

IEEE *The Open Channel*

Newsletter for the Hampton Roads Section of the IEEE
The Institute of Electrical and Electronics Engineers, Inc.

<http://www.ieee.org/hrs>

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November 2005

Topic: Unishield Shielding Technologies

Speakers: Robert Boyd and Wayne Legrande
Unitech, LLC

Date/Time: Thursday, November 17, 2005 at 6:30 PM

Location: Lake Wright

(<http://www.lakewrightgolf.com/>)

6280 Northampton Blvd 757.461.6251

Norfolk, VA 23502

Cost: Members and guests \$20; Students \$10



Unishield is manufactured exclusively by [Unitech, LLC](#). This unique, water-based material is extremely conductive and has seen extensive application as a safe and effective EMI shield for many nonmetallic surfaces. Unitech engineers have developed various formulations of Unishield to specifically address problematic RF emanations in commercial, military and governmental environments.

Non-toxic and extremely lightweight and durable, Unishield is easily modified to address specific electromagnetic challenges. Hybrid Unishield systems can target desired attenuation levels throughout a wide frequency spectrum without extensive, heavy and expensive metal shielding techniques. Retrofit and/or repair of existing enclosures or facilities are easily accomplished with spray, brush or roll applications. A Unishield flex formulation is suitable for fabric and other pliable substrates.

Unishield's specialized polymer systems give it superior adhesion to many plastics including Lexan and polycarbonate as well as metals, cotton/canvas, wood, drywall, masonry and Kapton film. Unishield also has excellent chemical, environmental and ozone resistance. Importantly, the proprietary formulation avoids the use of dissimilar metals, allowing Unishield to hold up to harsh marine environments.

Other unique applications include thin, lightweight ground planes and static dissipation mediums. Unishield is also being developed as a conformal, embedded antenna that can allow commercial and military platforms to effectively modify current, protruding arrays into virtually undetectable antenna systems. Finally, as a conduit for electricity, Unishield is the key material in a developmental ship hull anti-fouling system that creates an e-field pulse to prevent barnacle attachment.

Reservations: Please forward RSVP to Brent Phillips [bphillips@ieee.org] or William LaBelle [+1 757 619 9050, +1 757 421 8695, w.labelle@ieee.org].

Checks: Checks should be made out to IEEE and brought to the meeting.

Upcoming Meetings

Jan 26 Student Papers

Feb 16 TBD

Mar 16 TBD

Apr 20 TBD

May 18 TBD

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All materials for THE OPEN CHANNEL are due by the 22th day of the month preceding the issue month. Address all correspondence to:

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From the Chair

The Party Moves On



My term as chair is ending. I would like to take this opportunity to thank the many people who made it possible and highly enjoyable.

About a year and half ago, we found both our Chair and Vice Chair were moving out of the area. Subsequently, our Past Chair, William Edmonson, has also moved from the area. With the help of Brent Phillips, William Edmonson and Bill LaBelle, we managed to get by for the rest of that term and enlist new blood, Kurt Clemente and Dan Ulinski, to fill our ranks for the past year. We have also been fortunate to get help with many of our Committees. To each of you a hearty thanks.

Brent Phillips deserves special recognition. While studying for, and to his delight passing, the Professional Engineer Exam, he served as Vice Chair for a year and a half. The Vice Chair, as some of you know, is our Program Chair. He came up with programs month after month. While every officer position is important and requires significant effort, this position has the least room for error. Not only did he have to come up with good programs, he had to sweat out last minute cancellations on the part of the speaker or the restaurant. Brent, thanks!

Bill LaBelle has the next most demanding job, plus a few others. His efforts as newsletter editor have made sure that eight times a year you get news of our activities both electronically and by snail mail. He has investigated the Postal regulations and reduced the cost of sending our our newsletter significantly. These savings have allowed us to keep your meal costs low while improving the quality of the food.

My committee chairs: Demetris Geddis, Robert Pedigo, Mike McBeth, Bill LaBelle, and Roland Mielke (some of those names should sound familiar by now) all deserve a word of thanks for pitching in to handle the bits and pieces that hold the section together.

I also offer thanks to all of you who have attended our monthly parties or just sent me personal emails from time to time. I look forward to continuing to see you at our meetings in 2006. You are a really great group, I have enjoyed your fellowship and been stimulated by your experiences and adventures.

