This presentation will discuss the progress and capabilities for the analysis of antennas in their true environment. Discussion will include a description of the new capabilities of ANSYS’ HFSS for the solving of large scale simulations using the Finite Element Method (FEM), the Integral Equation (IE) method, and the Finite Element Boundary Integral (FEBI) methods. The strength of the HFSS approach is the ability for the solver to automatically hybridize the IE and FEM methods where each has its respective strengths for accuracy and efficiency while also adapting and converging the mesh to the electromagnetically appropriate mesh for the application. There will be real-world examples of large scale multi-antenna simulations and their respective improvements in time and computational resources using the latest version of HFSS, HFSS v15. Discussions will also include applications of Radar Cross Section to round out large scale simulation applications commonly seen in the software usage.

Jeffrey Tharp, Ph.D. Senior High Frequency Application Engineer Jeff Tharp is a Senior Application Engineer who has been with Ansoft/ANSYS since 2008. He works primarily with HFSS and Designer and the integration between the two tools. Prior to joining Ansoft/ANSYS, Jeff earned his Ph.D. in Optics from the College of Optics of the University of Central Florida working on research in Optical and IR electromagnetics.

Reservations:
- Mike Cooper 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.
From the Chair

Dear IEEE Colleagues:

I’m happy to report that 2013 is off to a good start for our Section!

Our joint meeting with the Marine Technology Society at the Virginia Aquarium was a great success. About 200 people came out to hear Dr. Bruce Parker give a fascinating talk on “The Power of the Sea,” illustrating mankind’s historic and ongoing quest to predict tides, rogue waves, storm surges, and tsunamis. The presentation was followed by a reception and book signing, providing an excellent opportunity to meet the speaker and to network with fellow scientists and engineers. Overall, it was an incredible evening! Thank you to Dr. Parker for the very interesting talk, to the staff of the Virginia Aquarium for hosting the event, and to Bob Kugler for organizing it for us.

Other exciting news I want to share with you concern our membership numbers. As of mid January, our Hampton Roads Section has exactly 1000 active members, though, not all have renewed their membership in 2013, yet. Nevertheless, I thought this was a pretty impressive figure.

When it comes to technical interests, the breakdown according to Society affiliation is as follows: Almost 200 members are associated with the Computer Society and about 100 belong to the Communications and/or Signal Processing Society. Next follow Power Engineering (about 50 members), Oceanic Engineering (30), and Control Systems (30).

Based on these numbers, I would like us to look into the possibility of forming new society chapters. Chapters have the advantage that they can focus on relevant subsets of topics and technologies and, thus, can address the interests and the needs of their members very specifically. This way, they complement the activities of the Section, which by its nature needs to keep a generalist perspective.

We do currently have a very active PES Chapter, which is led by Mr. Lloyd Eley and which plays a vital role in our Section. Furthermore, Dr. Demetris Geddis from NSU is in the process of reactivating an existing, but dormant Photonics Chapter.

Besides these two, a Computer Society Chapter and a Comsoc/SPS Chapter seem to be the most obvious choices for our Section. Dr. Dimitrie Popescu from ODU, an expert in wireless communication systems, has graciously volunteered to spearhead the effort for the combined Comsoc/SPS Chapter. If you are interested in becoming a founding member, please, send him email at dimitrie.popescu@ieee.org.

If on the other hand you would like to start up a Computer Society Chapter, or any other chapter, then please let me know

Continued on next page
From the Chair ...

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(riedl@cnu.edu).

In any case, I hope I will see many of you at our February meeting, which will feature Dr. Jeff Tharp, Senior Application Engineer with Ansoft/ANSYS. As always, for more information and registration, simply google “IEEE Hampton Roads”. Also, please, remember to send in your nominations for our IEEE Hampton Roads Awards.

Kind regards,

Anton Riedl

EWeek Banquet
William LaBelle [w.labelle@ieee.org]

Engineers Week 2013 runs from February 17 - 23. The week’s events culminate with banquets that honor people and organizations for their contributions to the profession. You can contact me for information on each event.

The 2013 ECHR Engineering Excellence Awards Banquet will be held February 22nd at the Town Point Club [101 West Main Street, Suite 300, Norfolk]. Contact me for tickets to the event or purchase through online sales [http://www.acteva.com/booking.cfm?bevaid=234831].

The 2013 Peninsula Engineer of the Year Banquet will be held on February 23rd at Newport News Shipbuilding [4101 Washington Ave., Bldg 520 - James River Room, Newport News]. Tickets to the event can be purchase from me or through online sales [http://www.acteva.com/booking.cfm?bevaid=234896].

