



IEEE
Distinguished Lecture



High Power High Performance Industrial AC Drives
— A Technology Review

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Lecture - 19 August 2003

The rapid developments of power electronic technologies, microprocessor / digital signal processor based control and estimation techniques and introduction of high power semi-conductors have resulted in an unprecedented growth in the *high power high performance ac drives* as demanded by automation industry over the past decade. In this lecture, a brief technology review on the state-of-the-art high power switching devices (like HVIGBTs, GCTs, ETOs / MTOs, etc.) converter topologies (like PWM converters/inverters, cycloconverters, matrix converters, etc.) and control technologies (scalar and vector control strategies, direct torque and flux control (DTC), sensor-less control etc.) developed progressively for such industrial drives involving induction and synchronous motors is to be presented. Finally, the future trends and challenges on various aspects of such drives and the developing areas of their applications in the industry are also to be addressed.

This seminar is part of IEEE Distinguished Lecturers Program which aims to deliver high quality lectures on various technical and policy issues in the area of electrical and electronic engineering.

Program

Topic	High Power High Performance Industrial AC Drives By Professor Ajit K. Chattopadhyay, <i>Fellow, IEEE</i>
Time, Date & Duration	5:30PM, Tuesday, 19 August 2003 (90 minutes)
Venue	University of Western Australia, Math Blakers Lecture Theatre, 35 Stirling Highway, Crawley, 6009. The venue is near Fairway & Clark St. A map is at http://cwis.uwa.edu.au/maps/uwamap2002_10.html . Parking is free on campus after 5pm (try carpark P15).
Schedule	5:30PM – 5:45PM: Refreshment 5:45PM – 6:45PM: Lecture 6:45PM – 7:00PM: Discussion and Refreshment
contact	Lawrence Borle (mobile: 0413 687 873, email: LJBorle@ieee.org) Chem Nayar (mobile: 0401 103 451, email: c.v.nayar@ece.curtin.edu.au)

Admission

Fee-free. Registration is not required, but would be appreciated to enable catering.

ORGANISERS: IEEE WA Section and IEEE PES WA Chapter