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THE

SUNCOAST

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Inside this Signal...

Page 2

- * *Editors Column*
- * *LightningMaster*
- * *Nolan Power Group*

Page 3

- * *Siliconexion*
- * *News From IEEE-USA*
- * *15 Best Degrees*

Page 4

- * *Implementing Volt/VAR for Smart Grid*

Page 5

- * *Volt/VAR Continued*
- * *Senior Member Update*

Page 6

- * *Tour of TECO Control Center*
- * *PACT Conference*

Page 7

- * *What is a Toastmaster?*
- * *Robot to Mine the Moon*

Page 8

- * *Calendar*



This Month's Meetings

September 1st: EXCOM Meeting

Meeting starts at 5:30PM At TECO Plaza

Register online at <http://time2meet.com/fwcs-excom/index.html>

Meeting is open to all FWCS members and guests

**Parallel Architectures and Compilation Techniques
Conference**

Raleigh, North Carolina. September 12-16, 2009.

to register go to <http://www.pactconf.org/>

See page 6

Tour of Tampa Electric's Energy Control Center

Thursday, September 17, 2009

<http://time2meet.com/fwcs-pes4/index.html>

See page 6

Have YOU Voted?

Voting in IEEE Elections is a privilege and responsibility.

Deadline is rapidly approaching – October 1st*

Please submit your vote as soon as possible.

***see election ballot envelope for details of the date**

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Friday after the 1st Tuesday of the month preceding the issue month.

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This Month...(Editor's Column)

As Editor I am tasked each month with writing a short column on topics of my choosing. As I thought about this month I could not think of one more important than voting in this upcoming election. This month I am re-posting Jim's endorsements.

IT'S TIME TO VOTE!

It is that time in the IEEE year to vote. Sadly, for many years the response to the ballot has been very poor. Electing persons and changing the constitution with less than a 25% return. So read the material and position statements of the candidates, then cast your ballot. Do it now, don't let it slide until it is too late.

Over the years, based on my knowledge of the candidates, I have been asked who I would vote for. I have usually had an answer. This year is no different. There are two positions on the ballot of particular interest. For IEEE President Elect, Joseph Lillie. I have known Joe since 1992. He is a foreword thinking person who really cares about the IEEE members.

He has had a world of experience in IEEE and knows how and where to get the job done. For IEEE-USA President Elect, James Howard. I have known and worked with Jim for over 20 years on IEEE activities. His knowledge on the history and activities of IEEE-USA is fabulous. He is the right person for the job.

James H. Beall, Life Fellow



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IEEE★USA IN THE NEWS

WASHINGTON (7 August 2009) -- IEEE-USA commends the Department of Energy for awarding \$2.4 billion in grants to fund 48 new advanced battery and electric drive projects. "We welcome these investments, because electrifying transportation addresses two of our greatest needs: reducing our consumption of petroleum and limiting the release of greenhouse gases," IEEE-USA President Gordon Day said.

The grants are the largest single investment in advanced battery technology for hybrid and electric-drive vehicles. When coupled with an expected \$2.4 billion in cost share from the grant awardees, they are expected to create thousands of jobs in the U.S. battery and automotive industries. General Motors will receive about \$241 million; Ford will get nearly \$100 million and Chrysler \$70 million. IEEE-USA called for electrifying the transportation system through widespread deployment of plug-in hybrid electric vehicles in its January "National Energy Policy Recommendations." See

<http://www.ieeeusa.org/policy/positions/energypolicy.pdf>

. The grants were announced by President Barack Obama on Wednesday August 5th. See

http://www.whitehouse.gov/the_press_office/24-Billion-in-Grants-to-Accelerate-the-Manufacturing-and-Deployment-of-the-Next-Generation-of-US-Batteries-and-Electric-Vehicles/.

