THE UNIVERSITY OF WESTERN AUSTRALIA

FACULTY OF
Engineering, Computing and Mathematics

School of Electrical, Electronic & Computer Engineering

SEMINAR

Simulation-based Analysis of Current Control Methods for Voltage Source Inverters with Practical Considerations

by

Eric Lam

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DATE/TIME: **Thursday 14 August 2008 at 3:00-3:45PM**

VENUE: **Billings Room 3.04** (3rd Floor)
School of Electrical, Electronic & Computer Engineering
Electrical Engineering Building
The University of Western Australia
Fairway Entrance 2 and 3, Crawley (Perth)

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ABSTRACT:

This presentation introduces a simulation-based benchmark approach to the investigation of control fidelity for different methods of current control applied in voltage source inverters. Simulations of voltage source inverters often only consider the ideal system performance, but in the real-world there are always non-ideal characteristics too. To provide insight into performance under non-ideal conditions and to make comparable analyses, particular levels of non-ideal characteristics can be introduced. The overall aim is to offer some implementation guidance so that control method suitability and associated issues/limitations are quickly identified (via knowledge of particular non-ideal characteristics that a certain control is susceptible to) – which hopefully saves time and/or cost during prototype development and verification.

The presentation is based on a paper to be presented at the 2008 IEEE COMPEL Conference, Zurich, August 2008.

ABOUT THE SPEAKER:

Eric Lam is a Masters by Research candidate supervised by Dr. Lawrence Borle and Dr. Herbert Iu in the Power Electronics Applications and Research Laboratory (PEARL) of the Signals and Systems Engineering Research Group. His research interests include analysis of power electronics current control methods for DC-AC converters and digital current control techniques and their implementations.