TRAINING

From 1990 – To 1991	Perfezionamento in Matematica Applicata (post graduate study) Mathematics / University of Padova
From 1981 – To 1987	Laurea in Fisica Physics / University of Padova

Relevant Experience on Quantum Technologies

OpenQKD EU Testbed for Quantum Communications - Italian node coordinator. Project coordinator for the development of a Space Quantum Communication payload for the Italian Space Agency (2017-2019).

Development and patenting of Quantum Random Number Generators QRNG – 17 Gbps record rate generated. (2014-2019)

First demonstration of Quantum Communications from an orbiting transmitter on a LEO satellite using polarization and temporal degrees of freedom (2010-2016).

Fundamental experiments in wave-particle duality of photons in Space: Wheeler "Delayed Choice" experiment (2016-2017).

Q-Space Experiment: first demonstration of single-photon link between a satellite and the Earth (2003-2008).

Canary 143 km Inter-island link experiment: Experimental demonstration of Quantum Key Distribution with mitigation of turbulence effects (2010-2015)

Single photon exchange from a MEO satellite (2015).

Aberration cancellation in quantum interferometry (2006-2009)

Space QKD link budget (2004-present)

Adaptive optics for entanglement generation and control (2008-2014)

- Member of the Board of Stakeholders of the European Technological platform Photonics21
Coordinator of the Study Group for Quantum Communication in Space in Europe
Member of the Executive Board of Department of Information Engineering, UniPD.

Founding member and First Director of the Padua Quantum Technologies Research Center.

Founding member of two spinoff of University of Padova, including **ThinkQuantum**.

Founding member of the Italian Society on Quantum Science and Technology.

Author of more than two hundred publications on peer-refereed journals, including Nature and Science, on encyclopaedia and editor of 2 books. Coauthor of more than 200 congresses contribution in the areas of Quantum Communication, Quantum Optics, laser-matter interaction and Atomic and Plasma Physics.

Awards and Prizes

- Winner of the first prize, with team VIVA, of STARTCUP 2002 - L'idea diventa impresa, the first competition among Italian Universities on best proposal that exploits for business a research idea, July 4, 2002, now Premio Nazionale per l'Innovazione.

- Selected for one of the 20 ideas of national relevance for the 2nd National Day for the Research, Rome, Oct. 1, 2003.

Winner of the first prize of the 4-th Premio Regionale per l'Innovazione on July 7, 2004.