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Automatic  
Control and  
Systems  
Engineering

The Department of Automatic Control & Systems Engineering  
is pleased to announce the following seminar:

## **Power Electronics – Trends and Recent Changes**

**Professor Frede Blaabjerg**  
*Institute of Energy Technology*  
*Aalborg University*

**Monday 28<sup>th</sup> April 2014 at 13:00**  
LT01, Sir Henry Stephenson Building

### **Abstract**

The power electronics technology is the working horse in the future in the electrical based society. It will control power in electrical power generation, power transmission, distribution and in almost all loads - acting as the intelligent and efficient interface. Further, in many energy autonomous energy systems power electronics is also becoming used to a large extent. The demand to the technology is many-fold. It has to be efficient, reliable, cost efficient, low volume and mass as well as the converter should be intelligent in many applications. This presentation will discuss different power electronic applications with special attention to renewable energy generation and energy efficient systems. Further it will discuss some of the future challenges in the technology like smart integration into grid systems (micro-macro), design for reliability in power electronic systems and harmonic stability in power electronic based power systems.

### **Biography**

Frede Blaabjerg was with ABB-Scandia, Randers, Denmark, from 1987 to 1988. From 1988 to 1992, he was a Ph.D. Student with Aalborg University, Aalborg, Denmark. He became an Assistant Professor in 1992, an Associate Professor in 1996, and a Full Professor of power electronics and drives in 1998. His current research interests include power electronics and its applications such as in wind turbines, PV systems, reliability, harmonics and adjustable speed drives. He has received 15 IEEE Prize Paper Awards, the IEEE PELS Distinguished Service Award in 2009, the EPE-PEMC Council Award in 2010, the IEEE William E. Newell Power Electronics Award 2014 and the Villum Kann Rasmussen Research Award 2014. He was an Editor-in-Chief of the IEEE TRANSACTIONS ON POWER ELECTRONICS from 2006 to 2012. He has been Distinguished Lecturer for the IEEE Power Electronics Society from 2005 to 2007 and for the IEEE Industry Applications Society from 2010 to 2011.

*Refreshments will be available prior to the talk in the  
Foyer of the Sir Henry Stephenson Building*