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 210,000 engineers, scientists and allied professionals who are U.S. members of IEEE. IEEE-USA is part of IEEE, the world's largest technical professional society with 375,000 members in 160 countries. See

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

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15 Top Paying Degrees

Below is a list of the top paying degrees. Note that all but three, Construction Management, Computer Science and Actuarial Science are engineering degrees.

1. Petroleum Engineering \$83,121
2. Chemical Engineering \$64,902
3. Mining Engineering \$64,404
4. Computer Engineering \$61,738
5. Computer Science \$61,407
6. Electrical Engineering \$60,125
7. Mechanical Engineering \$58,766
8. Industrial Engineering \$58,358
9. Systems Engineering \$57,438
10. Engineering Technology \$56,477
11. Actuarial Science \$56,320
12. Aeronautical Engineering \$56,311
13. Agricultural Engineering \$54,352
14. Biomedical Engineering \$54,158
15. Construction Management \$53,199





Implementing Volt/VAr for Smart Grid

Date: Friday, October 23, 2009
Time: Seminar: Registration 08:30am-9:00am, Speaker 9:00am-3:00pm
Speaker: Tom Beckwith, Dr Murty V.V S Yalla, Tom Jauch, and Chuck Mozina.
Beckwith Electric Co., Inc. 6190-118th Avenue North Largo, Florida 33773
Location: Seminole Electric (16313 N. Dale Mabry Highway)
PDH Credits 5 Professional Development Hours will be awarded.
Cost: \$100 Members, \$150 Non-Members. (Includes breakfast & Lunch)
RSVP: Online at: <http://time2meet.com/fwcs-pes1/index.html>
Make checks payable to: IEEE FWCS
Space limited to the first 50 registrants!
Questions: Serge Beauzile at 727-344-4123 or Serge.Beauzile@ieee.org

Present the theoretical and practical principal aspects related to Integrating Volt/VAr Management strategies consistent with Smart Grid objectives for Asset Management and Reliability in the distribution system. Discuss implementation of LTC transformer control, line regulator control along feeders, pole top capacitor bank control (remote and local), power quality issues; sags swells CBEMA and harmonics, as well as protection of the intertie with disburser, alternative, or green energy sources. Investigate system performance enhancements such as use of; autoadaptive techniques, VAr Biasing, Line Drop Compensation (LDC), flattening the voltage profile end to end and Conservation Voltage Control, paralleling for single bus, double bus and ring bus configurations, SCADA heartbeat integrity checks, and automatic change over on loss of communications. Additional topics include communications; ports, protocols and media and the use of Ethernet over fiber optics, IEC 61850, mesh networks, reporting by exception and unsolicited reporting, broadcast capabilities for voltage collapse mitigation, distribution VAr support to transmission for voltage collapse mitigation, and much more.

Tom Beckwith has over thirty-five years experience in the electric power industry, encompassing the fields of product and systems design, field applications and commissioning, and sales and marketing. He has served as Vice President of Sales and Marketing for RFL Electronics in New Jersey, Consultant for Bectech International and was General Manager of the International Division of Basler Electric. Beginning in 1970, Tom worked for Beckwith Electric Co., initially as an R&D Design Engineer and later in Systems Engineering, Field Commissioning and as Production Manager. He subsequently held positions as Vice President of Sales and Marketing and President of the Beckwith Engineering Services and Training (BEST) division. He presently is the CEO of Beckwith Electric Co., Inc.

Tom has a Bachelor of Science degree in Electrical Engineering (BSEE) from Case Western Reserve University and a Master of Business Administration (MBA) degree from the University of South Florida. He is a member of the IEEE Power Engineering Society and the IEEE Industry Applications Society. He has served on various working groups in the Power Systems Relaying Committee. He is a co-inventor of a 1993 U.S. patent on a Multifunction Protective Relay System.

