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SPECIAL ISSUE ON

Educating Engineering Educators: Keeping Pace with Scientific-Technological Change and Socio-Economic Development

Guest Editors

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Times are changing. Engineering practice and Engineering Education are immersed in profound metamorphoses, as a result of radical scientific-technological revolutions and of a globalized and growingly interconnected World, which reshape all aspects of Society, from culture to ethics, from economy to politics. Keeping pace with such changes implies a continued renovation of Engineering programmes, not guided by fashionable trends, but progressively incorporating the relevant innovations, while protecting the proven beneficial traditions and pursuing excellence. The support of simple procedures for promoting a more dynamic and personalized Education is one of the keys for success. Aspects such as the encouragement of global engineers, with a personal dedication to lifelong learning, and with human values derived from the Education for global citizenship principles, are among the critical issues for educating engineers capable of solving the challenges ahead. All these novelties constitute additional responsibilities for professors at technical universities and teaching institutions and generate growing uncertainties, which are complex to manage.

In consequence, the “Engineers Educators of the Future”, apart from providing students with the necessary in-depth theoretical knowledge on basic disciplines of science and technology, with more applied abilities, technical skills and with relevant transversal outcomes, must be able to train engineers capable of addressing the current global challenges that are transforming the present, which will soon be a far past. Facing the threats to come requires the best possible trained engineers, which will be: those capable of implementing and working within international and multidisciplinary teams; those having an important cultural background, as a basis for mutual understanding between countries and civilizations; and those conscious of the relevance of international mobility and of lifelong learning for keeping up with techniques, procedures and engineering systems still to be invented. Evidently, educators are also subject to such demands and their dynamism, as regards their teaching practice, supported by a life of research and innovation, will be essential.

In fact, lifelong learning has been recently put forward by the European Union Council and Commission Report on the “*Strategic Framework for Cooperation in Education and Training until 2020*” (2015/C 417/04) as one of the main drivers of change for promoting a knowledge-based economy, for increasing social cohesion and for improving equal opportunities. However, in spite of the lifelong learning and mobility programmes available for educators, the professors from technical universities are sometimes reluctant to benefiting from them or, in most cases, cannot take advantage from such opportunities, mainly due to overwhelming work-related (and especially bureaucratic) duties, lack of supporting funding or even familiar constraints.

In any case, much has been achieved in terms of the professional training, international mobility and lifelong learning of engineering educators, but there is still a long way ahead towards a generalized worldwide cohort capable of progressively re-thinking Engineering Education and of preparing the engineers of the future. In order to search, generate, gather and provide some clues for solving the mentioned challenges linked to Engineering educator’s professional practice, the Special Issue on “**Educating Engineering Educators: Keeping Pace with Scientific-Technological Change and Socio-Economic Development**” will focus in depth on aspects such as:

- Strategies for the professional training of Engineering educators.
- Good practices linked to the promotion of Engineering educators’ lifelong learning.
- Good practices linked to the promotion of Engineering educators’ international mobility.
- Specific mobility programmes for researchers and professors linked to lifelong learning.
- Collaborative teaching-learning projects and rewarding experiences among educators.
- Synergies between research experiences and innovative teaching-learning activities.
- Synergies between industrial experience and innovative teaching-learning activities.
- Conferences, workshops and seminars as part of educators’ professional development.
- Teaching-learning experiences involving students and teachers or students vs. teachers.
- Global classrooms, summer schools, contests and other extra-curricular collaborative tasks.
- Engineering educators and their adaptation to novel technologies and related methodologies.
- Bridging the gap between Engineering educators and the “digital generation”.
- Assessment of educators’ performance from the perspective of the challenges ahead.

Submissions are to be sent by e-mail in MSWord (.doc) to contact guest editor:

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Important Deadlines

Submission of extended abstracts (around two pages):	January 31st, 2017
Notification of reviewers’ feedback:	February 15th, 2017
Submission of manuscript:	June 15th, 2017
Notification of reviewers’ feedback:	September 15th, 2017
Submission of final manuscript:	November 30th, 2017

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