

UK Magnetics Society

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www.ukmagsoc.org

one day seminar

High Speed Machines

Wednesday, 25 November 2009

at

University of Sheffield

Conference Centre, George Porter Building

High speed machines are finding their way into more and more real-world applications. This seminar will bring together engineers and academics working in this area to discuss the design challenges in more detail. High speed means reduced volume for the same power; this is an advantage where space is at a premium, for example in aerospace, oil and gas, automotive and domestic appliance applications.

High speed, however, means high frequency; advances in power electronic drive technology has allowed for high switching frequencies, now making high speed drives an economic choice.

There are many challenges to designing high speed electrical machines. The mechanics (rotor construction, bearing design etc) must be able to withstand the large mechanical forces. The high switching speed and high electrical frequencies mean the efficiency of the electromagnetic circuit must be carefully considered, in order to minimise the acoustic and EMC emissions and minimise energy losses.

PROGRAMME

Chairman: Roger Allcock, Cobham Technical Services
from 0900 REGISTRATION/COFFEE

Chairman: Dr Glynn Atkinson, University of Newcastle-upon-Tyne,
School of Elec, Elec and Computer Engineering

1000 **WELCOME/INTRODUCTION**

1345 ***Revving Up***

David Gerada, Cummins Generator Technologies

1015 ***Ultra High Speed Brushless DC Motors, Drives and Applications***

Professor Zi-Qiang Zhu, University of Sheffield,
Dept of Elec & Elec Engineering

1415 ***Experiences in the Design and Manufacture of a High Speed Traction Motor***

Dr Rajesh Deodhar, IMRA Europe SAS UK

1045 ***High Frequency Materials***

Lars Hultman, Hoganas AB, Sweden

1445 ***Very High Speed Slotless Permanent Magnet Motors: Some Modelling Aspects***

Pierre-Daniel Pfister, Moving Magnet Technologies

1115 ***Mechanical Design of High Speed Electrical Machines***

Professor Keith Pullen, Centre for Energy and the Environment, City University London

1515 TEA/COFFEE

1145 ***High Speed Vacuum Pumps***

Dr Ulrike Hoefer, Edwards Ltd

1545 ***Simple Calculation of Retaining Sleeves for PM Brushless Machines***

Professor Tim Miller, SPEED Laboratory,
University of Glasgow

1215 LUNCH/LABORATORY TOUR

1615 ***High Speed Axial Flux Machines - Mechanical and Electrical Engineering join Forces***

Dr Michael Lamperth, Evo Electric Limited

1645 END OF SEMINAR

PLEASE COMPLETE AND RETURN TO:

Jane Ward, UK Magnetics Society, Grove Business Centre, Grove Technology Park, Wantage, Oxon OX12 9FA
tel: +44 (0)1235 770652 fax: +44 (0)1235 772295 email: jward@ukmagsoc.co.uk www.ukmagsoc.org

I wish to attend the UK Magnetics Society one-day seminar **High Speed Machines**, to be held on Wednesday, 25 November 2009 at University of Sheffield and enclose remittance to cover technical sessions, seminar documentation, refreshments and lunch (cheques made payable to the **UK Magnetics Society** and drawn on a UK bank).

Payment may also be made by bank transfer: UK Magnetics Society, Barclays Bank plc, 17 Market Place, Wantage, Oxon OX12 8AG, UK, Acct No 50893293, Sort Code No: 20-90-91, IBAN:GB98 BARC 2090 9150 8932 93, SWIFTBIC: BARCGB22. **Please add £10 to cover bank charges if paying by bank transfer from overseas.**

If you wish to be invoiced, please give Purchase Order number, if appropriate. PO number.....

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<input type="checkbox"/> UKMAG Members	£ 79.00	£11.85	£ 90.85
<input type="checkbox"/> As above [student]	£ 23.50	£ 3.52	£ 27.02
<input type="checkbox"/> Non-members	£168.00	£25.20	£193.20
<input type="checkbox"/> Non-member students	£ 39.00	£ 5.85	£ 44.85
<input type="checkbox"/> I would like a poster session			

* 3 delegates get 50% off the third person (cheapest rate applies). For bookings of more than 3 people, please contact Jane Ward

PLEASE REGISTER BY 16 NOVEMBER IF POSSIBLE

Surname.....		First name.....	
Title (Dr/Mr/Mrsetc)		Organisation.....	
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