

**Wednesday 26 September 2012**  
**2:00 – 4:00 pm,**  
« Salle des thèses », Université Lille1

**Energy storage and smart charging of Electric Vehicles**

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**This lecture will be presented within the framework of the VTS French chapter of IEEE**

**Abstract:**

The success penetration of new energy would change the energy structure and power systems. There would be more and more stochastic generations and demands. Thus the comprehensive roles of energy storage in the emerging new structure of energy and power systems are very important. Electric vehicles are a new kind of electric load. The smart charging of electric vehicles will be beneficial to both the power grid and electric vehicles. This lecture will give overview of the characteristics of smart charging of electric vehicles under the guidance of the philosophy of engineering. The key players in electric vehicles system and their different demands will be analyzed. The key is the integration of information flow and energy flow to stimulate synergy and achieving win-win ecosystem. The information should be able to provide integration and intelligence layer between grid and vehicles; to create smart charging schedules based on vehicle data, grid data and driver's desire; and to develop dynamic charging schedule based on updated demand side or grid side inputs. In summary, sustainable e-mobility requires sustainable power system and electrification of transportation with the aid of intelligent information system.

**About the Speaker**



**Prof. C. C. Chan**

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Academician, Chinese Academy of Engineering;

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<http://www.eee.hku.hk/people/ccchan.html>; <http://engg.hku.hk/home/people/ccchan/ccchan.htm>

**Prof. C. C. Chan** holds BSc, MSc, PhD, HonDSc, HonDTech degrees. Honorary Professor and Former Head of the Department of Electrical and Electronic Engineering of the University of Hong Kong; Visiting Professor of MIT, University of Cambridge; Founding President of the World Electric Vehicle Association; Senior Consultant to governments and industries; Fellow of the Royal Academy of Engineering, U.K., Chinese Academy of Engineering, IEEE, IET and HKIE. Recipient of IEE International Lecture Medal; Gold Medal of Hong Kong Institution of Engineers; "Asia's Best Technology Pioneers" by Asiaweek; "Father of Asian Electric Vehicles" by Magazine Global View; "Pitamaha (Grandfather) of Electric Vehicle Technology" in India; "Environmental Excellence in Transportation Award" by Society of Automotive Engineers (SAE); published 11 books, over 300 technical papers and holds 9 patents.