From the PES Corner
Lloyd Eley
Chair, PES Hampton Roads
[Lloyd.Eley@ieee.org]

IEEE Colleagues,

Happy New Year and I look forward to another great year in HR-PES! This spring, we will be scheduling a Surry Nuclear Power Plant Tour. So if you have ever wondered about the day to day operations of a nuclear power plant, now is the time to register for the tour. During the visit you will be able to tour the facilities and see a model of a nuclear reactor. Since the tour will be only open to 12 people, we are discouraging repeat attendance. More information including a tentative date will be coming soon. All members interested in attending should contact Lloyd Eley at Lloyd.Eley@ieee.org.

Below is a list of upcoming test dates for the PE and FE exams for 2013/2014.

<table>
<thead>
<tr>
<th>Year</th>
<th>PE, PS, SE Vertical</th>
<th>FE, FS, SE Lateral</th>
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</thead>
<tbody>
<tr>
<td>2013</td>
<td>Apr 12, Oct 25</td>
<td>Apr 13, Oct 26</td>
</tr>
<tr>
<td>2014</td>
<td>Apr 11, Oct 24</td>
<td>Apr 12, Oct 25</td>
</tr>
</tbody>
</table>

Thank you and I look forward to another great year in HR-PES!

Lloyd Eley
HR-PES
Lloyd.Eley@ieee.org
Many reasons to attend:

◊ Peer reviewed technical program with many interesting papers presented
◊ Many student competitions – Robotic Hardware, Software, Ethics, Paper, etc.
◊ Many exhibitors, including recruiting booths for major employers
◊ Region 3 Annual meeting

Discounts for students and life members, only $90 and includes two meals.
Special registration rate for the Region Committee. Registration is only $225
If you are a section chair or you are representing the chair for the region meeting, you should register as a member of the region committee.
All registration rates go up to the onsite level after March 1, 2013

Hotel registration should be done as soon as possible. There are limited rooms in our reserved block and the hotel will be heavily booked that weekend. If you use the link on our site you should automatically be offered our negotiated rate of $139 per night for up to two people per room. There is an additional fee of $25 for each person over two.

The technical program and student hardware practice begins at 8am on Friday, April 5. The technical program ends at 5pm on Saturday, April 6. Student programs and the region committee meetings end at noon on Sunday, April 7.

Everyone that is registered is entitled to attend the Awards Banquet on Saturday night, April 6 at 6pm. This event will include the final round of the student robotic competition and all awards presentations.

Jacksonville is a beautiful city with many local attractions for all ages. We are still negotiating discounts for attendees for admission and local transportation. We look forward to seeing all of you there.

The 2013 IEEE Systems and Information Engineering Design Symposium (SIEDS ’13) is a student-focused international forum for applied research, development, and design in Systems and Information Engineering. The symposium is the leading showcase for undergraduate and master’s graduate design projects or design-oriented graduate theses. Faculty, industry, and government project advisors are welcome coauthors. Contributed papers are solicited that apply diverse methodology, including:

- Data Mining and Statistics
- Simulation and Stochastic Modeling
- Life-Cycle Analysis
- Mathematical Modeling and Optimization
- Risk Analysis, Technology Management, and Policy
- Human Factors and Cognitive Engineering
- Systems Economics Analysis

Symposium papers presented will appear in a copyrighted CD-ROM and be available on-site and through IEEE Press. Awards for Best Paper will be presented for each track.

Student Travel Scholarships are available on a limited basis.

For more information contact:
SIEDS ’13 Symposium Committee  University of Virginia
PO Box 400747, 151 Engineer’s Way
Charlottesville, VA 22904
Phone: (434) 924-5393
sieds2013@virginia.edu

http://www.sys.virginia.edu/sieds13
IEEE Hampton Roads Awards Dinner

Date: March 21, 2013
Time: 6 p.m.
Location: The Catering Company at Point Plaza Suites, Newport News

The Section is currently seeking nominations for following awards:
IEEE Hampton Roads Outstanding Engineer
IEEE Hampton Roads Outstanding Service
IEEE Hampton Roads Outstanding Engineering Educator
IEEE Hampton Roads Student Professional Activities Service

Nominees must be IEEE members residing in the Hampton Roads area.

Nominations including a letter of endorsement as well as supporting documentation should be submitted by email to riedl@cnu.edu no later than Friday, March 1, 2013.

For awards and nomination details, see: http://www.ieee.org/hrs