



SEMINAR

Center for Advanced Research in Photonics
&
Department of Electronic Engineering
The Chinese University of Hong Kong

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2:30 p.m.

Rm 833 Ho Sin Hang Engineering Building,
The Chinese University of Hong Kong

All-Optical Regeneration - Requirements and Capabilities

Dr. Andrew Ellis

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Abstract

All optical regeneration has shown exciting prospects for over 20 years, and has numerous regenerative capacity records. In this presentation, we shall discuss the prospects for commercial deployment of optical regeneration technologies. The discussion will include the regeneration capabilities of various forms of optical regenerators considering high speed performance, ability to process multiple wavelengths and the suitability to use with currently researched modulation formats. We will finally compare the performance of such regenerators with the requirements of future networks, illustrating both significant difficulties but also major revolutionary prospects.

About the Author :

Dr Andrew Ellis graduated with a BSc in Physics with a minor in mathematics (first class honors) from the University of Sussex in 1987. He then joined the Submarine Systems Section of British Telecom laboratories at Martlesham Heath, Ipswich, where he investigated optical transmission systems based on semiconductor optical amplifiers, including fundamental device characterisation and full system demonstrators. From 1990 onwards he investigated non-linear effects in optical communication systems, developed novel transmission formats suited in general to BT's network environment, and in particular to the use of optical amplifiers, and performed research and provided technical leadership in the field of high capacity optical networking. He received his PhD in Electrical Engineering from Aston University in 1997 for his work on OTDM based optical networks. Upon joining Corning research Centre in 2000, he led the development and maintenance of a state of the art component characterisation facility. From 2003 he co-founded and has been a Principal Investigator in the Photonic Systems group at Tyndall National Institute, University College Cork, where he is leading projects in high capacity long haul optical transmission systems, optical regeneration, and components for optical networks. He has published over 190 journal and conference papers, 18 patents, and is a Chartered Physicist.

***** All are welcome to attend *****

For further information contact Prof. Chester Shu at 2609 8258