IEEE CASS/EDS/SSCS Ottawa Joint Chapters, IEEE ComSoc/BTS/CES Ottawa Joint ChapterIEEE PES Ottawa Chapter, and Reliability Ottawa Chapter & DoE-Carleton Joint Seminar (CASS Distinguished Lecture) are inviting all interested IEEE members and nonmembers to a seminar on

Anti-Islanding Protection of Inverter-Based Distributed Generation

by

Dr. Xiaoyu (Kevin) Wang, Assistant Professor, Dept. of Electrical Engineering, Tsinghua University, Beijing, China

DATE: Friday, Mar 02, 2012 [11AM - 12noon]
TIME: 10:45 pm Registration and Networking, 11:00 am- 12:00 pm Seminar.
PLACE: **ME 4124**, Mackenzie Engineering Building, Carleton University, Ottawa, On., Canada
ADMISSION: Free. Registration required. To ensure a seat, please register by e-mail contacting: Ram Achar at achar@doe.carleton.ca, or Wahab Almuhtadi at almuhtadi@ieee.org.

Abstract

New renewable energy technologies, combined with a broad suite of energy-efficiency advances, are spreading widely all over the world to reduce greenhouse gas emissions and to relieve energy crisis caused by exhaustion of fossil fuels. With the development trend of energy, it is expected that distributed energy resources (DER) including distributed generation (DG), energy storage and demand response (DR) will be increasingly introduced into electric power systems in the near future. As a radically different way to deliver electricity, DER technologies are expected to make fundamental changes to the current power system structure.

One of the most difficult challenges that DER interconnection is facing is to provide state-of-the-art techniques for DER control and protection. This talk will highlight my research effort on anti-islanding protection for grid-connected DG systems, which provides a better understanding of how to design optimal islanding detection method. In the first part, I will present the investigation results of the positive feedback anti-islanding scheme for inverter-based DG. Then a systematic application guideline for the studied anti-islanding scheme will be introduced, and the analytical analysis and comparative case studies will be provided to show the effectiveness of the designed guideline. At the end of the seminar, I will share my vision of the future innovation and applications of energy technologies in renewable energy and smart grid fields.

Biography

Dr. Xiaoyu (Kevin) Wang is an Assistant Professor in the Department of Electrical Engineering at Tsinghua University, Beijing, China. His research focuses on interconnection of distributed energy resources with particular emphasis on distributed generation control and protection. Prior to working at Tsinghua University, Dr. Wang was a postdoctoral researcher in the Department of Electrical Engineering at the University of Alberta. Dr. Wang received his Ph.D. from the University of Alberta in 2008, M.S. and B.S. degrees from Tsinghua University in 2003 and 2000, respectively (all in electrical engineering).