

## **AC 2007-1291: PANEL SESSION - EDUCATING GRADUATES FOR A FLAT WORLD - 1**

### **Stephen Williams, Milwaukee School of Engineering**

Dr. Stephen Williams is an Associate Professor of Electrical Engineering and Computer Science at the Milwaukee School of Engineering (MSOE). He received the Ph.D. degree from the University of Missouri in 1990 and has 20 years of experience across the corporate, government, and university sectors. He is a registered Professional Engineer in Wisconsin. He teaches courses in control systems, electronic design, and electromechanics.

### **Owe Petersen, Milwaukee School of Engineering**

Dr. Petersen is the Department Chair and Professor of Electrical Engineering and Computer Science at the Milwaukee School of Engineering (MSOE). He is a former Member of Technical Staff at AT&T Bell Laboratories and received his Ph.D. degrees from the University of Pennsylvania in 1971. His technical work covers the topics of Optical Data Links, Integrated Circuit Technology, RF semiconductor components, and semiconductor component reliability. He is a Senior Member of the IEEE and an ABET EAC program evaluator in Electrical Engineering.

## Panel Session – International Division

### “Educating Graduates for a Flat World”

#### Co-Moderators:

Stephen Williams and Owe Petersen  
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#### Abstract

Competency in your technical field of knowledge is not sufficient for success in professional life in engineering. Graduates need more than what the normal degree/curriculum provides. Thomas L. Friedman – “The World is Flat - A Brief History of the Twenty-First Century” – provides significant documentation of the forces driving the rebalancing of relationships between nations and industries. Professionals, including, engineers will have their careers shaped by those same forces.

From an engineering standpoint technology has provided the mobility that flattens everything. And, engineering (and science) will continue to do so. Barriers will continue to be lowered or fall, further promoting mobility. But, some barriers in areas as culture, language, values, etc. will persist. Engineers who understand the opportunities and danger represented by mobility and are able to effectively surmount problems of culture and similar factor will be the professionals that thrive.

A panel with strong interest and expertise in such issues will address how to successfully compete in an environment that appears to promote outsourcing.

- What are the skill sets that will provide the economic and professional distinction and advantages necessary for competition in a global environment?
- How are those skill sets achieved?
- What are the changes in curricula required of our academic institutions?
- How vital is the role of non-technical knowledge in the future of engineering graduates?

#### Panel Members:

- Gary Downey  
Department of Science and Technology in Society 0247  
Virginia Tech  
Blacksburg, Virginia
- John Grandin  
International Engineering Program  
University of Rhode Island  
Kingston, Rhode Island

- Byron Newberry  
School of Engineering and Computer Science  
Baylor University  
Waco, Texas
- Samuel Scheibler  
Department of General Studies  
Milwaukee School of Engineering  
Milwaukee, Wisconsin

**Expected Forum Results:** The intended outcome of the forum is to not just explore what is currently happening in the world, but to provide a focus on and offer specific suggestions and examples of how to effectively change academic curricula to educate and advise our future engineering graduates. Discussions will impact curriculum, skills of graduates, and the worldview of graduates.