



The Institute of Electrical
and Electronics Engineers, Inc.

The Open Channel

Newsletter for the Hampton Roads Section

March 2001

March Meeting

- Date:** Thursday, March 21, 2002
- Location:** Rom-Thai Restaurant
7512 Granby St
Norfolk
- Schedule:** 6:00 p.m. - Administrative Meeting
6:30 p.m. - Social
7:00 p.m. - Dinner
7:30 p.m. - Speaker
- Price:** Member - \$15.00
Student - \$7.50
Guest - \$15.00

Signal Processing for Adaptive Control
Ran Cabell of NASA Langley

Randolph Cabell (Ran) received his BS, MS, and PhD degrees in Mechanical Engineering from Virginia Tech. He worked as a Research Associate in the Vibration and Acoustics Labs at Virginia Tech for 7 years, followed by a one-year tenure as an NRC Research Associate at NASA Langley Research Center. He is currently a Research Engineer in the Structural Acoustics

Branch at NASA Langley. His past research includes pattern recognition applied to vehicle noise, neural networks for helicopter fault detection, and neural networks for optimizing actuator and sensor locations in an active noise control system. More recently he has been working on feedforward and feedback control algorithms for active noise control in aircraft cabins.

Digital Signal Processing for Active Noise Control This talk will present a brief overview of digital signal processing hardware and algorithms used to study active noise control for aircraft cabins. The talk will feature a demonstration of active structural acoustic control, where a piezoelectric actuator mounted on a structure is used to reduce sound transmitted through that structure. The adaptive filtering algorithm and DSP hardware used in the demonstration will be discussed, and other feedback control algorithms currently being studied will also be discussed.

Section Chair's Words

The new year ushers in a new chair for the IEEE Hampton Roads Section and hopefully a new and consistent word in the newsletter.

Let me introduce myself; the name is William Edmonson. I have been an IEEE member for 25 years and since arriving to this area I have been involved with the section, starting out as vice chair. I moved here from Florida to become a faculty member at Hampton University in the Department Electrical Engineering.

With your help I would like to make this Section more viable by increasing participation at our monthly meetings. There are over a thousand members in the area with only about 10 people in regular attendance. Furthermore, there should be more collaboration between the other engineering organizations beyond what is happening through the Peninsula Council of Engineers. I would also like better communication between the section and the student branches at Hampton University, Old Dominion University and Christopher Newport University. To accomplish this, we need your help. Attend meetings and give a technical presentation that is germane to society members. If you have any thoughts to improve the society, contact me. Your yearly IEEE dues do fund the section.

One topic I would like to engage in this year is engineering education. In particular, are our K-12 educators preparing students for engineering school? I have my views and possible actions, but I want to hear from you. Please email me your thoughts. I will compile them for a latter newsletter.

William Edmonson, Ph.D.
Hampton University
wedmonson@ieee.org

Chapter Scheduled Speakers

April 18, 2002

Hampton Roads Job Market@ Sammy & Nicks
Ed Edgar, Keane Inc.

May 16, 2002

Smart Roads @ ROM Thai
James Mott, VDOT

Hampton University's Second Annual Technology Conference

In today's Information Technology world, we as educators, business owners and government agencies need to place ourselves in a position to effectively protect and secure our network infrastructure as well as our personal affairs. Hampton University recognizes the importance of these issues and host this conference with the assurance that conference attendees will become more knowledgeable about the critical issues that we face as a population.

The conference co-sponsor, the Advanced Technology Program, part of The National Institute of Standards and Technology, U.S. Department of Commerce, will host a robust Track on Advanced Technology Development and Commercialization Opportunities. Learn about over \$1 billion of funding opportunities available for advanced technology from federal government agencies. Sessions will emphasize and highlight minority business' and universities participation in these programs.

The conference theme "Are You Sure, It is Secure?" will be April 3-5, 2002 at the Hampton University Student Center. Invited guest include: The Honorable Mark Warner, Governor of Virginia; Dr Belle Wheelan, Virginia Secretary of Education; Willie E. Gary, Esquire.

For additional info or questions, please contact Ms. Adrienna Davis (757) 728-6927 FAX (757) 727-5438 or HUTC2002@hamptonu.edu (Subject: HUTC2002-IEEE)

Tell Us About Your Local Engineering Events

Are you organizing or sponsoring a local event of interest to the engineering community? Let us know! Contact chapter newsletter editor [Judith Brandon](mailto:Judith.Brandon@hamptonu.edu) to have your event announced in upcoming editions of *The Open Channel*. With distribution to over 1000 local IEEE members each month, you can't afford to ignore this free resource.

IEEE News

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WASHINGTON (15 March 2002) – IEEE-USA is accepting applications from U.S. IEEE members interested in spending a year at the U.S. State Department as a technical adviser. The successful State Department Fellow can play an important role providing technical insights into U.S. foreign policy interests.

An applicant must be an IEEE member with U.S. citizenship, possess a Ph.D. or 10+ years of professional experience, and be able to obtain a security clearance. A stipend and relocation assistance will be provided by IEEE-USA.

The application deadline is 3 June 2002; the Fellowship will start in either September 2002 or January 2003. For more information, go online to www.ieeeusa.org/forum/govfel/state.html; or contact IEEE-USA Government Relations Director Chris Brantley at +1 202 785 0017, ext. 8347

SoutheastCon 2002

April 5 - 7, 2002

Embassy Suites Hotel

Columbia, South Carolina

<http://www.ewh.ieee.org/cmte/secon/index.html>

This month's edition of **IEEE-USA TODAY'S ENGINEER** includes:

- LEARNING OUTSIDE OF THE BOX

Whether you're just starting your technical career or are well into it, education plays a key role in professional success. How do engineering professionals progress from being merely students to being self-directed independent learners? Vern Johnson has some ideas, in the March / April edition of IEEE-USA Today's Engineer.

- A-C-T N-O-W: A STRATEGY FOR EFFECTIVE CRISIS COMMUNICATION (PART III)

Despite the best efforts to anticipate and prepare for disaster, most companies find themselves at a loss when it strikes. That's why it's a good idea to have an effective crisis communication strategy in place. Don't miss the final installment of Cheryl Reimold's article on A-C-T N-O-W crisis communications.

Also this month in TE:

- Engineering Trends: The Manager vs. The Leader
- Engineering Hall of Fame: Carl Friedrich Gauss
- World Bytes: Self-Actualization and Your Career

To read Today's Engineer, visit:

<http://www.todaysengineer.org/careerfocus/>

Educational Activities Board

For complete access to IEEE educational products and programs, log onto www.ieee.org/eab. The site offers the online education reading room, video on-demand, the NewsWire, contests and prizes, and much more.

Region 3 Addresses

R3 Web Site: <http://www.ewh.ieee.org/reg/3/>

Hampton Roads Web Site:

http://www.ewh.ieee.org/r3/hampton_roads/

ETI Web Site: <http://ie3eti.eng.uab.edu/>

ETI Authorization: eti-info@eng.uab.edu