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## Tomorrow's Education in Electrical Technologies:

#### revisited Methods & Tools for renewed Motivation

#### Liège, Belgium, 14 to 16 March 2001

#### - First Call for Papers -

Organised by the AIM Secretariat

Sponsored by the European Power Electronics and Drives Association

In Cooperation with: AIM (Association des Ingénieurs de Montefiore), SEFI (European Society for Engineering Education), SRBE/KBVE (Belgian Royal Society of Electrical Engineers), IEEE/IAS (Industrial Application Society)\*

\* to be confirmed

### **Synopsis**

Education in general and the teaching of Electrical Engineering in particular are changing thoroughly. Tomorrow's actors in teaching technologies should seize the opportunities offered by the new technologies & methodologies to make it attractive to new generations. New ways are also available to give access to technology training to persons who need academic or professional knowledge in the field and would normally have difficulties getting the proper information in the time available.

Two questions are frequently discussed among Electrical Engineering professors & trainers:

- 1. How can I teach Power Electronics or Electrical Machines or ... in 15 hours? And what should I teach?
- 2. How can I attract more students to Electrical Engineering?

On the other hand, the industry needs experienced practitioners and is reluctant to give them time to attend continuous education classes to help them keeping abreast with the latest technological evolution.

New educational methods using intensively Information & Communication Technologies are bringing possible solutions to these problems. In the frame of "Electralis 2001" in Liège (Belgium), the EPE Association, world wide renowned thanks to its biennial EPE Conference on Power Electronics, Drives and Applications, is inviting academics and industrialists to an International Conference on Tomorrow's Education in Electrical Technologies: revisited Methods & Tools for renewed Motivation.

The strong industrial background and support of EPE Association will ensure that the contents of the conference will be oriented towards the actual needs of the industry regarding basic education as well as continuous education.

The conference will take place in Liège (Belgium) from 14 to 16 March 2001. The conference will include:

- invited papers by leading actors of the field
- forum discussions on various themes related to education in Electrical Engineering and its future
- dialogue sessions where authors are invited to present their thoughts, actions and results on posters and have discussions with other attendees
- demonstrations of discussed methods
- a visit to the "Campus", an Electralis 2001 event where RTD laboratory projects will be presented

# Some topics for the forum discussions are:

1. Distance Learning (DL): towards an upgraded quality of our education?

Issues concerning educational quality criteria - coherence between objectives, methodology and evaluation - advantages in terms of flexibility and image coherence of an institution – implications of DL in terms of contents digitalisation and of tutoring

2. Coping with student expectations and professional requirements: Distance Learning as a customisation tool for the learner's project

Distance Learning and its specific contributions to a continued education when small communities of adult students imply a very personalised and high-quality follow-up —Case Study: the Certificates of Specialised Studies (where Education matches job market requirements and takes advantage of the privileged relationships between students and active professionals)

3. Tutors, monitors, moderators – upcoming professions and new actors of Distance Learning

Who does what in DL – New actors, new roles and new professions generated by first experiences in Europe - Proposal of a new dealing out of roles between the actors with a view to optimised efficiency of distance learning

4. Virtual Campus – towards which collaborations between institutions? What with the recognition of diplomas?

Could a student prepare a self-tailored programme by mustering at different institutions those courses he considers being most appropriate in a well-defined field? Shouldn't those institutions have to agree upon the delivery of common diplomas? Would those diplomas be recognised and thus valid to an employer? What is Europe's position in these institutional agreements? What is the future of "university shopping"?

5. Long-distance evaluation: formative or certificative?

The state-of-the-art in advanced technologies and methodologies in the field of distance learning evaluation: which links between developed courses and training? Which contents? Which results? Which guarantee for confidentiality and identification (notion of "trusted third party")?

6. Europe's position in the globalisation of education

How much of the global distance courses are European? What percentage for each curriculum? How is the situation expected to evolve? How can one try to improve the local productions?

Call for papers

The Call for papers will only relate to dialogue sessions presentations as the conference will focus on forum discussions and some keynotes. Some topics for the Call for papers are:

- 1. Adapting the curriculum of Electrical Engineering, feedback from experiences
- 2. Self-study, new materials set-up (DL, CD-ROM, Internet sites, ...)
- 3. Distance learning, new materials, new methods
- 4. Inter-university collaboration, feedback from experiences
- 5. University/industry collaboration, feedback from experiences

#### **Content of Synopses**

The synopses should consist of:

<ul> <li>a 2 to 3 pages <b>summary</b>, including an <b>abstract</b> with no more than 50 words; topic must be clearly mentioned;</li> <li>key diagrams;</li> <li>a references list.</li> </ul>
One paper copy of the synopses must be submitted and must be headed with the following information
paper, title, author(s), affiliation(s), mail addresses, telephone and fax number.
The synopses will also be submitted as a file (Word 6/95 or PDF) on disk with the paper copy or by e-mail to: E-TeM2@vub.ac.be

Authors of papers provisionally selected for presentation will receive an author's kit, which includes instructions for preparing the dialogue papers. Final selection will be based on the full paper. The paper will only be included in the conference proceedings after receipt of one full registration fee in due terms.

Synopses should be sent to:

EPE Association c/o VUB-TW-ETEC Pleinlaan 2 B-1050 Brussels, Belgium e-mail t: E-TeM2@vub.ac.be

#### **Deadlines**

Intending authors should note the following deadlines:

Receipt of Synopses 15 May 2000

Notification of provisional acceptance 30 October 2000

Receipt of full typescript for final review 20 December 2000

#### **Working Language**

The working language of the Conference is English, which will be used for all printed material, presentations and discussion.

#### Programme and registration

A provisional programme and registration form will be published a few months before the Conference, and sent to all who complete and return the attached form.

#### **Provisional International Steering Committee**

Mr. Pierre Aloïsi, EPE, France

Dr. Roger Bassett, Alstom Research & Technology Centre, Engineering Research Centre, United Kingdom

Prof. Frede Blaabjerg, Aalborg University, Institute of Energy Technology, Denmark

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Mr. Jean Louis Sanhet, Alstom, Division DEI - DT, France

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#### **National Organisation Board**

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Information

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Registration form: Yes I am planning to participate to $\mathbf{E} = \mathbf{T_e}  \mathbf{M}^2$
Name, Firstname: Title:
Company or Institution:
Full Address:
Phone: Fax:
I plan to offer a contribution provisionally entitled:
I plan to attend the Conference, please send me the provisional programme with full information
My company is planning to present applications at the exhibition, please send the Exhibition Set
Signature:

# E = T<sub>e</sub> M<sup>2</sup> EPE Association

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