

The Open Channel



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of Engineering the Future

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

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November 2009

2009 part 2 Annual Student Paper Presentations

Speakers: Students from ECPI, Christopher Newport University, Hampton University, Norfolk State University, and Old Dominion University

Date/Time: Thursday, November 19, 2009 at 6:30 PM

Location: Culinary Institute of Virginia

[<http://www.chefva.com/aboutus/location.cfm>]

2428 Alameda Avenue #106

Norfolk, VA 23513

+1 757 858-2433, +1 866 619 2433

Meal Cost: Members and guests \$20; Students \$10, Presenters FREE

Presentation: Free



The Hampton Roads Section will be sponsoring the 2009 part 2 Annual Student Paper Presentations. Students from local colleges are invited to present topics on research and innovations. Prizes will be awarded to the three best presentations. Faculty and guests are welcomed to attend. Come hear what our college engineers are researching today.

Reservations: Please submit your reservation(s) online at <http://www.acteva.com/booking.cfm?bevaaid=192096> or send RSVPs to Greg Hodges at officers-r3-hamptonroads@ieee.org or William LaBelle +1 757 619 9050].

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

Directions: See page 3

Upcoming Conferences

2009 IEEE 30th Real-Time Systems Symposium (RTSS), Dec 01 - 04, 2009, Washington, DC, <http://www.rtss.org/>, IEEE Sponsor: Computer Society

2009 IEEE 40th Semiconductor Interface Specialists Conference (SISC), Dec 03 - 05, 2009, Arlington, VA, <http://www.ieeesisc.org/>, IEEE Sponsor: Electronic Devices

2010 11th Joint Magnetism and Magnetic Materials - INTERMAG Conference, Jan 17 - 21, 2010, Washington, DC, <http://www.magnetism.org>, IEEE Sponsor: Magnetics Society

IEEE SoutheastCon 2010, Mar 18 - 21, 2010, Concord, NC, <http://www.southeastcon.com/2010/>, IEEE Sponsor: Region 3, Charlotte Section, North Carolina Council

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Upcoming Events

- Nov 19** Student Paper Presentations
- Dec 1-4** 2009 IEEE 30th RTSS, Washington, DC
- Dec 3-5** 2009 IEEE 40th SISC, Arlington, VA
- Dec** EXCOM

2009 IEEE Executive Committee Hampton Roads Section

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All materials for IEEE 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



So do you think you know as much as a university student? Here's your chance to find out. Come to the November section meeting and hear our local undergraduate engineering students give presentations on the topics of their choice. We have adjusted our meeting schedule to be more in line with the students' schedule so that, as they are finishing projects, they can practice presenting on a body of engineers and receive feedback from us. If you are not careful you may even learn something! The PES chapter is providing a technical program this month for those that need to get continuing education credits for the licensure requirements. Either way, I believe both programs will be quite informative.

We had an excellent October meeting that was well attended. I want to thank Muelhbauer for being such gracious hosts in sponsoring this event. It is truly amazing how much technology has increased and improved even since I went to school. One of our life members asked the question, "What would Maxwell think"? Remember him? The mention of his name conjures up memories of curl and divergence. The technology of today might overwhelm the giants of yesterday, but in electrical engineering we truly get to stand on the shoulders of giants in our understanding of the world. What will tomorrow bring. I don't know. But I do know that electrical engineering will be out front. Actually all engineering disciplines will be out front, we are just partial to electrical engineers. My thought is that the IEEE provides us the opportunity to meet as a body of engineers so that we can learn from each other. The local section, society chapters and student branches allow us that opportunity. We have 876 active members in our section. There is opportunity to learn from each one of them.

Not only does IEEE give us an opportunity to learn but also the opportunity to serve. We have numerous opportunities in the section for people to serve. We are currently working with the local Marine Technology Society in co-hosting the Oceans 2012 conference which will be held in Virginia Beach. The local Marine Technology Society is small (~14 members). We have been asked to help them with this conference. There is a great deal of work to be done to pull this off but I am confident that we can do it. I am going to be blunt about this - if we are successful, the section can make some money on this deal. We continue to struggle with finances (for the 3 years that I have been an officer). This will get us on some good footing when it comes to our financial picture.

November is the last technical presentation for this year. We will be looking for additional presentations starting in January and running through April. If you know of any potential presentations and/or presenters, please contact our Vice-Chair Greg Hodges.

Nominations for officers are still being taken by our past Chair, so please contact Kurt Clemente if you are interested in serving in our section. Elections will be in November.

