



Instytut Sterowania i Elektroniki Przemysłowej, Politechnika  
Warszawska, ul. Koszykowa 75, 00-662 Warszawa



**Sekcja Polska IEEE**  
**Joint Industrial Electronics/Power Electronics**  
**Chapter (IES/PELS) – Oddział IES/PELS**

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## **Seminarium**

### ***Encoderless and Predictive Control***

**Prof. Ralph Kennel**

Institute for Electrical Drive Systems and Power Electronics  
Technische Universität, Muenchen, Germany  
Full Professor

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Czas i miejsce:

**09.06.2011, godz. 11:15, Gmach Elektrotechniki Sala 300**

Zapraszamy do wzięcia udziału w bezpłatnym seminarium!

Organizatorzy:

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**Dyrektor ISEP**  
**Prof. nzw. dr hab. inż. Lech M. Grzesiak**

**Chair IES/PELS**  
**Dr inż. Marek Jasiński**

**Past-Chair IES/PELS**  
**prof. dr hab. inż. Marian P. Kaźmierkowski**

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#### **Abstract:**

Prof. Ralph Kennel will start the seminar with information about organization and research projects at the [Institute for Electrical Drive Systems and Power Electronics](#), TU Munich, Germany.

Next he will present recent developments in sensorless control of AC drives with a special emphasis on synchronous drives. The presentation will merge in the latest invention of his institute combining sensorless control of a synchronous machine with predictive control methods. As a result an injection of additional voltage signals to the electrical machine is not necessary any more. Furthermore this concept has no speed limitations – neither to low speed/standstill nor to high speed



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**Życiorys Wykładowcy:**

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**Prof. Ralph Kennel**



Ralph M. Kennel was born in Kaiserslautern, Germany, in 1955. He received the Diploma and Dr.-Ing. (Ph.D.) degrees from the University of Kaiserslautern, Kaiserslautern, in 1979 and 1984, respectively. From 1983 to 1999, he was with Robert BOSCH GmbH, Stuttgart, Germany, where he was responsible for the development of servo drives until 1997. He was one of the main supporters of VECON and SERCOS interfaces, two multi-company development projects for a microcontroller and a digital interface, particularly dedicated to servo drives. Furthermore, he took an active part in the definition and release of new standards with respect to CE marking for servo drives. Between 1997 and 1999, he was responsible for the “Advanced and Product Development of Fractional Horsepower Motors” in automotive applications. His main activity was preparing the introduction of brushless drive concepts to the automotive market. From 1994 to 1999, he was a Visiting Professor with the University of Newcastle-upon-Tyne, England, UK. From 1999 to 2008, he was a Professor for electrical machines and drives with Wuppertal University, Wuppertal, Germany. Since 2008, he has been a Professor for electrical drive systems and power electronics with the Department of Electrical Drives and Power Electronics, Technical

University of Munich, Munich, Germany. His main interests today include sensorless control of ac drives, predictive control of power electronics, and hardware-in-loop systems. Dr. Kennel is a Fellow of the IEE/IET and a Chartered Engineer in the U.K. Within IEEE, he is a Treasurer of the Germany Section, as well as ECCE Global Chair of the Power Electronics Society.

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