
Program

Sunday, 7 June 2015

Location: Room EEG3, Electrical Engineering Building, University of New South Wales.

13:30 – 14:00 Registration

14:00 – 15:15 Tutorial: Part I - Direct Torque and Flux Control of IPM Synchronous Machines; Review of Closed-loop Sensorless DTFC, Dr. Dan Xiao, University of New South Wales, Australia.

15:15 – 15:45 Tea/Coffee break

15:45 – 17:00 Tutorial: Part II - Combined HF Injection and Model-Based Sensorless Controller. Dr. Dan Xiao, University of New South Wales, Australia.

17:00 – 19:00 Welcome Reception

Monday, 8 June 2015

Location: Harvard Theatre LG03, TETB Building, Lower Campus, University of New South Wales.

08:30 – 08:50 Registration

08:50 – 9:00 Welcoming address

Session I: Sensorless Control of Induction Machines

Session Chair: Professor Ralph Kennel, Technische Universitaet Muenchen, Germany.

09:00 – 09:50 Keynote address by Professor R. Lorenz, University of Wisconsin-Madison, USA, “Disruptive Changes in the Frontier of Drive Technology via Design for Self-Sensing and Dynamic Loss-Minimizing Control.”

09:50 – 10:15 Optimal avoidance strategy to improve the performances of induction machines sensorless drives, G. Lefebvre, J-Y. Gauthier, A. Hijazi, X. Lin-Shi and V. Le Digarcher; Alsthom Transport and University of Lyon, France.

10:15 – 10:40 An Improved Sensorless FS-PTC of Induction Motors Using Estimated Stator Currents, Md. Habibullah, Student Member, IEEE, and Dylan Dah-Chuan Lu, Senior Member, IEEE, Sydney University, Australia.

10:40 – 11:00 Morning Tea/coffee break

Session II: Sensorless Control of IPM Synchronous and Induction Machines

Session Chair: Dr. Howard Lovatt, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia.


11:25 – 11:50 Mechanical sensorless PMSM drive system based on direct torque control in M-T Frame synchronized with stator flux linkage vector, Y. Inoue, S. Morimoto, M. Sanada, Osaka Prefecture University, Japan.
11:50 – 12:15  Alternative temperature estimation approaches for sensorless permanent magnet synchronous machines, P. Landsmann and R. Kennel Senior Member, IEEE, Technische Universität München, Germany.

12:15 – 12:40  A novel stator flux and current estimator in induction motor with offsets of measured currents, J. Lee, S. Sathiakumar, Y. Srivastava, University of Sydney, Australia.

12:40 – 13:30  Lunch

Session III: Sensorless Control IPM Synchronous Machines

Session Chair: Professor Sanjib Panda, National University of Singapore, Singapore.

13:30 – 13:55  Sensorless Direct Torque Control of IPMSM Drives using the Current Derivative Approach, G. Foo¹, X. Zhang², D L. Maskell², D. M. Vilathgamuwa³, ¹Auckland University of Technology, New Zealand, ²Nanyang Technological University, Singapore, ³Queensland University of Technology, Australia.

13:55 – 14:20  Design and experimental verification of saliency-based sensorless controlled IPMSM with Concentrated winding for general industrial application, Y. Kano¹, T. Kosaka², N. Matsui³; ¹National Institute of Tech., Toyota College, Toyota, Japan, ²Nagoya Institute of Tech., Japan, ³Chubu University, Japan.

14:20 – 14:45  Permanent Magnet Synchronous Drives Observability Analysis for Motion-Sensorless Control, Mohamad Koteich¹,², A. Maloum¹, G. Duc² and G. Sandou²; ¹Renault SAS, Technocentre, France, ²Paris-Sud University, France.


15:10 – 15:30  Afternoon Tea/Coffee break

Session IV: Sensorless control of SR, SPM and Special Machines

Session Chair: Professor John Fletcher, University of New South Wales, Australia


15:55 – 16:20  An FPGA based minimum inductance sensor-less technique for Switched Reluctance Motors, A. Stump³, D. Elton¹, J. Devlin¹, H. Lovatt², ¹La Trobe University, Australia; ²Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia.


16:45 – 17:10  Design of a sliding mode observer for sensorless control of SPMSM operating at medium and high speeds, Z-Q Guo, and S. K. Panda, National University of Singapore, Singapore.

17:10 – 17:20  Closing address

19:00 – 21:30  Dinner