

First Call for Papers

Saturday, 26 February 2011 18:11 Wilmar




Dear Colleague,

It is my pleasure to invite you to participate in the 2011 Research in Engineering Education Symposium to be held October 4 - 7, 2011 in Madrid, Spain. The main theme of the conference is Engineering Education Research. All studies aiming to contribute to our understanding of Engineering Education are welcome. Within this broad theme, the following sub-themes have been identified:

- Teaching and Learning in EE
- Innovation and Technology

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- Curriculum Evaluation and Accreditation
- Classroom Experiments
- Transition from School and into Industry
- Methodological Issues in EER

Within each category we aim to invite one "state of the art presentation". Contributions can include research reports, work in progress and case studies.

As in previous years, we are seeking contributions that represent high-quality research activity across a diverse range of research traditions and will contribute to engaged conversations during the conference.

Abstracts and full papers will be blind-reviewed and will be published on a CD, with an ISBN. This will not preclude revised and extended papers being subsequently published in a journal following the conference.

Welcome Message

Research in Engineering Education Symposium 2011

It is my pleasure to warmly welcome you to the **2011 Research in Engineering Education Symposium** being held in Madrid, Spain, October 4-7, 2011. The main theme of the conference is Engineering Education Research and the purpose of REES is to build a global community of researchers in engineering education. As in previous years, we are seeking contributions that represent high-quality research activity across a diverse range of research traditions and will contribute to engaged conversations during the conference. Participants should come ready to share, discuss, debate, encourage and leave with at least one new research partner.

The conference has been organized by an international Planning Committee of colleagues in the field of engineering education research, supported and hosted by the Universidad Politécnica de Madrid (UPM). Sponsors include the Vicerrectorado de Ordenación Académica y Planificación Estratégica UPM (gold sponsor), EUIT de Telecomunicación UPM (bronze sponsor), EU de Informática UPM (bronze sponsor), ETS de Ingenieros Aeronáuticos UPM (bronze sponsor), EUIT de Aeronáutica UPM (bronze sponsor), Madrid Convention Bureau (bronze sponsor) and the Journal of Engineering Education (bronze sponsor).

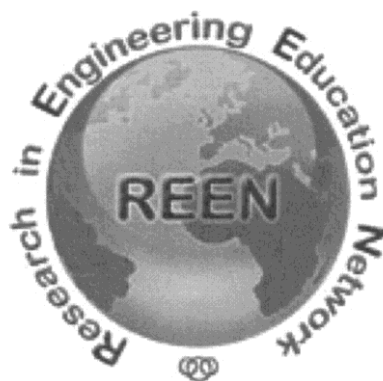
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Session 2 – Wednesday afternoon

Turn A: Engineering Education Research

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| 14:30 – 15:00 | <p>Paper number 68 “Strategic pathways to engineering education research: a top-down case study”</p> <p><i>Presenter: Maizam Alias</i></p> |
| 15:00 – 15:30 | <p>Paper number 79 “Hidden barriers to academic staff engaging in Engineering Education Research”</p> <p><i>Presenter: Llewellyn Mann</i></p> |
| 15:30 – 16:00 | <p>Paper number 64 “Analysis of trends in United States National Science Foundation funding for engineering education: 1990 - present”</p> <p><i>Presenter: Barbara M.Olds</i></p> |
| 16:00 – 16:30 | <p>Paper number 144 “A possible resistive electrical circuits learning pathway for engineering students”</p> <p><i>Presenter: Mauricio Duque</i></p> |

Turn B: Project-Based Learning

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|---------------|---|
| 14:30 – 15:00 | <p>Paper number 28 “Evaluating tutor training for online PBL teamwork courses in first year engineering”</p> <p><i>Presenter: Lyn Brodie</i></p> |
| 15:00 – 15:30 | <p>Paper number 31 “Measuring the influence of cooperative learning and project based learning on problem solving skill”</p> <p><i>Presenter: Javier Garcia</i></p> |

TURN 1B - PBL

**EVALUATING TUTOR TRAINING FOR ONLINE PBL TEAMWORK COURSES IN FIRST
YEAR ENGINEERING**

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The use of Problem-based Learning and other collaborative pedagogies in undergraduate engineering courses is recommended by a plethora of learning theory and research on educational best-practice, particularly for Applied Sciences such as Medicine and Engineering. One barrier to implementing and sustaining these curricular and pedagogical approaches lies in the development of the appropriate knowledge and skills and a consistent and appropriate approach in the teaching team. A significant change from the traditional pedagogies employed by tutors and the training of tutors is required, if PBL and similar methods are to be effective in delivering their numerous affordances, especially in asynchronous online environments for distance learning. This paper describes the development of a strategy to train engineering tutors in online PBL facilitation, and the evaluation framework used to assess the effectiveness of this training. Results of the evaluation of training and subsequent behavioural changes of the tutors are given. The evaluation revealed a variance between the message of the training and subsequent practice. Recommendations are made about the need for ongoing tutor development and support, and the necessity of evaluation in the implementation of PBL pedagogies