



9TH ASEE GLOBAL COLLOQUIUM ON ENGINEERING EDUCATION

**Keeping Engineering Education
Relevant in the New Global Economy**



Hosted by National University of Singapore

**Marina Bay Sands Hotel, Singapore
October 18 - 21, 2010**

CALL FOR PAPERS

The colloquium will provide a forum for exchanging ideas on how the Engineering Grand Challenges¹ will force changes in the existing engineering education paradigm. It is clear that we must develop more effective ways to impart knowledge and skills so that practitioners can transcend current disciplinary boundaries in addressing such challenges. The event will also focus attention on effective ways to recruit and retain some of our best talent in an era where other options for pursuing challenging careers exist. Specifically, we will explore several strategies for preparing practitioners to be productive in a global knowledge economy.

The colloquium theme will be explored in three tracks:

- Keeping the engineering pipeline filled- Attracting young talent to engineering in the new economy
- Engineering education in the age beyond engineering disciplinary boundaries
- Advancing engineering careers through lifelong learning in an interdisciplinary world

Coalitions and partnerships, both inter and intra, between the academy and a range of stakeholders are central to the success of these efforts. Contributions describing successful implementation of creative strategies are invited in each area, preferably making references to the task of meeting humanity's growing appetite for clean energy and clean water.

Track 1: Keeping the engineering pipeline filled- Attracting young talent to engineering in the new economy

The challenge of attracting the best and the brightest to a demanding profession, particularly when opportunities for pursuing other equally lucrative careers exist, continues to grow. Programs designed to expose the very young to science, technology, engineering and mathematics need to be more immersive and interesting if we are to succeed in addressing this challenge. Also, there is growing evidence that such programs have to be offered to students younger, in the elementary school or even in the pre-school stage, than in the past to be successful. This track will discuss and review some of the more innovative

approaches to promoting interest in science and engineering among the young and making sure that such interest is nurtured as the student progresses through the secondary school system.

Track 2: Engineering education in the age beyond engineering disciplinary boundaries

Engineering education programs have evolved along disciplinary lines over the years. Today schools are mostly geared to equip graduates with the tools and skills necessary to qualify oneself as a good mechanical, civil, electrical or some other type of engineer. Our curricula have become siloed along disciplinary lines. However, nature seldom presents challenges along such neatly packaged lines. Our grand challenge problems require our engineers to be able to understand issues that transcend disciplinary boundaries and to be able to offer effective solutions. This track will focus on creative ways to train our students in ways that can provide the intellectual dexterity to go beyond disciplinary boundaries and offer pragmatic solutions to truly multidisciplinary problems.

Track 3: Advancing engineering careers through lifelong learning in an interdisciplinary world

Being a member of the engineering profession can both be exhilarating as well as frustrating. The rapid rate at which technology is developing can disenfranchise engineers from the engineering world if opportunities for staying abreast of developments in the field are not made available. The most recent recession also dramatized the need to retrain engineers with skills outside their area of expertise to take advantage of job opportunities in emerging areas. This track will focus on creative ways in which the academy can help improve the “shelf life” of engineers through innovative refresher and retraining programs at a time when the ability to address interdisciplinary problems is rapidly becoming the coin of the realm.

Students attending the 7th Global Student Forum on Engineering Education are encouraged to submit papers to this call.

SUBMISSION PROCESS

April 5 – July 16, 2010	Abstract Submission
April 5 - July 30, 2010	Abstract Review
July 30, 2010	Abstract Decisions Notification Deadline (Accepted or Rejected)
August 2 - September 3, 2010	Paper Submission Phase
September 3, 2010	Paper Submission Deadline
September 10, 2010	Author Registration Deadline

The official language of the conference is English. All papers for the contributed papers presentation session(s) must be submitted and presented in English.

The **Authors Kit** with full instructions will be available in April 2010 on the 2010 Global Colloquium website: <http://www.asee.org/conferences/international/2010/>.

Abstracts

Abstracts are encouraged to address one of the three colloquium themes, however abstracts will also be considered in a general category.

Abstracts should contain the following:

- Background and motivation
- What was done? Methods used and why?
- Results, i.e., include some evidence and analysis. What was found?
- Conclusions and significance, including wider application

Abstracts should be no more than 500 words in length. A set of three to five key words and the most appropriate track number must also be submitted. Abstracts must be in English.

Abstract submission must take place through SmoothPaper, ASEE's paper management system at www.asee.org/smoothpaper/.

Papers

If an abstract is accepted, the authors will be invited to submit a full paper.

Full papers will be published in the colloquium proceedings on a CD-Rom, providing at least one of the authors registers for the colloquium by September 10, 2010.

1. <http://www.engineeringchallenges.org/>