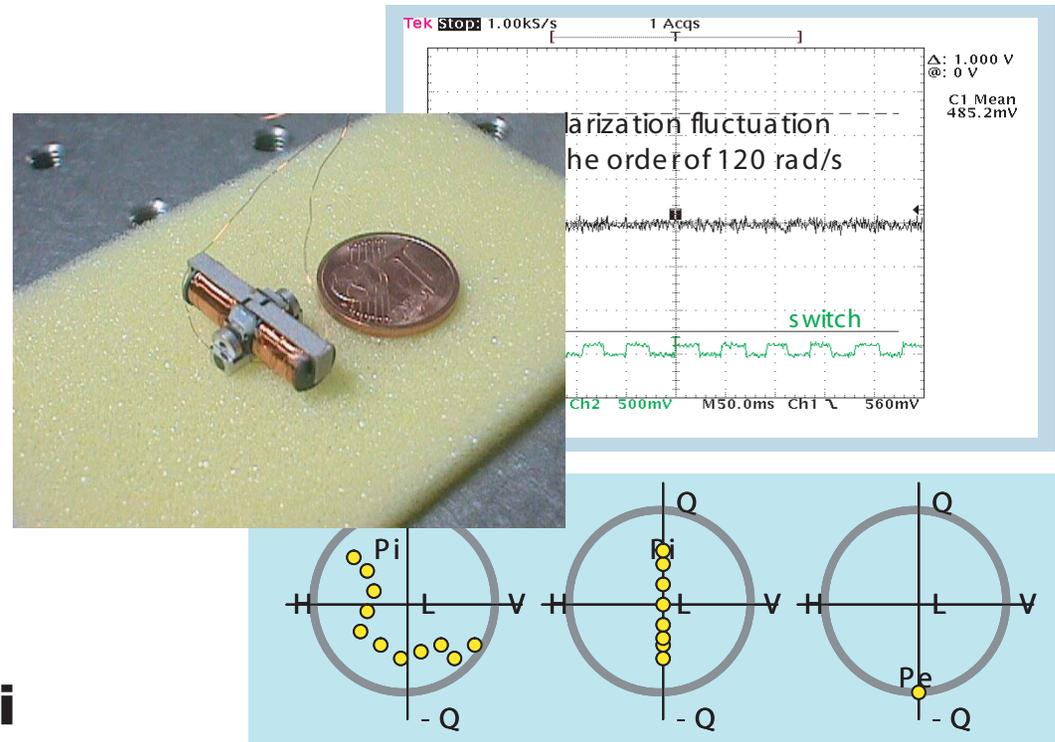


# Polarization stabilizer and its application to the new formats in optical communications



**Professor Mario Martinelli**  
**Optical Communications**  
**Politecnico di Milano, Italy**  
**Director of CoreCom**

In the talk, new developments in controlling and stabilizing the state of polarization of communication signals will be given as well as applications to DQPSK format and to coherent detection.



10:30 am, Thursday, May 22  
 Goergen 109  
 Refreshments provided

# ***Polarization stabilizer and its application to the new formats in optical communications***

Professor Mario Martinelli, Politecnico di Milano

## **Abstract**

The to-date optical communications scenario proposes new formats aimed to increase the spectral efficiency of the transport as well as to relieve the main penalties. In this frame, the polarization control play an important role both to serve as a multiplexing technique and to allows a better signal processing. In the talk, new developments in controlling and stabilizing the state of polarization of communication signals will be given as well as applications to DQPSK format and to the coherent detection.

## **Biography**

Full Professor in Optical Communications at Politecnico di Milano, Director of CoreCom and OSA Fellow.

He received the Laurea Degree in Nuclear-Electronics Engineering from Politecnico di Milano in 1976. In 1997 he joined the Quantum Electronics Division of CISE Laboratories in Segrate (Milano). Since 1980 he started new research activities regarding the optical fibers which led him to the position of Director of the Coherent Optics Dept. In 1981 he was Visiting Researcher at the London University College (UK).

In 1992, he was appointed Professor of Optical Communications by Politecnico di Milano, where he activated the first Italian related course; in 1993 he funded the Photonic Lab at the Electronics and Information Dept and in 1995 he participated to the foundation of CoreCom, a Research Consortium between Politecnico di Milano and Pirelli Cables and Systems established to develop advanced researches in Optical Processing and Photonic Switching.

In the 2004 the Optical Society of America elected him Fellow of the Society for the contributes given in the domain of the optical communications, of the optical fiber sensors and the discovery of the Faraday mirror effect.

He is author of more than 100 scientific papers on the most important Journals and of more than 130 communications presented at international Congresses. He is also assignor of 40 international patents.

In the 2007 he has organized the Italian National Conference on Photonics ( as President), he has a member of the ECOC TPC and he has been elected President of the Photonic Chapter of the Italian Association of the Electronics and Telecommunications Engineers ( AICT).