



VIRGINIA MOUNTAIN SECTION NEWSLETTER

IEEE Region 3, Council 09, Section 65

October 2006

Thursday, October 19, Holiday Inn University- Blacksburg

Improving the State of Engineering in the USA

Dr. Ralph W. Wyndrum, Jr.
President, IEEE-USA

ABSTRACT

This talk will address questions such as

1. How can U.S. Engineers succeed in the new global environment?
2. Is engineering losing its value today?
3. What are specific IEEE/IEEE-USA programs to maintain U.S. Leadership in Innovation, including the Innovation Institute in Washington, DC?
4. What IEEE programs in the USA address the needs for pre-college education in science, technology, engineering and mathematics (STEM), and mid-career education for practicing engineers?

IEEE-USA has defined innovation as a strategic priority for 2006-2007 and beyond, since the ability to innovate is an increasingly critical skill set for U.S. engineers to maintain rewarding careers, as well as for the nation to sustain its competitiveness in the global economy. In response to the globalization challenges facing the technology sector, IEEE-USA has outlined the following **Innovation Initiative**, which is a key

focus of its efforts to serve IEEE's U.S. membership:

- Advocating innovation policy
- Teaching innovation and mentoring innovators
- Supporting entrepreneurs



SPEAKER

Dr. Ralph W. Wyndrum, Jr. is the 2006 President of IEEE-USA and has served as a member of the IEEE Executive

Committee, and the IEEE Board of Directors for five years.

Dr. Wyndrum leads Executive Engineering Consultants, consulting in areas of R&D resource allocation and decision sciences targeted at new product and service development. He also teaches a Seminar on Strategic Leadership and Decision Quality at Rutgers University. Prior to assuming these positions, he had a long and successful career at Bell Labs and AT&T Labs, beginning in thin film and solid state circuit R&D, and retiring as Technology V.P., and then Program Planning and Management Vice President.

Dr. Wyndrum holds BS and MS degrees in Electrical Engineering and an MS in Business Administration (Executive MBA) from Columbia University and a Doctor of Engineering Science (Eng.Sc.D.) from New York University. He has published over 40 papers, articles and reviews and holds six patents in integrated circuit applications, VF receiver design, and voice/data transmission.

Date: Thursday October 19, 2006

Social: 6:30 PM

Dinner: 7:00 PM

Speaker 8:00 PM

Cost: Members & Guests \$ 15.00
Students \$ 8.00

Reserve by **4 PM Friday, Oct. 13**
Dr. Jan Helge Bohn (540) 231-3276
<mailto:bohn@ieee.org>

Please specify number of attendees.

Directions to

Holiday Inn University-Blacksburg
900 Prices Fork Road, Blacksburg

I-81 to Exit 118B

460 W about 8 miles to Prices Fork Road exit (one exit past Virginia Tech exit). Take first Prices Fork Rd. exit (towards Downtown) and the Holiday Inn will be on your left just past the first traffic light.

News from IEEE-USA

IEEE-USA cosponsored a convocation on September 28 at the National Academies designed to strengthen U.S. competitiveness initiatives at the state and local level, with the theme, "Rising Above the Gathering Storm: Energizing and Employing Regions, States, and Cities for A Brighter Economic Future."

The convocation focused on key action areas identified in the 2005 report, "Rising Above the Gathering Storm: Energizing and Employing America for A Brighter Economic Future": K-12 science, technology, engineering and mathematics education; higher education; research; and innovation environment. See

<http://www7.nationalacademies.org/gatheringstorm/>

IEEE to Beef Up Its Global Accreditation Role

Willie D. Jones, IEEE The Institute, September 2006

Although the number of technical jobs in countries such as India and China keeps growing, the lack of standards for

evaluating engineering and computer science programs presents a grave challenge there and in other parts of the world. The absence of accrediting bodies to control and affirm program quality has resulted in an uneven approach to accreditation of engineering programs in different countries. The result is that some universities turn out degree-titled graduates who are unprepared to fill the industry's needs in engineering and technology.

Describing the extent of the problem, Moshe Kam, vice president for IEEE Educational Activities, noted that Chinese universities confer approximately 250 000 engineering degrees annually, and those in India hand out around 200 000, compared with about 70 000 in the United States. The numbers do not tell the whole story, however. India, for example, is experiencing a shortage of qualified technical personnel in spite of the 60, 000 out-of-work engineers who reside there.

Kam asserts that the IEEE must begin to take a more active role in accreditation of engineering, engineering technology, and computer science programs worldwide. The IEEE owes this action to its members in countries where accrediting bodies are underdeveloped or do not exist, and it is a mandate that stems from the IEEE's status as the leading professional association in its fields of interest. To that end, Kam presented a plan at the Board of Directors meeting in February, calling for the IEEE to expand its accreditation activities, mostly outside the U.S.

IEEE Southeastcon 2007
22-25 March 2007
Richmond, VA

Hosted by IEEE Region 3, IEEE Virginia Council, and the IEEE Hampton Roads, Richmond, Central Virginia, and Virginia Mountain Sections. Paper submission deadline: November 1, 2006. For more information, see

<http://www.southeastcon.org/2007>

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