Dr. Murty V.V.S. Yalla has been with Beckwith Electric Co. since February 1989 and presently holds the position of President and serves on the Beckwith Electric Board of Directors. In this capacity, he provides the leadership to develop and implement strategies for product development, manufacturing, quality control, finance, and staffing. He was Vice President of R&D/Engineering from 1994 to 2004. He received his Diploma in Electrical Engineering from Andhra Polytechnic, Kakinada, India in 1976, Bachelors degree in Electrical Engineering from Jawaharlal Nehru Technological University, College of Engineering, Kakinada, India in 1981, Masters degree in Electrical Engineering from Indian Institute of Technology, Kanpur, India in 1983 and a Ph.D. degree in Electrical Engineering from the University of New Brunswick, Canada in 1987. From 1988 to 1989 he was teaching and conducting research on digital power system protection at Memorial University of Newfoundland, Canada. He has published several research papers in international journals on digital protection. He holds four U.S. patents in the areas of digital controls and protective relays.

Continued on the next page...

Continued from previous page

Dr. Yalla was the U.S. delegate to the International Electrotechnical Commission (Geneva, Switzerland) Technical Committee 95 Ad Hoc Working Group on Relay Functional Standards. Presently he is the Convener of the IEC Technical Committee 95 Maintenance Team 4 -Measuring Relays and protection equipment: Functional Standards. He is also a member of the CIGRÉ (Paris, France) Working Groups B5.04 Modern Techniques for Protecting and Monitoring of Generating Plants and B5.05 Modern Techniques for Protecting, Controlling and Monitoring of Power Transformers

In 2006, Dr. Yalla was elected to Fellow Grade by the IEEE Fellow Committee for his contributions in computer relays for power systems. Dr. Yalla is an active member of the IEEE Power System Relaying Committee (PSRC) for the past 15 years. He is a member of several working groups in PSRC and presently chairs the Working Group which is revising IEEE Standard C37.102 "Guide for AC Generator Protection." He chaired the Working Group "Application of Multifunction Generator Protection Systems," of the Rotating Machinery Protection Subcommittee of the PSRC. He co-authored an IEEE PES tutorial on the "Protection of Synchronous Generators." Dr Yalla, who chaired the working group, received the IEEE Power Engineering Society (PES) Working Group Recognition Award for an outstanding technical report "Application of Peer-to-Peer Communications for Protective Relaying" at the IEEE PES General Meeting in Denver, CO, June, 2004. He also received the 2005 IEEE Florida Council Outstanding Engineer Award.

Tom Jauch is a Contract Consultant, Control Products and Systems for Beckwith Electric Company, Inc., specializing in power plant and generator protection. Tom Jauch worked as the Manager of Application Engineering for Control Products and Systems for Beckwith Electric Co. Prior to that, he was an engineering consultant to Beckwith Electric on product lines such as the generator protection systems and the adaptive capacitor control.

Tom has a Bachelor of Science in Electrical Engineering from Bradley University in Illinois and has authored numerous technical papers and magazine articles on power transformers, controls, and protective relaying. He is a member of the IEEE and the Power Engineering Society.

Tom has more than 20 years of experience as a senior application engineer and manager of business development for General Electric's Electric Utility System's Engineering Department located in Schenectady, New York. Tom is a former instructor in the Graduate School of Electrical Engineering at Rensselaer Polytechnic Institute in New York, and he was also a senior engineer with Central Illinois Light Company (CILCO) for five years.

Chuck Mozina is a Contract Consultant, Protection and Protection Systems for Beckwith Electric Company, Inc., specializing in power plant and generator protection. His consulting practice involves projects relating to protective relay applications, protection system design and coordination.

