



VIRGINIA MOUNTAIN SECTION NEWSLETTER

IEEE Region 3, Council 09, Section 65

October 2007

Thursday, October 18, Holiday Inn University- Blacksburg Emerging Technologies in Photonic Sensors

Dr. Raymond Rumpf
Chief Technology Officer, Prime Research
Blacksburg, VA

ABSTRACT

This talk will discuss some of the key technologies emerging in the field of photonic sensors. Turn-around-point long period gratings and fluorescence spectroscopy are beginning to find a large array of applications in miniaturized systems that perform chemical and biological sensing. Ultra-wideband impulse radio promises to enable low power sensor networks to cooperate and disseminate more information from their environment. Nanoscale photonics integrated into optical imaging systems will provide additional degrees of freedom to control and manipulate light and lead to more compact and rugged sensing systems.

SPEAKER

Raymond C. Rumpf is currently the Chief Technology Officer at Prime Research which develops advanced photonic sensor systems for harsh environments. Dr. Rumpf is working to evolve the company's core technologies and investigate novel ways that nanoscale photonics can be exploited in their sensor systems. He was previously a principal investigator for the Microsystems Technology Group at

Harris Corporation where he investigated revolutionary technologies to miniaturize government communications systems. While at Harris, Dr. Rumpf led efforts to develop magneto-dielectric tuned RF devices, ultra-wideband impulse radio technologies, novel micro-packaging methods, and advanced thermal management techniques. He earned his Ph.D. in Optics from the University of Central Florida where he designed, optimized, and fabricated nano-optical elements. He earned his M.S. and B.S. in Electrical Engineering from the Florida Institute of Technology specializing in fiber optics and fiber optic sensors. Dr. Rumpf holds 11 patents across a broad range of technologies; and has authored over 20 journal publications since 2004.

Date: Thursday, October 18, 2007

Location: Holiday Inn University-Blacksburg

Social: 6:30 PM

Dinner: 7:00 PM

Talk: 8:00 PM

Cost:

Members & Guests \$ 20.00

Students \$ 10.00

Reserve by 5 PM Monday Oct. 15

Dr. Wilbur Dale (540) 464-7547

[mail to:dalewn@vmi.edu](mailto:dalewn@vmi.edu)

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.

Once again IEEE Journals top Annual Citations Ratings

Each June, numbers that could affect the careers of many researchers are released. These numbers are the rankings from the annual Journal Citation Reports, which note how often publications have been cited by researchers writing for other publications. The latest report shows that last year IEEE journals made it to the top of these ranks, once again.

Read on at <http://bmsmail3.ieee.org>

FREE TUTORIALS

IEEE Communications Society is pleased to offer a free two-hour online tutorial presentation on "Software Radio Implementation for MIMO/OFDM High Speed Wireless LAN/MAN" from IEEE Communications Society's popular Tutorials Now! program. Originally presented at the IEEE Wireless Communications & Networking Conference, the tutorial covers cutting-edge wireless parallel transmission technologies in OFDM and MIMO. Free for a limited time only.

<http://bmsmail3.ieee.org:80/u/7436/00847004>

IEEE Foundation Awards US \$121, 000 in Grants

The creation of a new museum exhibit, the production of a pilot TV episode, and the expansion of an electrical engineering course developed by an IEEE student branch are among the initiatives recently receiving support from the IEEE Foundation. For more information, go to

<http://bmsmail3.ieee.org:80/u/7441/00847004>

IEEE-USA Innovation Forum

Because engineers are our country's principal innovators, and innovation generates economic activity and leads to desirable, high-paying jobs, IEEE-USA will host its first IEEE-USA Innovation Forum at the Fairview Park Marriott in Falls Church, Va., on 6-8 November.

The day-and-a-half forum is designed to promote the innovation process, highlight new technologies and trends, and help scientists, engineers and allied professionals improve their innovative skills. Unlike programs offered by and for business school graduates, the IEEE-USA Innovation Forum is grounded in the experience of successful technology innovators.

Current and future leaders from industry, academia and government will have the opportunity to learn from a distinguished faculty that includes: Mike Austin, who has served as president and CEO of numerous U.S. steel companies; Alain Rostain, founder and principal of Creative Advantage, a strategic innovation consulting firm; Mauro Togneri, a former president and senior executive of U.S. companies with R&D, sales and manufacturing operations around the world; and Steve Walker, an entrepreneur and former Defense Department engineer who helped develop the ARPAnet packet switching system that evolved into the Internet.

Howard Lieberman, founder and CEO of the Silicon Valley Innovation Institute, will deliver the keynote address.

Attendees will learn to innovate in a team-setting and work through real case studies. Group discussions and exercises will focus on:

- * Leadership and culture's impact on innovation
- * Large vs. small organizations as foundations for innovation
- * The innovation process and how to leverage your style to promote innovation
- * Capitalizing on new technologies and processes

The event begins on 6 November with an opening night reception and dinner. The forum starts the next day with a full day of teaching and includes breakfast, lunch and breaks. It will conclude with a half-day program that includes breakfast and a morning break. The cost is \$795 for IEEE members and \$950 for non-members. See <http://www.innovation-institute.org/dcforum/>.

The IEEE-USA Innovation Forum is part of the IEEE-USA Innovation Institute (<http://www.innovation-institute.org/>).

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