

Engineering Education in a Globalized World

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General Context

Within the six short years following Thomas Friedman's publication of the *World is Flat*, the exponential technologies fueling globalization and innovation have transformed the world in unimaginable ways.

The resulting empowerment of people to create and innovate has revolutionized communication, commerce, research and education, and spawned new industries.

Many of society's toughest challenges, some the result of unintended consequences of this exponential growth, will also be solved by engineering.

Engineering schools are at the center of this transformation and will be the key drivers to shape this era. This GEDC Globalization session aims to provide a stimulating discussion of the state of globalization of engineering education as viewed from a number of global perspectives, and to look at the future.

General Context: Topics

- Engineering as enabling discipline: Impacting the global economy, through innovation and the creation of new business and enterprises; empowering the “other 90%” in the world (at the “bottom of the pyramid”). Better preparing engineering students worldwide by innovative engineering curricula.
- What are the current and future innovation drivers globally, in terms of intellectual area? For example, the National Academy of Engineering has broadly classified emerging challenges in the areas of sustainability, security, health and the joy of living (e.g. see <http://naegrandchallengessummit2010.org/>). Are these or other specific areas towards which global innovation is headed?
- In many universities across the world, innovation and the generation of IP are increasingly tied to their mission, both in terms of education and research. What is the status in various global institutes of engineering education and future prospects?

General Context

- Globalization has transformed the supply chains for labor, capital and goods. What is the current and future role of engineering schools in various parts of the world in this global chain? Specifically for industries in the high technology area (from info- to nano- to bio)?
- The education pipeline is likewise dramatically affected by the globalization currents. Particularly, how does STEM education (Science, Technology, Engineering and Mathematics) influences and is influenced by global trends?
- A global planet leads to global challenges, particularly in the areas of sustainability (energy, water, infrastructure) and the environment. How are engineering schools preparing to face these challenges?