



THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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FWCS Power Engineering/Industry Applications Chapter Wins Power Engineering Society **OUTSTANDING CHAPTER AWARD**

The FWCS PE/IA Chapter has won the very prestigious Outstanding Chapter Award from the Power Engineering Society. We have won for the large chapter category after having been nominated for our outstanding work for 1999 under the Chairmanship of Mary Ellen Thacker.

This is the second time in this Chapter's history we have been selected as the **Outstanding Chapter for the world**. The first time was in 1992 under the Chairmanship of Randy Strain. This is a worldwide competition and it is a great honor to be considered for this award, let alone win.

A representative from the Chapter will be accepting this award at the Summer Power Meeting in Seattle, WA the week of July 17th. At that meeting we will receive both a plaque and banner at the Award Luncheon for the meeting. Please join the FWCS Executive Committee in congratulating the Officers of the FWCS PE/IA Chapter for their hard work and dedication.

Following are comments from both the current Chairman and Vice-Chair of the PE/IA Chapter:

Comments from the PE/IA Chapter Chair

*"I would like to thank all of the members for making 1999 so successful. Without your support, awards like this would not be possible. We, as officers, try to do our best for you, our members, and we get very frustrated because we want to do so much more. And at times, we feel that we really aren't serving/providing for our members. That's why this award is so refreshing because it says that compared to all of the other chapters, we are ahead of the pack. And as usual, success brings success and in this case, \$1,000 so we are going to bring in some distinguished speakers before the year is up. So once again, congratulations to all of you. **James Reed, Florida West Coast PE/IA Chapter Chairman.***

Comments from the PE/IA Chapter Vice-Chair

*How time flies when you're having fun. It seems like only yesterday we were putting together the 1998 Outstanding Chapter submittal and here we are in 2000 thanking everyone for his or her support for the 1999 award. It was a tough year for us, our chairperson had her first child and the vice-chair and myself spent most of the year looking for new jobs. After our experience with the 1998 submittal, the officers of the Florida West Coast Chapter decided that we would try a Power Point submittal for 1999. We were quite happy with the results. Special thanks go to James Howard and the rest of the FWCS Executive Committee members for their help and guidance. We hope to keep things interesting in the year to come and will continue to serve our members as best we can. **Paul Leal, Florida West Coast PE/IA Chapter Vice-Chairman.***

Look for more information and updates about this award in the next Signal. And be sure to let the officers of the PE/IA Chapter know how much you appreciate their dedication and time.

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Chair's Comment

by Al Rosenheck

Congratulations to our PE/IA Chapter for winning the prestigious Outstanding Chapter Award in the large chapter category from Power Engineering Society.

Every three years, the IEEE holds a Worldwide Sections Congress for Section Leadership from each of the ten Regions to provide an opportunity for interaction among IEEE Staff, Societies, Chapters and Leaders. The last Section Congress was held in Minneapolis in 1999. The next Congress will be held in Washington DC in 2002. The location for the 2005 Congress has not yet be selected, however proposals are being accepted. Preference will be given to Region 3, Region 8, and Region 10, since no Congress has yet been held in these locations.

Last month our FWCS Executive committee agreed to submit a proposal to host the Sections Congress in Tampa in 2005. Our Region 3 Director, Dick Riddle, and Florida Council Chair, Kalpathy Sundaram, have both gone on record supporting the FWCS proposal. With more than 2,000 members in our Section and 33,000 in our Region, we have significant support. While it seems a long time away, early hotel and planning commitment are necessary for major conferences such as this. The final site selection will be made by June 2001.

We look forward to the opportunity to work with our IEEE colleagues and participate in the Congress. The Executive Committee has selected Jim Howard to be our FWCS Section Congress Coordinator. As you all know Jim has played a key role in organizing conferences in our Section.

Power Line Speak-out

by Bob Ashley

A Florida West Coast Section Life Fellow, Dr. J. Robert "Bob" Ashley, will Speak-out in the 2000 July IEEE Spectrum in answer to the title question "Are Power Lines Unsafe?" Bob gives a personal review of the epidemiology work that has raised a suspicion that living near overhead power lines might be linked to increased childhood cancer risk. As based on his measurements in Florida, Denver, and Los Angeles as well as a landmark study in Sweden, Bob challenges some of the conventional wisdom about power line magnetic fields.