I would not be moving on without the volunteers that are on the 2006 nomination list. In addition to Brent who has agreed to Chair next year, there is Kurt Clemente, Dan Ulinski and Bob Pedigo. This is a highly motivated and energetic team that I know will lead us well in 2006.

Sincerely,
Bill Clayton
2004-2005 Chair
Hampton Roads Section

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Directions to Lake Wright Restaurant:

Directions from Williamsburg:

1. Take I-64 East to Northampton Blvd
2. At exit 282 take ramp onto US 13 North/SR 166.
3. Turn LEFT at first light, Wesleyan Drive (0.5 miles)

Directions from Norfolk:

1. I-64 West to Northampton Blvd
 2. At exit 282, US 13 North/SR 166 take RIGHT ramp.
 3. Turn LEFT onto Wesleyan Drive (0.2 miles)
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Accelerated Doctor of Science Degree Program in Engineering Management and in Systems Engineering at the GW Hampton Roads Center

Summary

The Department of Engineering Management and Systems Engineering (EMSE) program leads to the degree of Doctor of Science (D.Sc.). All courses and research are to

be undertaken at The George Washington University Hampton Roads Center in Newport News, Virginia. A cohort of 15 students begins on Saturday, 29 April 2006, with a target graduation date of April 2009.

Curriculum

The EMSE doctoral program at the Hampton Roads Center enables professionals who are employed full-time to pursue doctoral study and research on weekends in an intense, focused environment in cohort style—alongside like-minded fellow students. The program leads to award of the Doctor of Science degree in Engineering Management or in Systems Engineering.

The program consists of a minimum of 54 credit hours, divided into a classroom experience of ten graduate-level three-semester-hour courses culminating in the doctoral qualifying examination, and a research effort of at least 24 semester hours of dissertation research culminating in the dissertation defense. After completing the course work and passing the doctoral qualifying examination, the student writes an original dissertation in one of two fields of study: (1) Engineering Management, which focuses on innovation in the management of organizations; or (2) Systems Engineering, which focuses on innovation in theories governing the structure, operations, and management of technical and scientific organizations.

After the student satisfactorily completes all the classroom courses and passes the doctoral qualifying examination, he or she will use the 24 credits of EMSE 399 to conduct the literature search, research, and writing of the dissertation. No fewer than 24 hours of dissertation research (EMSE 399) will satisfy the requirements for the doctoral degree.

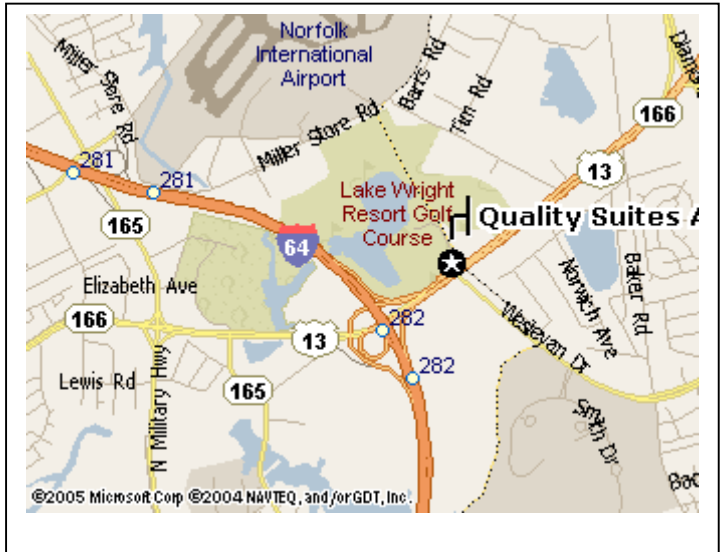
The dissertation is defended in the Final Examination before a committee of five members. The Final Examination committee members for this program will be: Professors Sarkani and Mazzuchi; two other EMSE Department faculty members; and one expert from outside The George Washington University. The candidate should consult Professor Sarkani about scheduling the examination. When the examining committee is convinced of the quality and originality of the candidate's contribution to knowledge as well as his or her mastery of the scholarship and research techniques of the field, the committee recommends the candidate for the degree of Doctor of Science.

Format

Sessions will be eight weeks long. Classroom courses will meet every Saturday. Two classes will be taken each session, from 8:45 a.m. through 5:00 p.m. Research courses will meet on Saturdays from 8:45 a.m. to 1:00 p.m.

