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## Gastvortrag

# Encoders for Simultaneous Sensing of Position and Speed - a Bottleneck in Electrical Drives with Digital Control

**Professor Ralph Kennel (TU München)**

**Donnerstag, 06.08.2015, 15:30 Uhr**

**Bibliothek des Institutes EAM, Inffeldgasse 18/1 (HS01020F)**

Speed and position encoders are essential components in electrical drives. High resolution encoders are necessary to obtain acceptable speed control behaviour. Speed and position sensing in servo drives is still not completely understood today. For example, the notions of accuracy and resolution are still often simultaneously, despite them describing different characteristics. The lecture presents generals of speed and motion sensing as well as different encoder technologies available today and their characteristics, particularly with respect to digitally controlled servo drives. It contributes to better understanding of speed and position encoders, which still are the technical bottle neck for further improvements in digital drive control.

**Dr. Ralph M. Kennel** worked on several positions with Robert BOSCH GmbH (Germany) from 1983 to 1999. He took actively part in the definition and release of new standards with respect to CE marking for servo drives. From 1994 to 1999 Dr. Kennel was appointed Visiting Professor at the University of Newcastle-upon-Tyne (England, UK). From 1999 to 2008 he was Professor for Electrical Machines and Drives at Wuppertal University (Germany). Since 2008 he has been Professor for Electrical Drive Systems and Power Electronics at Technische Universität München (Germany). Dr. Kennel is a Senior Member of the IEEE, a Fellow of the IET and a Chartered Engineer in the UK. He is Treasurer of the Germany Section and ECCE Global Partnership Coordination Committee Chair of IEEE-PELS. In 2013 Dr. Kennel received the IEEE-PELS Harry Owen Jr. Distinguished Service Award.