



Faculty of Engineering

The University of Hong Kong

香港大學工程學院



Faculty Seminar Series

Wireless Power Transfer: Historical Development and Modern Applications

Professor Ron Hui

Department of Electrical and Electronic Engineering, HKU

**November 25, 2011 (Friday)
12:30 pm – 1:30 pm
Theatre A, Chow Yei Ching
Building, HKU**

Prof. Ron Hui will introduce the historical developments of wireless power transfer, from the apparatus of Tesla patented in 1900 to the launch of the world's first wireless charging standard, Qi, in 2010. He will explain the basic principles laid down by Tesla - which are still valid today. Then he will zoom into the historic developments of the horizontal-flux and vertical-flux approaches for non-radiative "short-range wireless transfer". The charging methods adopted in the Qi standard are explained. The technical and safety concerns of the electronics industry are addressed. The major technical challenges (electrical, thermal, manufacturing, materials, EMC, safety etc] overcome in the process from a concept to a commercial product will be highlighted. He will share his views on future challenges and research trends for short-range wireless power transfer and the main issues involved in wireless EV charging. At the end of the talk, he will illustrate some new developments of "mid-range" wireless power transfer and their application potentials in power electronics, medical and superconductivity research.

~ ALL ARE WELCOME ~