



Jointly presents

SEMINAR SERIES ON CHAOS, CONTROL AND COMPLEX NETWORKS

A Review of the Inductive Power Transfer System

Dr Siu-Chung Wong

Dept. of Electronic and Information Engineering
Hong Kong Polytechnic University

Date and Time: Friday, 13 September 2019, **10:30am – 11:30am**

Venue: Room **CD634**, Hong Kong Polytechnic University

Reception starts at 10:15am

(Language: **English**)

Abstract

My research on inductive power transfer starts from 2008. The first published paper was application orientated that the converter was designed to have an output regulated voltage which is common for most power converters. Optimization had been done on efficiency and control of the converter against the dynamical variations of gap distance and load. Specifically, the converter had zero voltage switching, operated at a resonant frequency with a load independent voltage output, and controlled using a co-operative modulation of frequency and pulse-wide to tightly regulate the output voltage in case of variations of transformer gap length and load. In this talk, further optimizations on the inductive power transfer system will be highlighted. Different fundamental developments and engineering implementation approaches will be given for the understanding, optimization and application of inductive power transfer systems.

About the Speaker

Dr Siu-chung Wong joined the Hong Kong Polytechnic in 1988 as an Assistant Lecturer. He received the Ph.D. degree from the University of Southampton, United Kingdom in 1997. He is currently an Associate Professor in the Department of Electronic and Information Engineering, The Hong Kong Polytechnic University, where he conducts research in power electronics. Dr Wong is a senior member of the IEEE and a member of the Electrical College, The Institution of Engineers, Australia. He served as a Guest Associate Editor of IEEE Journal of Emerging and Selected Topics in Power Electronics, Special Issue on Power Electronics for Biomedical Applications in 2014. He serves as an Associate Editor of IEEE Transactions on Circuits and Systems-II: Express Briefs since 2016.