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

Fiber-Wireless Technology

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Date : 30th April, 2010 (Friday)

Time : 2:00 p.m.

Place : Rm 222 Ho Sin Hang Engineering Bldg., CUHK

Abstract

Hybrid fiber-wireless networks for fixed wireless access have been actively pursued to provide ultra-high bandwidth for untethered connectivity. The hybrid architecture enables most of the signal routing, processing and switching functionalities to be moved to a centralized location (Central Office) which significantly reduce the complexity of the antenna base station. In such a network layout, optical fiber transport is the ideal solution to provide high bandwidth interconnections between a large number of functionally simple base stations and the Central Office. Although optical-wireless integration enables the unification and simplification of the backhaul infrastructure, the implementation of the hybrid network is not straightforward with many issues associated with the linearity of the analog photonic link have to be addressed. In this talk, I will present an overview of our research on the signal impairments for transporting wireless signal in fiber-wireless links and I will focus on the strategies to overcome some of the impairments.

About the Author

Christina Lim is currently an Associate Professor and Australian Research Council Future Fellow with the Centre for Ultra-Broadband Information Networks (CUBIN), Department of Electrical and Electronic Engineering, The University of Melbourne Australia. She obtained her B.E. and Ph.D. degrees in Electrical and Electronic Engineering from the University of Melbourne, Australia in 1995 and 2000, respectively. In 1999, she joined the Photonics Research Laboratory (a member of the Australian Photonics Cooperative Research Centre) at the University of Melbourne. Between 2003 and 2005 she was the Project Leader of the Australian Photonics CRC Fiber-to-the-Premises Challenge Project. Christina has received the IEEE Lasers and Electro-Optics Society (IEEE LEOS) Graduate Student Fellowship in 1999, the Australian Research Council (ARC) Australian Research Fellowship in 2004 and most recently the ARC Future Fellowship (2009). Her research interests include fiber-wireless access technology, modeling of optical and wireless communication systems, microwave photonics, optical network architectures, optical access technology and optical signal monitoring.

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

For further information contact Prof. Chester Shu at 2609 8258