CEU Course Offerings Listed

A list of courses offering Continuing Education Units (CEU), as well as contact information, can now be found thru IEEE CEU course list website located at www.ieee.org/organizations/eab/ceucourselist.htm. Listed by date, the courses run the gamut from Advanced Induction Motor Production to XML Technologies.

**IEEE-Florida West Coast Section
MTT/AP/ED July Meeting**

“Beat the Heat” Summer Chill Series:

System on a Chip, Parts 3&4

(An EDS Videotape Short Course)

DATE: Tuesday, July 18, 2000

TIME: 6:00 pm

LOCATION: Raytheon Systems Company St. Petersburg
1501 72nd Street North, St. Petersburg
Gill Robb Wilson Conference Room – 2nd Floor Engineering

RESERVATION: Give name & country of citizenship with Greg Bonaguide at (727) 302-3367.
Email: g.bonaguide@ieee.org. Bring a guest, non-members welcome!
Refreshments will be provided.

ABSTRACT:

The scaling of silicon technology below 0.25um is characterized by aggressive exploitation of device technology and the integration of “new” materials such as copper, low dielectric constant insulators, and SOI substrates to extract greater performance. In spite of technological hurdles, the trend towards miniaturization and lower operating voltages permits an ever-increasing degree of functional integration with the potential for dramatic improvements in performance, cost and power at the systems level. SOC designers must functionally integrate disparate elements such as logic, analog, and memory circuits. This course attempts to address these different requirements and the methods to meld them into a complete and meaningful single chip solution. In cases where the technology does not permit, a single chip-like approach may be needed.

**Tape 3: “Embedded Analog Technology”
6:00 pm – running time 1 hour 10 minutes**

**Tape 4: “Embedded Volatile and Non-Volatile Memory”
7:15 pm – running time 1 hour 30 minutes**

The first lecture addresses the motivation for single chip solutions from a systems perspective. The second lecture describes design and test challenges for a system-on-a-chip device and presents methods for dealing with them.

COMING SERIES:

Tape 5: “Packaging Options for SOC” is tentatively scheduled for August 15

DIRECTIONS:

From Tampa, take I-75 South to I-275 south across Tampa Bay to Exit 12 (22nd Ave N.). From Sarasota, take I-75 North to I-275 north over the Sunshine Skyway Bridge to Exit 12 (22nd Ave N.). Turn west on 22nd Ave. past Tyrone Mall to 72nd Street N. Turn left at the traffic light to the Engineering building. Park in the lot farthest south of complex. The meeting will be held in the Gill Robb Wilson Conference Room – 2nd Floor Engineering.

Florida West Coast Section Submits Bid to Host the 2005 Section's Congress

by Jim Howard

Every three years the IEEE brings together the Section Chairs from all over the world. This Section's Congress was recently held in Minneapolis, MN in 1999 and will be held in Washington, DC in 2002. Bids to host this prestigious Congress were requested from all 10 Regions throughout the world, with preference being given to Regions that have never hosted a Section's Congress. These Regions were 3, 8 and 10.

We are part of Region 3, which covers the entire Southeast. The Florida West Coast Section is one of 44 Sections in Region 3. The Florida West Coast Executive Committee chose to submit a bid for the Congress after the Region Executive Committee indicated their support for Sections within the Region for the Congress. As of today, Lexington Section of Kentucky has also submitted for the 2005 Section's Congress besides FWCS.

With the help of the Tampa/Hillsborough Convention and Visitors Association, and in particular Jeff Hewitt, Director of Convention Sales, we were able to put together a very impressive bid package that included an invitation from the Mayor of Tampa, The Chairman of the Hillsborough County Board of County Commissioners, and many other prominent local business leaders. In addition, we have several of the major hotels and resorts that have included their bids for the Congress in the package.

Please watch upcoming Signals for updates on the progress of our bid.

IEEE Awards

by John Twitchell, P.E.

The Florida West Coast Section has the opportunity to sponsor Section members for several awards, both at the Florida Council (all Florida Sections) and the Region 3 (all of the Southeast US) levels. We are looking for candidates for Outstanding Engineering Educator, Outstanding Engineer, and Outstanding Service. In addition, there is a relatively new Region 3 award for Employer Professional Development, which recognizes an employer or an organization that places a priority on the development of its engineering personnel. Call, write, or e-mail any member of the executive committee with a recommendation, and we will assist in assembling the necessary paper work. We should all take this the opportunity to honor our fellow engineers who are deserving of recognition for their accomplishments.

