



**University of Pavia**

**Ph.D. School of Electrical and Electronics Engineering and Computer Science**

## **SHORT COURSE**

### **Electrical machines for advanced applications**

***Prof. Loránd Szabó***  
***Technical University of Cluj (Romania)***

29 Sept. 2015, h 9:00÷11:00 (E7), h 14:00÷16:00 (E2)

30 Sept. 2015, h 11:00÷13:00 (E7), h 16:00÷18:00 (seminar room, floor E)

Polo Didattico Ingegneria

Università degli Studi di Pavia – Via Ferrata 5 - Pavia

**Abstract:** The short course is focused on the most frequently used special electrical machines. They are called "special electrical machines" since they have particular construction characteristics, supply or applications. These are nowadays getting more and more importance in diverse emerging domains, as advanced manufacturing, automotive, renewable energies, aerospace, etc. The short course will cover doubly fed induction machines, variable reluctance machines (including switched reluctance machines, synchronous reluctance machines, transverse flux machines, etc.), stepper motors, linear machines, fault tolerant electrical machines, etc. For all these special electrical machines their construction, working principle, equations, characteristics, control principles, advantages/drawbacks and possible applications will be detailed. PowerPoint presentations will be used. The printable handouts of the courses will be available for all the participants.

**Bio:** Loránd Szabó was born in Oradea (Romania) in 1960. He graduated electrical engineering at the Technical University of Cluj (Romania) in 1985 and received the Ph.D. degree from the same university in 1995. He joined in 1990 the Technical University of Cluj (Romania) as a research & design engineer. Since 1999 he is with the Department of Electrical Machines and Drives of the same university, where he was a lecturer, associated professor and by now he is a full professor in electrical machines. He is also the founding director of the Centre of Applied Researches in Electrical Engineering and Sustainable Development (CAREESD) in the frame of his university. His research interests include linear electrical machines, variable reluctance electrical machines, fault tolerant designs, fault detection and condition monitoring of electrical machines, etc. He published more than 250 papers in these fields.

#### **Organizers**

Dr. Lucia Frosini and Prof. Ezio Bassi

#### **Ph.D. Coordinator**

Prof. Paolo Di Barba

Seminar in English

For more information: [lucia@unipv.it](mailto:lucia@unipv.it)