

**The Tunisian Chapter and the ENIS Student Chapter
of the IEEE Power & Energy Society
are inviting all interested IEEE members and researchers
to Distinguished Lectures presented by**

Prof. Bruno Meyer



- Candidate for IEEE PES President-Elect

<http://www.ieee-pes.org/2013-pes-elections>

- IEEE Fellow

- CEO of ARTERIA which is a subsidiary of RTE (the French electricity transmission system operator). ARTERIA is a telecom operator acting in the fields of fiber optics, rental of masts and pylons for antennas, and in the hosting of servers in secure environment

- Involved in several field of power systems: simulation, dynamics, planning, economics.

- Worked with the utility EDF from 1985 to 2008, 20 years of which in R&D

- Involved in several international projects and cooperation in Europe, Turkey, Canada, the USA, Brazil, Japan, China

- Member of the IEEE PES Governing Board from 2006 to 2008 as Region 8 representative

- Participated in numerous conferences and working groups

- Produced several papers and a book on Power System Simulation

- Received the Cigré Technical Committee Award in 1999

WELCOME!

Talk Title: *R&D for Transmission System Operators: The key challenges in Europe*

Date & Time:

- **Saturday 16 November 2013 at 10:00am in Amphi 6, ENIS (Sfax)**

- **Monday 18 November 2013 at 9:00am in ENIM (Monastir)**

Abstract: The power industry is facing major challenges. Over the past decade, the overall scene has strongly changed:

- Deregulation has multiplied the number of players, with the emergence of neutral Transmission System Operators (TSO) which operates the system and allows competition in generation and supply;

- In industrial countries, the extension of the grid is each time more difficult (the NIMBY syndrome). So operators have to deal with that and find alternative solutions;

- New technology arrives: power electronics, but also new means of telecommunication and IT;

- Dispersed generation has had a great impact on the operation of the system. When originally designed, power systems were supposed to transmit power from large power plants all the way down to consumers via transmission and distribution grids. Now, generation is at all voltage levels, including at the lowest residential one, and the different operators have to take into account electricity flowing up. Protection devices must be adapted, load forecast and scheduling has changed completely;

- Renewable energy is taking a larger share of the energy mix. This means intermittency and difficulty in generation forecast. It also means that the share of non-synchronous generation increases;

- New technology is emerging: "Smart grids" are becoming a reality;

- Market models have changed, and still do. Over the past years, it was common to observe the prices of electricity going negative for a few hours, when renewable energy was so important that the system had to pay to reduce consumption;

- On longer time scales, market signals are such that peak flexible generation units such as Combined Cycled are being shut down.

R&D effort is becoming stronger, as it is one of the ways to meet the challenges of this new context.

In this talk, an overview of some projects currently addressed by ENTSO-E (the European network of transmission system operators for electricity) will be presented, as well a focus on some projects undertaken by the French TSO, RTE.