Online Courses Offered

On 1 June, IEEE members will have access to an expanded choice of Video-On-Demand tutorials and a 10% discount on all Stevens Institute of Technology WebCampus online courses. These are the first in a series of partnerships between IEEE and university and industry content and technical support providers.

Video-on-Demand with anytime, anywhere access, uses SoftCom technology to stream tutorials to your desktop. The ever-expanding catalog titles currently range from Communications to Signal & Image Processing.

Stevens titles include Wireless Communications, Technology Applications in Science Education, and Telecommunications Management. Whether taken for graduate credit or in a slightly shortened version for CEUs, our members and their employers appreciate that the same highly respected Stevens faculty teaches both the traditional on campus courses and the online courses.

To see a list of all IEEE tutorials and co-sponsored Stevens classes or check out systems and registration requirements, visit the Educational Activities homepage at www.ieee.org/organizations/eab/index.htm. For further information contact Alan Trembly at a.trembly@ieee.org or (732) 562-5488.

Engineers and Educators In-service Series Proposal

Doug Gorham, Special Projects Manager, Pre-college, for IEEE Headquarters, will be at the July 11 Section's Executive Committee meeting to present a plan for beginning in-service training for local teachers. Dr. Gorham has been a principal for twelve years, the last five years at Bayshore High School in Manatee County, and has implemented a successful electronics program in his school. He has taken Enrichment Leave to work with IEEE.

The proposed series will be designed to promote technological literacy among pre-college teachers and offer practical ways that teachers can teach technology in their classrooms. Several school districts in the Section's area will be invited to join the program. It is hoped that the first topic of the series can be planned and implemented prior to winter break. This program will include:

- In-service topics offered each quarter during the academic year
- Collaborative planning among engineers and educators to select topics and presentation formats.
- Incentives offered to pre-college teachers for participating, e.g., in-service points, software, and stipends.

The goal is to develop examples of technical applications for classroom use and promote professional development for teachers. It is envisioned that this in-service series, once tested, can be a model for other IEEE Sections worldwide.

This initiative is in response to the Technology Literacy Counts Workshop (TLC) held in October 1998 in Baltimore, Maryland. TLC brought together over one hundred engineers and educators from around the world to address the lack of public understanding of technology. Among other actions, it was decided that a TLC network of dedicated individuals, engineers and educators, would be established to raise the level of technological literacy through collaborative efforts.

With the rapid increase and influence of technology, the public in general and pre-college students in particular must have a level of technological understanding to make informed political and personal decisions. The TLC Workshop began the work of ensuring that teachers have the resources, knowledge, and community support to empower students to become informed citizens, aware consumers, and productive workers. This in-service series is an important first step in doing that.

For a copy of the TLC proceedings that fully details proposed agenda to address the lack of technological literacy problem, or if you have questions, thoughts, or are willing to help with the in-service project, please e-mail Doug Gorham at d.gorham@ieee.org.

Coming in August PES/IAS Meeting!

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Presenter: Mark Dixon

Date/Time: Thursday, August 24, 2000, 4:30 PM

Location: Beckwith Electric Co, 6190 118th Avenue N, Largo, FL 33773

Phone: 727-544-2326

Brain Teaser Challenge Column

by Butch Shadwell

June BTC Solution

First, I want to report on the hit counter at my web site. As I write this, readers have had about a month to respond to my web site visit request. This was initiated simply in the spirit of the census. I have had 110 hits since then. If I assume that all of the hits were from readers and that only one in one hundred readers actually took the time to hit the site, I can claim 11,000 readers. (If you think my ratio of readers to hits is off, this is the ratio we get to most IEEE membership polls.) I am thrilled with this statistical analysis. Like most poll interpreters, I see what I want.

As for the "Hall Effect" BTC last month, there has been a little controversy. To solve this problem one must know the direction of the B vector. (i.e.- north to south, or south to north) My recollection was that the vector runs from the north pole to the south pole of a magnet. Wishing to maintain the high accuracy of this column I decided to check my recollection against an old classical physics book (Weidner & Sells 1965). Upon a cursory examination, I found two illustrations that clearly showed the B vector going from south to north (i.e.-the arrowhead at the north pole of the magnet). This would mean that the negative charge would bounce off left wall in the problem. However, since then I have had input from several readers that I trust, saying that my original recollection was correct, that the B vector goes from north to south. Of course in this case the negative charge would bounce off the right wall. I'm going with the latter.

