



IEEE

IEEE **Edmont Potential**

A publication of the IEEE Piedmont Section - October 2009

<http://www.ewh.ieee.org/r3/piedmont>

Message from the Chair

It is hard to believe that we are heading into the fourth quarter of 2009. We plan to have some activities for the end of the year, and are working on topics of interest for 2010. We hope that you will find the upcoming meeting topics of interest to you and welcome suggestions for future meetings.

The Piedmont Section Executive Committee gathered on September 2, 2009 to map out our plans for the rest of the year. We have some things planned that will hopefully be of widespread interest to our membership. We have several meetings coming up and are looking for additional meeting topics for the first of next year.

We will have a technical meeting on October 8th at the CUICAR facility on Arc Flash, and on November 19th we will meet at the Hubbell Lighting Headquarters in Greenville for dinner, a presentation on LED products and technology, and a tour of the lab facilities. We will also continue our usual participation in Clemson's activities, such as the design competition. Some of the details will be in this newsletter, and some are still to be finalized.

We have a few thoughts for future meetings, but would like to hear from you regarding what would be of interest to you. If you have an idea for a meeting, or yourself would like

to present a topic, please email or call one of the Executive Committee members.

The Executive Committee members and contacts are as follows:

- Chair: Louis Hapeshis: Hapesl@IEEE.ORG
- Vice-Chair: Owen Parks: O.Parks@IEEE.ORG
- Sec/Treasurer: Robert Scruggs: R.Scruggs@IEEE.ORG
- Membership: Allen Thomas: A.Thomas@IEEE.ORG

Thanks,
Louis Hapeshis

NEXT MEETING

October 8, 2009

Arc Flash Education Workshop + 1 PDH

Louis Hapeshis

Topics covered in this workshop will include

- Types of major electrical faults
- Requirements of NFPA 70E, OSHA, NEC, IEEE 1584
- Equipment labeling for arc flash hazard
- Establishing an electrically safe work condition

- Boundary distances and PPE requirements
- Methods of determining flash hazard levels
- PPE hazard risk categories
- Maintenance of electrical equipment is critical to reducing risk
- Maintaining electrical system documentation
- Worker safety training as a risk control strategy
- Arc Flash Hazard Analysis process
- Overcurrent protective devices - fuses and circuit breakers
- Hazard warning labels
- Engineering controls to mitigate the hazard
- Administrative controls

Target audience members for this event include vice presidents of safety and risk management, corporate safety managers, engineering managers, facility managers, electrical supervisors or electrical maintenance specialists.

Speaker

Louis G. Hapeshis, III P.E.
Louis Hapeshis is a Principal Engineer for Square D's Power Systems Engineering group. He is currently serving as a Principal Engineer responsible for Engineering Services in the states of North Carolina, South Carolina, & Georgia. Based in Seneca, S.C., he is responsible for a team of engineers providing power system

studies, design, and monitoring services for Square D customers, as well as engineering support for Square D's field service operations. He is knowledgeable in power distribution, control systems, network communications, automation control products, variable frequency drives, and power quality. Louis received the BS degree in electrical engineering from Clemson University in 1995. He is a member of the Institute of Electrical and Electronics Engineers (IEEE), and IEEE's Power

We will offer 1PDH with a certificate for this meeting.

Meeting details:

6:30 Social ½ hour and meal

7:00 Presentation begins

Place:

The meeting is at the Campbell Graduate Engineering Center (CGEC) at Clemson ICAR in Greenville, SC. Upon arrival, walk up the curved ramp to the entrance. Someone will be at there to let you in and direct you to the room. We'll be in Room 401 in the CGEC.

All members and guests are welcome to the meeting, either for dinner or the presentation only. Dinner costs \$5 for members and guests and N/C for students and unemployed members.

Directions:

From I-85, take Exit 48A (Laurens Road or US 276) southbound. Once on Laurens Road, take the first left (at the traffic light) onto Millennium Boulevard. Turn left onto Research Drive. The parking deck is on your left and the CGEC is on your right.

NOVEMBER MEETING ANNOUNCEMENT

November 19, 2009

Plant tour of Hubbell Lighting, Inc., Greenville, SC

In November we will host our local IEEE Section at the Lighting Solutions Center at the HLI Greenville headquarters on November 19th. We'll begin at 6pm where we will provide dinner and then hear a presentation on LED products and technology along with a tour of their lab facilities ending around 9pm.

Map:

[http://www.clemson.edu/center](http://www.clemson.edu/center-s-institutes/cu-)

[s-institutes/cu-icar/campus/map.html](http://www.clemson.edu/center-s-institutes/cu-icar/campus/map.html) Parking is in the deck which is called the "CU-ICAR Partnership Office" on this map.

