Distinguished Lecture on Photonics

Nell'ambito del corso di Optoelectronics della Laurea Magistrale in Ingegneria Elettronica e del Dottorato in Information and Communication Technology con la collaborazione dell'IEEE Photonics Society - Italy Chapter, il Prof. Ghanshyam Singh della Department of Electronics and Telecommunication Engineering

Malaviya National Institute of Technology Jaipur, India terrà un seminario dal titolo:

Photonic Integrated Devices and Systems: Technology for next Generation Telecom Networks

Il seminario, aperto a studenti e docenti interessati, avrà luogo il giorno 27 ottobre 2017 alle ore 12:00 nella Sala del Consiglio della Facoltà di Ingegneria di San Pietro in Vincoli in via Eudossiana, 18.

ABSTRACT. Telecommunications networks and systems are seeing extreme increase in network traffic which is growing at the tremendous rate of 30% per year (ref: report released by CISCO Inc.). It is estimated that the energy and cost requirements will increase tenfold in coming ten years. But this progress is not sustainable from ecological and economic point of view. However, this information explosion can be dealt with, using integration of very small photonic components on very high density Photonic Integrated Circuits (PICs). The technological advancements in PICs have made them a popular choice for components of next generation networks. Silicon being the evident choice due to its high availability, mature fabrication technology, and low cost has attracted the researchers to explore the possibilities of integrating the fast photonics components on a chip. At the same time, the unique material properties and direct bandgap, group III-V materials have huge potential in applications like laser, amplifiers, modulators and detectors. Due to robustness, flexibility, reliability and performance of PICs, many commercial solutions are now available for a variety of applications. In coming years, it is expected that the field will continue to advance and communication networks may see a shift from electronic to all-optical/electro-optic network infrastructure.



BIOGRAPHY. Dr. Ghanshyam Singh received B. Tech. degree in Electronics and Communication Engineering from NIT Silchar (then REC Silchar), M. Tech. and PhD degrees in Electronics and Communication Engineering from Malaviya National Institute of Technology (MNIT) Jaipur. In early 1999, he joined the academic staff of MNIT Jaipur, where he is an Associate Professor with the Department of EC Engineering. He has worked as visiting research scholar/visiting professor in the area of Photonic Switching and Networks for various periods at the Department of Physics, Herriot Watt University, Edinburgh, UK (March 2009), the Institute of Photonics, University of Eastern Finland, Joensuu, Finland (January – June 2010) under the CIMO Fellowship (Govt. of Finland) and Department of EEE, Keio University, Hiyoshi Campus, Yokohama, Japan (October 2013). Dr. Singh has extensive teaching, research and sponsored R&D experience (for various funding agencies from India and abroad) on many aspects of Optical Communication and Photonics Engineering and has published and reported over 110 research papers/review articles in peer reviewed International journals/conferences. Dr. Singh is a senior member of OSA, IEEE and Fellow of OSI and IETE. His current research interest includes Micro and Nano-structured photonic devices, all optical circuits and networks and non-linear characteristics of photonic crystal fibers.



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