Contact Information: If you are interested in learning more about this degree, please contact

Tammy Miller
Senior Education Specialist
Program Representative
Hampton Roads Center
757-269-2209
twm@gwu.edu



Membership Renewal Reminder

On 1 October 2005, IEEE began to mail the 2006 membership renewal notices to all members in Regions 7-10. By now all members in the Hampton Roads Section should have received their renewal package. Contact your section membership chair, William LaBelle [w.labelle@ieee.org] if you have not received your renewal notice. When the renewal forms arrives please provide complete information and register for an email alias.

All members are again being urged to renew online, as this method provides more timely service and greater accuracy in member records. It also helps IEEE to hold down its costs. Please note that, as was the case last year, Student members are **required** to renew online!

For those who wish to renew early, the 2006 online renewal form is already open for business. The online renewal process is fast, easy to use, and immediate. We encourage everyone to please renew early at: <http://www.ieee.org/renew>. Those who renew online prior to 15 November 2005 will be eligible to participate in a drawing for a chance to win a Dell laptop computer.

Members can register for a Web Account at: <http://www.ieee.org/web/accounts>.



Congress Discussing Raising H-1B Cap

IEEE-USA has just learned that there is a plan in the US Senate to increase the number of H-1B visas available by 60,000 per year for at least the next 5 years. It is essential that Congress hear from as many engineers as possible IMMEDIATELY if we want to stop this plan.

The proposal has been presented as a way of raising money. If adopted, it would be an amendment to the 2006 budget bill. Once included in this bill, it will be virtually impossible to remove the measure. Therefore, engineers who oppose the plan must speak up now to make a difference.

Concerned engineers should go to the IEEE-USA Legislative Action Center here: <https://www.capitolconnect.com/ieee> for more information. Sign in using your IEEE Web Account Password. The site will also help engineers quickly contact their legislators.

IEEE members have repeatedly indicated that they are very concerned about temporary work visas and want IEEE-USA to oppose them. In this case, Congress needs to hear that individual engineers oppose the program.

Please contact me if you or your members have questions about this Alert or about H-1B visas.

Thank you for your help.

Russell Harrison

r.t.harrison@ieee.org

IEEE-USA

(202) 530-8326

Vote in the IEEE HR Election

Hampton Roads Section

Locally, the Hampton Roads Section will be holding its annual election of officers in November. As with all sections and chapters in IEEE the elected positions are: Chair, Vice Chair, Treasurer, and Secretary. Send in your nominations now to William LaBelle [w.labelle@ieee.org]

IEEE Educational Activities Board (EAB) Seeks Industry Professionals to Serve as Program Evaluators for Accreditation Activities

by Carolyn Solimine

The IEEE Educational Activities Board (EAB) seeks qualified professionals from industry, government and academic sectors to serve as Program Evaluators to assist in accrediting Engineering and Engineering Technology Programs at USA colleges for the Engineering Accreditation Commission (EAC) and the Technology Accreditation Commission (TAC) of ABET, Inc., (the *Accreditation Board for Engineering and Technology, Inc.*)

Service as a program evaluator provides the opportunity for members of the profession to contribute to the achievement of high quality educational standards of engineering and engineering technology programs.

IEEE evaluator candidates are required for the following ABET-accredited programs:

- o Computer Engineering and Computer Engineering Technology
- o Electrical Engineering and Electrical and Electronic Engineering Technology
- o Electro-Mechanical Engineering Technology
- o Information Engineering Technology
- o Telecommunications Engineering Technology

Participation in the accreditation process by industry professionals will ensure that the requirements of industry are addressed.

Applications are due to the IEEE Accreditation Administrator by 15 November 2005 for the 2006-2007 academic year. Applications are reviewed during the February 2006 IEEE meetings. Accepted or declined notification will be sent to the applicants by 1 March 2006.

Nomination and Application forms are available at: <http://www.ieee.org/portal/pages/education/apc/ceaa/eacinfo.html> for people interested in engineering and <http://www.ieee.org/portal/pages/education/apc/ctaa/tacinfo.html> for those interested in engineering technology.

To submit nominations and applications or request information contact Carolyn Solimine at +1 732 562-5484 or c.solimine@ieee.org or [Mailto:eab-accred@ieee.org](mailto:eab-accred@ieee.org)