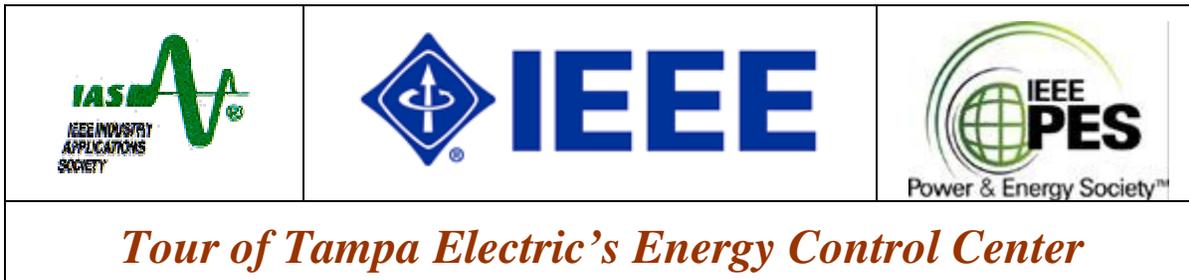
Chuck is an active 20-year member of the IEEE Power System Relaying Committee (PSRC) and is the past chairman of the Rotating Machinery Subcommittee. He is active in the IEEE IAS I&CPS committee, which addresses industrial protection system. He is the past U.S. representative to the CIGRE Study Committee 34 on System Protection and has chaired a CIGRE working group on generator protection. He also chaired the IEEE task force that produced the tutorial "The Protection of Synchronous Generators," which won the PES's 1995 Outstanding Working Group Award. Chuck is the 1993 recipient of the PSRC's Career Service Award.

Chuck has a Bachelor of Science in Electrical Engineering from Purdue University and has authored a number of papers and magazine articles on protective relaying. He has over 25 years of experience as a protective engineer at Centerior Energy, a major investor-owned utility in Cleveland, Ohio where he was the Manager of the System Protection Section. For the past ten years, he was Application Manager for Protection Products with Beckwith Electric Company. He is also a former instructor in the Graduate School of Electrical Engineering at Cleveland State University. He is a registered Professional Engineer in the state of Ohio.



Senior Members Update

IEEE CONGRATULATES OUR 179 NEW SENIOR MEMBERS! The last A & A Review Panel meeting was held on 1 August 2009 in Cedar Rapids, Iowa. Charles E Hickman, Chair of the A&A Committee, would like to thank the panel of Senior Members and Fellows from the Cedar Rapids Section who took part in the review process. The report can be accessed online from the Senior Member Update Web page at: <http://www.ieee.org/web/membership/senior-members/updates.html>. The next IEEE Senior Member Review Panel Meeting will be held on 12 September, in Saint Louis, Missouri.



Date: Thursday, September 17, 2009
Time: 6:00 P.M.
Cost: No Charge
Speakers: Art Nordlinger, Manager, Transmission Tariff & Contracts
 Dave Darden, Senior Consulting Engineer, System Planning & Operations Support
Location: 820 S. 78th Street
 Tampa, FL
RSVP: Online at: <http://time2meet.com/fwcs-pes4/index.html>
Space limited to the first 30 registrants!!!
Questions: Art Nordlinger at 813-630-6203 or alnordlinger@tecoenergy.com

Tampa Electric recently upgraded both its Transmission and Distribution system control rooms, along with its Energy Management System (transmission) and Outage Management System (distribution). The tour will include a presentation, visits to both control rooms, and a demonstration of new state-of-the-art graphical functionality.



Parallel Architectures and Compilation Techniques Conference

Raleigh, North Carolina. September 12-16, 2009.

PACT is a multi-disciplinary conference that brings together researchers from the hardware and software areas to present ground-breaking research related to parallel systems ranging across instruction-level parallelism, thread-level parallelism, multiprocessor parallelism and large scale systems. PACT solicits novel, unpublished papers on a broad range of topics that include, but are not limited to, the following:

- Parallel architectures and computational models
- Compilers and tools for parallel computer systems
- Multicore, multithreaded, superscalar, and VLIW architectures
- Support for concurrency correctness in hardware and software
- Compiler/hardware support for managing memory hierarchies
- Hardware and software support for power/heat-aware parallel computing
- Parallel accelerators and reconfigurable computing
- Dynamic translation and optimization for parallel systems
- I/O issues in parallel computing and their relation to applications
- Parallel programming languages, algorithms and applications
- Middleware and run-time system support for parallel computing
- Reliability and fault tolerance for parallel systems
- Modeling and simulation of parallel systems and applications
- Parallel applications and experimental systems studies
- Non-traditional parallel computing systems topics

For more information or to register go to <http://www.pactconf.org/>



What is a Toastmaster?