Smart Leadership Conference

IEEE-Chicago Section in Cooperation
with Harper College
Number LIC2003

November 13, 2009

8 am ó 5 pm

Organizations no longer just compete with their products, rather with how well they use their people. More and more companies recognize that, in order to gain the competitive advantage, they need to make sure their people know how to handle themselves at work and how to relate with their customers and peers. Learn to enhance meeting productivity, make smart decisions, negotiate for better results and lead when you're not in charge. Includes skill

enhancement exhibits and lunch. Sponsored by IEEE Chicago and Harper College.

- LIC2003-001 (CRN 20978) \$159 Early-bird registration until 10/2/09
- LIC2003-002 (CRN 20979) \$199 IEEE members beginning 10/3/09
- LIC2003-004 (CRN 20980) \$99 IEEE student members
- LIC2003-003 (CRN 20981) \$299 Non IEEE

Harper College

Avante Building, Room Z102
1200 W. Algonquin Road
Palatine, Illinois 60067

To register call 847.925.6300
or online at

<http://Harpercollege.edu/ce>

Why Aren't I Hired Yet?

"IEEE-USA Employment & Career Strategies
Forum" community
Moderator: Elizabeth Lions

Date: 22 October 2009

Time: 2-3pm ET

The job market in 2009 can be frustrating and confusing to job seekers. The unemployment rate for U.S. electrical and electronics engineers hit a new record in the second quarter, while the unemployment rate for all engineers increased for a second straight quarter, according to data released by the Department of Labor's Bureau of Labor Statistics. Elizabeth Lions solves the mystery in this IEEE-USA webinar by examining market data and the latest hiring trends during this challenging economy. This presentation is an in-depth follow up to her article published in the September issue of Today's Engineer. Register online:

<http://www.ieeeusa.org/careers/webinars>

Here's an Idea, Why not Patent It?

A Brief Summary of the Issues and Complexities of Bilski v. Doll

Steven Rubin

This article is a discussion of what has been characterized as the most important patent case in 50 years, now pending review before the United States Supreme Court [1]. At issue is nothing less than *what is patentable?* The Supreme Court will be deciding whether software is patentable, whether business methods are patentable and likely will make a ruling that will affect every invention that can be defined using a series of steps. As our fragile economy limps back toward recovery, the decision in *Bilski v. Doll* (öBilskiö) will affect the patent monopoly incentive provided for virtually every new invention.

Read the full article online here: IEEE-USA Today's Engineer
<http://www.todaysengineer.org/2009/Sep/Bilski.asp>

Sports & Signal Processing

Dr. John Vardalas, Outreach Historian,
IEEE History Center

Since the first televised sporting event, broadcasters have used new visualization technologies to enhance the viewer's experience of sporting events. The first notable innovation was the instant replay. Nearly 55 years ago, the Canadian Broadcasting Corporation (CBC) first tested the idea of an instant replay system. However, it was ABC's well known program *Wide World of Sports* that first put the technology on the air. The first time instant replay was applied to a football game was in CBS's broadcast of the 1963 Army-Navy game. In 1997, ESPN introduced another big technological innovation in football broadcasting: the öFirst-and-Ten Line.ö In addition to the white yardage lines on the field, the viewer also sees a simple line that stretches the entire width of the field. Also called the öYellow Lineö because of its color, this line indicates where the offense has to reach to get the next first-down. As a result, the line constantly keeps shifting up and down the field as the game progresses.

Read the full article online here: IEEE-USA Today's Engineer
<http://www.todaysengineer.org/2009/Sep/history.asp>

Alternatives for Health Care Reform

George F. McClure

The House of Representatives is ready to debate their \$1 trillion bill after the August recess, but the Senate Finance Committee has not revealed the details of their \$900 billion version yet. Both estimates cover the first ten years for new plans. The Senate may split its bill into two parts, as bipartisan support wanes.

Read the full article online here: IEEE-USA Today's Engineer
<http://www.todaysengineer.org/2009/Sep/health-care.asp>

Congress and DOE Focusing Intensified Attention on Energy-Water Nexus

Barton Reppert

Congress and the U.S. Department of Energy (DOE) are focusing intensified attention on the energy-water nexus, particularly in the context of efforts to develop advanced technologies which promise to substantially reduce water withdrawals and consumption by electric power plants.

öWe have tended to think about these two essential resources independently,ö Rep. Brian Baird, D-Wash., chairman of the House Science and Technology Subcommittee on Energy and Environment, said in opening a 9 July hearing by the panel. öHowever, the strong linkage between water and energy requires that we make a more concerted effort to ensure that water and

energy technologies are being developed synergistically.

Baird noted that if new power plants continue to be built with today's technologies, consumption of water

for electrical energy production could more than double by 2030, from 3.3 billion gallons per day in 1995 to 7.3 billion gallons per day.

Read the full article online here:
IEEE-USA Today's Engineer
<http://www.todaysengineer.org/2009/Sep/energy-water.asp>

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