

九州工業大学次世代パワーエレクトロニクス研究センター主催  
特別講義のご案内

拝啓 時下ますますご清栄のこととお喜び申し上げます。

この度、九州工業大学にて次世代パワーエレクトロニクス研究センター主催により、イギリス  
ノッティンガム大学 Alberto Castellazzi 准教授による特別講義を下記の要領にて開催致します。  
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敬具

記

日 時:平成 28 年 4 月 14 日(木) 13:30~(予定)

場 所:教育研究 5 号棟 5-2B 講義室

タイトル:

Wide-band-gap power device based power conversion for renewable energy sources

講 師:Dr. Alberto Castellazzi

Associate Professor of Power Electronics PEMC Group  
University of Nottingham



*Abstract:* Presented for a long time mainly as a synonym of high temperature capable devices, wide-band-gap (WBG) semiconductors are presently attracting significant application-related interest due not only to their higher efficiency, but also to their stability of performance over switching frequency and temperature.

This feature enables significant improvements in power density and reliability, key figures of merit for technology breakthrough. This talk will consider in particular power conversion applications for renewable energy sources, where the specific characteristics of WBG power devices enable power converter design optimization against the intrinsically intermittent nature of the power source.

問合せ:次世代 PE 研究センター

Tel & Fax: 884-3268

## Biography

Alberto Castellazzi holds a Laurea degree in Physics (1998) from the University of Milan, Italy, and a PhD degree in Electrical Engineering (2004) from the Munich University of Technology, Germany.

From 1998 to 2000 he was with Carlo Gavazzi Space S.p.A., in Milan, Italy, as a designer of power electronics for space applications. In 2000 he joined the Power Electronics Department of Siemens Corporate Technology, in Munich, Germany, to work on the reliability of PowerMOSFETs in novel automotive applications.

In 2004 and 2005 he was a Research Scientist at the Institute for Physics of Electrotechnology of the Munich University of Technology, where he was mainly concerned with electro-thermal 2D device simulation of PowerMOSFETs and IGBTs. In this period, he also co-supervised students in a laboratory of electronics and a laboratory of process and device simulation; in 2005 he was in charge of the organisation of a series of seminars on electro-physics and was the substitute secretary of the commission for student matters.

From January 2006 until September 2008 he was with ETH Zurich, Switzerland, where he was a Senior Researcher at the Integrated Systems Laboratory. In 2006 and 2007 he was a visiting researcher at the Power Electronics Associated Research Laboratory (PEARL) of ALSTOM-Transportation, in Semeac, France, where he worked on IGBT modules for traction applications.

In October 2008 he joined the Department of Electrical and Electronic Engineering of the University of Nottingham as a Lecturer in Power Electronics. From February to July 2011 he was a Guest Scholar at Kyoto University, in the laboratory of Prof. Takashi Hikiyama, where he worked on characterisation and modelling of SiC power devices in collaboration with other academic (Prof. Tsunenobu Kimoto, Kyoto; Prof. Tsuyoshi Funaki, Osaka) and industrial partners.

Dr. Castellazzi is a member of the IEEE Power Electronics Society and Electron Devices Society and of the European Power Electronics Association. He is a member of the Technical Programme Committee of the ISPSD, IPEC and PEMD conferences.

<https://www.nottingham.ac.uk/engineering/people/alberto.castellazzi>