I am sure that most of the readers have heard of Toastmasters and you probably think that it is a club where members give speeches on various topics. You would be partially correct but Toastmasters has a lot more to offer than just speeches. How many of you have been asked to make a presentation on a project, or been asked to critique an idea or process or been to a job interview where you had to think on your feet? I imagine that nearly everyone could answer yes to at least one of these questions. Your local Toastmasters club can help you improve in each of these areas when you become a member and participate in the meetings.

First, Toastmasters is known for teaching you how to write and deliver speeches on topics of your choosing. It is done by completing 10 speech projects in the Competent Communicator Manual. It starts with the “Icebreaker” speech which is 4-6 minutes long and allows the club to learn more about you and also see what you do well in speaking and areas for improvement. Each speech project after that focuses on a specific skill, like organizing your speech, vocal variety and body language. There is also a speech that emphasizes multimedia presentations like PowerPoint. Each speech builds on the skills learned in the previous project. When you complete the manual you are awarded the Competent Communicator certificate.

For each formal speech made by a club member, an Evaluator is assigned to listen to the speech and make notes on what the speaker did well and suggestions for improvement. At some point in the club meeting, the Evaluator goes before the group and delivers a 2-3 minute presentation on the speech project. To be a good Evaluator you need to develop good listening skills and be able to compose a short speech in just a few minutes and deliver it in a way that allows the speaker to learn from the project. Being an effective evaluator and offering constructive criticism is a valuable skill in the workplace.

Prior to a Toastmasters meeting, one of the members volunteers to be “Table Topics Master”. This person will develop a list of questions or topics, usually around the theme of the meeting. A member is selected at random and given the topic. The task is to give a concise answer delivered in 1-2 minutes. This exercise gives you practice in thinking on your feet and responding to unexpected questions.

Finally, one of the most valuable skills is being the Toastmaster of the meeting. You develop a theme, organize the meeting, print an agenda and make sure the meeting goes smoothly and orderly with everyone getting to speak and keeping the meeting lively and fun and starting and ending on time.

So you can see that there is much more to Toastmasters than just giving speeches. I hope you take the time to visit a club near you and enjoy the benefits of membership! To find a club near you go to <http://www.toastmasters.org> and look for “Meeting Locations”

Richard Sanchez
PACE Chair



A Robot to Mine the Moon

In a Brooklyn warehouse, Honeybee Robotics is developing a lunar excavator that may help us colonize the moon. *IEEE Spectrum* visits a warehouse in Brooklyn, N.Y., where [Honeybee Robotics](#), a space technology company, is developing a next-generation rover to excavate and mine the lunar surface. The robot may be used in future NASA missions to retrieve soil samples. It may also help humans to colonize the moon one day.

Conventional digging machinery might be too clunky to operate on the moon. So Honeybee came up with a completely new approach to mining. Its robot uses gas to push lunar dirt into the rover's storage compartment. The material could be used for construction of roads, or mined for oxygen. But first, Honeybee needs to test its prototype, using a massive vacuum chamber at the Brooklyn warehouse.

<http://spectrum.ieee.org/video/aerospace/robotic-exploration/lunar-vacuum-cleaner>



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September 2009 Calendar of Events (For more information see P. 1) *inside this Signal...*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	1 EXCOM Meeting at TECO Hall	2	3	4	5
6	7	8	9	10	11	12 PACT Conference, see page 6
13 PACT	14 PACT	15 PACT	16 PACT	17 Tour of TECO Control Ctr. See page 6	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3