

Plenary Presentation

Power Electronic Converters – Fueling the Rapid Growth in Renewable Energy Systems

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Abstract

With rapid developments in renewable energy systems at both the distributed generation level and large power plant level, Power Electronic Converters are playing a critical role as an enabling technology. This presentation will focus on the state-of-the-art development of power electronic converters for renewable energy systems, particularly on the integrated functions of power conversion, grid integration, and system control. Particular attention is devoted to wind turbine systems, photovoltaic systems and variable speed small hydro systems.

Biography

Liuchen Chang received his Ph.D. degree from Queen's University in 1991, and has been with the Department of Electrical and Computer Engineering at the University of New Brunswick, Fredericton, NB, Canada. He Chairs the Technical Committee of Power Electronics on Distributed Generation and Renewable Energy Systems (IEEE PELS), and held the position of NSERC Chair in Environmental Design Engineering during 2001-2006. He is a professional engineer registered in the Province of New Brunswick. His principal research expertise and experience include distributed power generation, renewable energy conversion, and power electronic converters.