

InstaSPIN sensorless electrical drive solutions

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Talk Summary:

'Win with InstaSPIN' is a message to the electrical drive community that a new comprehensive set of software tools is now available which greatly simplifies product development. Consequently, the development of a high performance low cost drive without using a shaft encoder is within reach of the average user. Furthermore, all the software and hardware tools are now available which take the novice user through all the steps needed to create a highly advanced electrical three-phase drive system at no additional costs with minimal drive knowledge.

This presentation will outline the InstaSPIN concept and the associated hardware/software tools that are available to master this technology. More specifically, the topic covered will be:

- Introduction on field oriented control of electrical drives
- Concept of Sensorless control of three-phase drives
- Introduction to the InstaSPIN concept
- Use of Embedded control software VisSim, for achieving Sensorless control
- VisSim based application examples showing the hardware and InstaSPIN at work
- Use of PLEXIM (PLECS) with MotorWare for drive development using the 'processor in loop' (PIL) approach

Finally, a demonstration booth is present at this conference where the topics mentioned above are shown, so that interested potential users can peruse this material.



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Professor Pulle was born in the Netherlands in 1946 and graduated from Eindhoven Technical University in 1979, which was followed by a Ph. D from the University of Leeds in 1984. He subsequently worked at the Australian Defense Force Academy as a senior academic for 15 years in the field of power electronics and electrical drives. In 1998 he joined the University of Lund, Sweden, which was followed by an appointment as professor at the American University of Sharjah, UAE. He has been a University professor at RWTH-ISEA, Aachen Germany since 2005 working in the area of electrical drives. In addition to his work at ISEA he runs his own consulting company EMSynergy in the field of sensorless drives. He advises leading multinational companies in the area of electrical drives and presents workshops on this subject around the world. Professor Pulle has published widely, served on numerous professional advisory boards and holds several patents. In addition, he is a coauthor of two leading textbooks on 'Control of Electrical Drives' published by Springer and is presently working on a third book on 'Embedded Control of Electrical Drives' which will appear later this year.

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