

SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Faculty of Engineering

Website: <https://www.eng.nus.edu.sg/ece/>

Area: Power and Energy Systems

Host: Prof Dipti Srinivasan

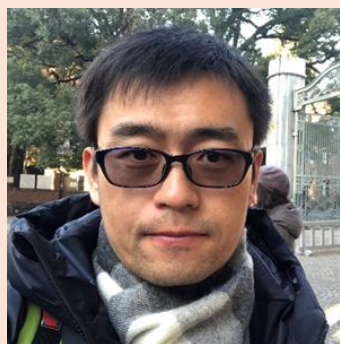
Research Seminar

TOPIC	:	Wireless Power Transfer – One single transmitter for multiple pickups
SPEAKER	:	Dr Zhang Zhen Technical University of Munich, Germany
DATE	:	4 November 2019, Monday
TIME	:	10am to 11am
VENUE	:	EA-06-03, Engineering Block EA, Faculty of Engineering, NUS

ABSTRACT

As one of the most epoch-making techniques, wireless power transfer (WPT) unfolds increasing charm for various industrial applications, especially for the electric-driven devices. By utilizing this emerging technique, the energy receptor can harness wireless power from electromagnetic field in air and then charge their battery in dynamic states or extreme operation conditions. Thus, the WPT shows significant meanings for charging portable electronic devices, implanted medical devices, integrated circuits and solar-powered satellites etc. However, this exciting technique still faces with critical issues to breakthrough, such as ensuring the resonance, the misalignment tolerance, the energy encryption, the omnidirectional transmission, as well as the high-power/ long-distance applications etc. This research seminar aims to provide insight on where the state-of-the-art stands today, introduce the latest developments on WPT technologies especially for the contributions from the speaker's research group, and discuss about the trends and challenges driving its future.

BIOGRAPHY



Zhen Zhang (S'11-M'13-SM'15) received the B.Eng. and M.Eng. degrees in automation from Tianjin University, Tianjin, China, in 2004 and 2007, respectively, and the Ph.D. degree in electrical engineering from The University of Hong Kong, Hong Kong, in 2014.

In 2014, he was a visiting scholar at IBM Research Laboratory supported by IBM Global Great Minds Program. Then, he served as a Postdoctoral Fellow with The University of Hong Kong. He is currently an Associate Professor in the School of Electrical and Information Engineering at Tianjin University and an Honorary Associate Professor in the Department of Electrical and Electronic Engineering at The University of Hong Kong. He has authored or coauthored around 50 internationally refereed papers as well as 2 books published by Wiley-IEEE Press and Cambridge University Press, respectively. His research interests include power electronic control, wireless power transfer, electric drives, electric vehicles, and distributed energies.

Dr. Zhang is the recipient of the Humboldt Research Fellowship, the Carl Friedrich von Siemens Research Fellowship, and JSPS Visiting Fellowship. He is currently an Associate Editor of *IEEE Transactions on Industrial Electronics*, an Associate Editor of *IEEE Transactions on Industrial Informatics*, Editor of *IEEE Transactions on Magnetics*, Associate Editor of *IET Renewable Power Generation*, and Executive Editor of *Cambridge University - Wireless Power Transfer*, respectively.