



THE CHINESE UNIVERSITY OF HONG KONG
Department of Electronic Engineering
Seminar



**Slot-loaded Electromagnetic Transparency
Antennas for Base Stations**

Professor Qing-Xin CHU
Professor
School of Electronic and Information Engineering
South China University of Technology, China

Date: 21 Dec 2023 (Thursday)

Time: 1:00 p.m.

Place: Rm 222, Ho Sin Hang Engineering Building, CUHK

Abstract

The decoupling technology of multi-frequency shared-aperture base-station antennas is the key point, difficulty and hot spot of base-station antenna design. As early as in 4G, the industry has carried out the research and development of multi-frequency shared-aperture antenna products with a relatively small number of arrays. In 5G, as the number of arrays in the same frequency band or different frequency band increases sharply, the decoupling between arrays or elements has become increasingly serious and become the bottleneck problem of restricting the design and development of base-station antennas. Therefore, the decoupling technology has also attracted extensive attention and in-depth research in the academic circles. In recent years, various new decoupling methods emerge in endlessly, and the research boom is in the rise. This talk mainly introduces electromagnetic transparency antennas loaded slots, which is one of the research achievements of Professor Chu Qing-Xin team of South China University of Technology in 4G / 5G base station antenna decoupling technology in recent years, and also includes the review, comment and prospect of base-station antenna decoupling technology.

Biography

Qing-Xin Chu is the professor with the School of Electronic and Information Engineering, the founder of IEEE Guangzhou AP/MTT Chapter, the vice-chair of Chinese Institute of Electronic (CIE) Antenna Society, the vice-chair of CIE Propagation Society, IEEE Fellow and CIE Fellow. He has published two books, more than 460 papers in journals and more than 450 papers in conferences, in which several papers were selected in ESI high cited papers. He has been the highly cited scholar from Elsevier since 2014. He has authorized more than 120 invention patents of China. He was the recipient of the Science Awards by CIE in 2018 and 2016, the Science Award by Guangdong Province of China in 2013, the Science Awards by the Education Ministry of China in 2008 and 2002. His current research interests include antennas and microwave devices in wireless communication.

***** ALL ARE WELCOME *****

For enquiries: Prof. GAO Shichang Steven (scgao@ee.cuhk.edu.hk), Tel: 3943 8260