James Bolitho
IEEE Hampton Roads
jbolitho@ieee.org

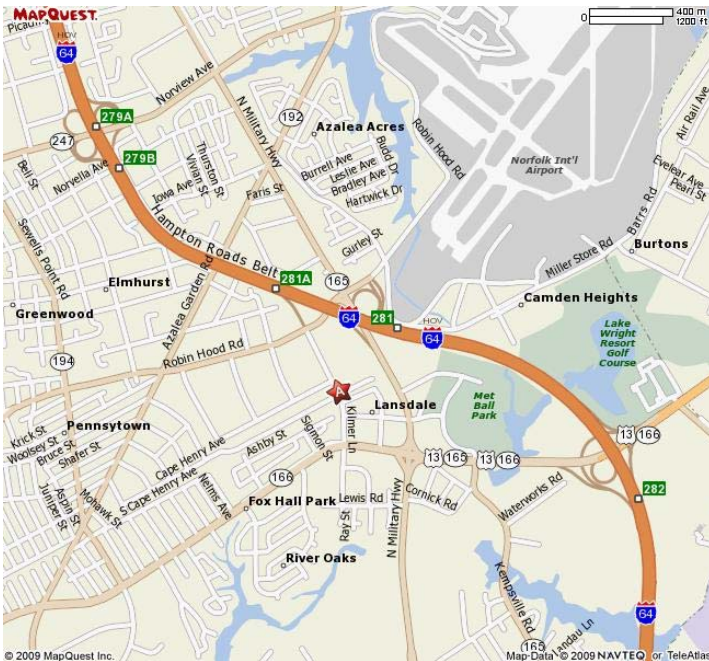
Directions to Culinary Arts Institute

From the Peninsula

1. I-64E toward Norfolk.
2. Take the Robin Hood Road exit 281A. (0.2 mi.)
3. Stay straight to go onto Almeda Avenue. (0.2 mi.)
4. Turn left into parking lot at 2428 Almeda Ave.

From Virginia Beach

1. I-264W towards Norfolk.
2. Take the Newtown Road exit toward I-64W Richmond. (1.2 mi.)
3. Merge onto I-64W via Exit 14 toward Norfolk Int'l Airport. (3.1 mi.)
4. Take exit 281 toward VA-165 Military Hwy. (0.2 mi)
5. Turn Left onto Robin Hood Road. (0.3 mi.)
6. Turn Left onto Almeda Avenue (0.2 mi.)
7. Turn left into parking lot at 2428 Almeda Ave.



Culinary Arts Institute
2428 Almeda Avenue, Suite #106
Norfolk, VA 23513

IEEE Hampton Roads Annual Elections—Last Call

As with all sections and chapters in IEEE the elected positions are: Chair, Vice Chair, Treasurer, and Secretary.

Send in your nominations now to Kurt Clemente [kurt.clemente@ieee.org]. The election will be held at the November Meeting.

From the PES Corner

Jennifer Ammentorp
Chair HR PES
[jammen99@juno.com]



PES had a successful first stand alone meeting with "The New Face of Nuclear Power." Presented by Ray Riha, Ph.D on Oct 8th. There have been several improvements in the area of safety; all moving in the direction of passive safety where the need for human interaction is not required to deploy the safety feature in Generation III and Generation III + Reactors. Some designs of newer reactors also consume a greater portion of the fuel, leaving less waste (in one case

it can use the spent fuel rods from older facilities).

A motion was made and carried to have a tour of a Nuclear power facility, and details will follow on that effort.

We continue the Green Power Engineering with the November 10th meeting: "Practical Lessons in Wind Farm Collector Systems and Interconnections" by Wanda Reder of S & C Electric. Ms. Reder is a Distinguished Lecturer of IEEE and PES. This is a great follow up to the Sept. Presentation on Off Shore Wind Farm Project presented by Justin Turner .

If you are interested in attending the Nov 10 Meeting please RSVP early to insure your seat.

This meeting will be opened to the public and announced through the local media, and the limited seats could fill quickly.

It will be held at Town Point Club in Norfolk, and their dress code applies (business attire, coat and tie preferred)

Cost for members Early RSVP and advance payment (IEEE, PES,) is \$25 and Guests \$30.

Checks payable to HR-PES can be mailed to IEEE HR-PES at 210 Graves Circle Newport News, VA 23602-7536

Early RSVP closes Nov 2. Late RSVP is \$35, and is from Nov 3 - 6, when Registration closes.

