




The **Power Electronics Society** in the
IEEE Montreal Section cordially invites you to
the **PELS Distinguished Lecture** titled



**“Enabling Technologies in Control & Power
Electronics for Power & Energy Systems”**

Date	Tuesday, October 10 th 2017	
Time	12:00 PM to 1:30 PM	
Location	Room 603, McConnell Engineering Building, McGill University	
Speaker	Dr. Qing-Chang Zhong Max McGraw Endowed Chair Professor, Energy & Power Engineering, Dept. of Electrical and Computer Engineering, Illinois Institute of Technology	
<p>Dr. Qing-Chang Zhong obtained a PhD degree in 2000 from Shanghai Jiao-Tong University and another PhD degree in 2004 from Imperial College London. Having been recognized as a Distinguished Lecturer for the IEEE Control Systems Society, the IEEE Power Electronics Society and the IEEE Power and Energy Society, he is a world-leading multidisciplinary expert in control, power electronics and power systems. Before joining Illinois Institute of Technology, he was the Chair Professor in Control and Systems Engineering at The University of Sheffield, UK, where he built up a \$5M+ research lab dedicated to the control of energy and power systems and attracted the support of Rolls-Royce, National Instruments, Texas Instruments, Siemens, ALSTOM, Turbo Power Systems, Chroma, Yokagawa, OPAL RT and other organizations. He (co-) authored three research monographs, including <i>Control of Power Inverters in Renewable Energy and Smart Grid Integration</i> (Wiley-IEEE Press, 2013). His fourth book on the architecture and technical routes of next-generation smart grids based on the synchronization mechanism of synchronous machines will be published by Wiley-IEEE in 2017. He is an Associate Editor for leading journals in control and power electronics, including <i>IEEE Trans. on Power Electronics</i>, <i>IEEE Trans. on Industrial Electronics</i>, <i>IEEE Trans. on Automatic Control</i>, and <i>IEEE Trans. on Control Systems Technology</i>. His current research focuses on advanced control theory, power electronics, and the seamless integration of both to address fundamental challenges in energy and power systems.</p>		

Abstract

Widening energy sources and improving energy efficiency are two main means to address the energy and environmental issues we face nowadays. At the heart of both, control and power electronics play a vital role and the integration of both has never been demanded at such a high level before. In this lecture, some enabling technologies with control and power electronics seamlessly integrated together are presented. These include synchronverters to make inverters behave like synchronous generators to achieve grid-friendly integration, robust droop controllers to achieve accurate power sharing and excellent voltage regulation for parallel-operated inverters, C-inverters to make the output impedance of inverters capacitive, and harmonic droop controllers to improve the voltage quality etc.

Admission: Free for all interested IEEE members & non-members.

Registration is required: <https://meetings.vtools.ieee.org/m/46379>

Food & refreshments will be served.

