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THE CHINESE UNIVERSITY OF HONG KONG

Department of Information Engineering

Seminar

High Speed LED based Visible Light Communication

by

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Time : 11:00am – 12:00noon

Venue : Room 1009, William M.W. Mong Engineering Building
The Chinese University of Hong Kong

Abstract

The research of visible light communication (VLC) technology is going through a very active development period. As recent demand factors due to the new spectrum resources, energy conservation and emission reduction, Visible light communication presents huge market potential. VLC has a wide range of application scenarios, such as indoor information network, ubiquitous 3D positioning system, and specific security network. This presentation will introduce this emerging field from the key components, technologies and applications of LED visible light communication. We summarize the latest developments in visible light communication, including high speed VLC system pre equalization, post equalization, single carrier CAP modulation, single carrier Nyquist pulse shaping and DMT bit loading, space multiplexing and wavelength multiplexing. These technologies can support up to G bit capacity and 100m free space transmission.

Biography

Nan Chi received the BS degree and PhD degree in electrical engineering from Beijing University of Posts and Telecommunications, Beijing, China in 1996 and 2001, respectively. From July 2001 to December 2004, she worked as assistant professor at the Research Center COM, Technical University of Denmark. From January 2005 to April 2006, she was a research associate at the University of Bristol, United Kingdom. Then in June 2006, she joined Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology, where she worked as a full professor. She joined the Fudan University since June 2008, in School of Information Science and Engineering. She is the author or co-author of more than 200 papers. She has been awarded as the New Century Excellent Talents Awards from the Education Ministry of China, Shanghai Shu Guang scholarship, Japanese OKAWA intelligence Fund Award, Ten Outstanding IT Young Persons awards of Shanghai City. Her research interests are in the area of coherent optical transmission, visible light communication and optical packet/burst switching.

**** ALL ARE WELCOME ****

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