Please submit your reservation(s) online at http://meetings.vtools.ieee.org/meeting_view/list_meeting/1231

Your feedback and comments are invited. Tell HR-PES what tours, and topics you want to see in our Spring line up.

I look forward to working with you in the future!

Sincerely,
Jennifer



Justin Turner, ODU Student

Mr. Turner presenting "Offshore Wind Power" at the September meeting of the IEEE PES Hampton Roads.

Brain Teaser Challenge Solution — August 2009

Butch Shadwell



Dr. Ray Riha receives a presentation certificate from Jennifer Ammentorp, IEEE PES Hampton Roads Chair.

Harvesting hydrogen from the sea was the subject. "We all know that deuterium is found in much higher concentrations in the sea than in the atmosphere. Perhaps the heavier molecules find it harder to make the transition from liquid to gas phase on the surface, so most of the evaporation is of the lighter isotopes. So the problem today is - how big a container do I need to hold 1 mole of H₂ at STP?"

In this problem, fact that the gas is deuterium is not relevant at STP. The answer is approximately the same for a mole of any gaseous compound. Remember $pV=nRT$, where n is the number of moles of the gas in question and R is a proportionality constant that varies depending on the units selected for the other three variables. For p in atmospheres, V in liters, and T in degrees Kelvin, $R = 0.0821 \text{ L atm/K mol}$. Since p and n equal 1, $V = R * T$ or $V = 0.0821 * 273$, or 22.39 liters. But I bet you already knew that.

Brain Teaser—September 2009

Butch Shadwell

Little Schlomo had nothing on his mind as he rolled the wheel down Pearl Street with his stick. The sound this perfect circle made as it rumbled along, drew his thoughts away from here and now. It was 1889, and for a ten year old in New York, life was lived in the street, and things were hard. Uncle Lenny, who had been living with his family for as long as he could remember, was sure his ship would come in any day now. Even though he knew it was rubbish, sometimes Schlomo would enjoy listening as his uncle would explain his latest get rich quick scheme. It was on a Tuesday, as he heard his Uncle Lenny describe his new electric light business. As you know, light bulbs were pretty expensive, about a dollar a piece, and they didn't really last that long. Lenny's idea was to sell folks lower voltage light bulbs which were a little cheaper and would last a little longer. He planned on buying transformers to reduce the voltage. What turn ratio did he need to run 25 volt bulbs? Hope you remember your electrifying history.

Reply to Butch Shadwell at b.shadwell@ieee.org (email), 904-223-4510 (fax), 904-223-4465 (v), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328. (<http://www.shadtechserv.com>) The names of correct respondents may be mentioned in the solution column.

Moshe Kam Is 2010 IEEE President-Elect

The tally of votes for the 2009 annual IEEE election is in: Moshe Kam has been elected 2010 IEEE President-Elect. The results are unofficial until the IEEE Tellers Committee Report is accepted by the IEEE Board of Directors at its November meeting. View the complete results at <http://bmsmail3.ieee.org:80/u/15408/956935>

Ed. Note: The above article reprinted with permission from the October 13, 2009 issue of The Institute Online [<http://www.ieee.org/theinstitute>].

Other election results

The information provided below is the tally of votes of the 2009 IEEE Tellers Committee. These results are unofficial until the Tellers Committee Report is accepted by the IEEE Board of Directors at its meeting 22 November 2009.

IEEE President-Elect, 2010

J. Roberto Boisson de Marca 12,704
Moshe Kam 15,690
Joseph V. Lillie 14,903

IEEE Division Delegate-Elect/Director-Elect, 2010

Division II

Caio A. Ferreira 1,346
J. Keith Nelson 1,407
Brian C. Wadell 1,028

Division IV (Electromagnetics and Radiation)

Peter N. Clout 2,354
Elya B. Joffe 1,523

Division VI

Gerard (Gus) H. Gaynor 852
Jeffrey M. Voas 1,034

Division VIII (Computer)

Susan K. (Kathy) Land 4,565
James W. Moore 1,710

Division X

Vincenzo Piuri 2,412
Daniel S. Yeung 2,195

IEEE Region Delegate-Elect/Director-Elect, 2010-2011

Region 3 (Southeastern USA)

Eric S. Ackerman 1,474
David G. Green 2,178

IEEE-USA President-Elect, 2010

James M. Howard 9,963
Ronald G. Jensen 14,154

IEEE-USA Member-at-Large, 2010-2011

Winnfort J. Myles 15,358
Mauro G. Togneri 8,627

For a complete listing of election results visit <http://www.ieee.org/web/aboutus/corporate/election/results.html>.