The fact is that the "Right Hand Rule" shown on all IEEE insignia, is reversible in that if the right thumb is in the direction of current flow then the fingers of that hand show the B vector direction. Similarly, if the thumb is in the direction of the B vector, the fingers show the direction of current precession. If the B vector is going down from the ceiling to the floor, then current would tend to the left wall and electrons would tend to the right.

July BTC

Greta Unibrow was a new student in our EE department. Her sloping forehead and calloused knuckles caught everyone's attention. In addition to her unusual features, she was very strong. For extra credit her statics class was invited to do a special project with pulleys. Since the photo was stolen from our bulletin board, I will try to describe the scene verbally. Greta stood holding a rope. She could pull the rope a full 60" with one stroke. The rope went up from Greta's hand to the upper pulley, then down to the lower pulley, then back up to the upper pulley, and then back down to the lower where it was tied. After several weeks of Pavlovian training, when a fellow student rang a bell, Greta would pull the rope for her full stroke with a constant force of 60 pounds. What is the maximum weight that the lower pulley could have lifted (no friction), and how high would it move? I know this problem is too easy for most of you, but you should have seen Greta doing the demonstration.

Questions or comments to the Brain Teaser Challenge, please contact Butch Shadwell at 904-223-4465 (v), 904-223-4510 (fax), b.shadwell@ieee.org (email), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328. (<http://www.ccse.net/~butchs/>)

IEEE Historical Resources for Members

Are you looking to promote the history of information and electrical technologies in articles, brochures or advertisements? The IEEE History Center can help. Here are some of the available resources:

- More than 5,000 historical photos
- Over 380 oral histories of individuals who have made important contributions to their fields, as well as significant IEEE members and employees
- An archive of unpublished records of the IEEE and its predecessor societies
- An historical reference service

For more information, visit www.ieee.org/organizations/history_center/, or contact Rob Colburn, IEEE History Center, at r.colburn@ieee.org.

IEEE-USA Symposium Rates Electric Power Reliability

WASHINGTON, 24 May 2000 -- More than 100 leaders in electric power from industry, government and academia today contemplated a brave new world for electrical consumers in the not too distant future -- a time when citizens can call up the latest electric power rates on the Internet and dispatch instructions to their home to turn smart appliances on or off according to their price tolerances. IEEE-USA and the Consortium for Electric Reliability Technology Solutions (CERTS) organized a one-day symposium on "Ensuring Electric Power Reliability -- The Challenges Ahead."

In a morning panel session on reliability management, Paul McCoy, Senior Vice President of Trans-Elect, observed that until recently electrical reliability was ensured by the nation's top 25 public and private utilities. However, since 1995, with deregulation of utilities in 23 states plus Washington, DC, new structures have not grown to fill the reliability gap, McCoy said. He added that the transition will take longer and will cost more than imagined. When these new structures are in place, McCoy indicated, they will be doing a better job than the status quo.

In one of two morning keynote addresses at the IEEE-USA/CERTS symposium, Craven Crowell, Chair and CEO of the Tennessee Valley Authority, stated that a combination of quantity and quality electricity is required to bridge the digital divide. Crowell added that electricity is "fueling the Internet age," and that an investment of patient capital is essential for future successes.

In a luncheon keynote, Kurt Yeager, President and CEO of the Electric Power Research Institute (EPRI), noted that electric power will accelerate the digital revolution and help move the nation from an industrial to a network economy. According to Yeager, electricity is the "lifeblood" of an adaptive economy.

2000 Review Seminars For PE Electrical and EIT/FE October 27 & 28 Examinations

Review seminars for the PE (Electrical) and Engineer In Training / Fundamentals of Engineering (EIT/FE) exams will begin:

**Tuesday, August 1st for the EIT/FE Exam &
Thursday, August 3rd for the EE Exam**

Seminars are conducted from 7-10 P.M. (Tues or Thurs) for ten weeks. The registration fee is \$225 and includes text. The seminars will tentatively be held at the TECO Data Center in Ybor City.

To register, contact: Alan M. Keith, P.E., PO Box 14042, (EC51), St Pete, Florida 33733

Alan.M.Keith@fpc.com

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July PE/IA Chapter Meeting
Solar Power - Meeting and Tour

DATE/TIME: Tuesday, July 25, 2000 - 4:30PM

LOCATION: Museum of Science and Industry (MOSI)
4801 E. Fowler Ave., Tampa, Fla.

RESERVATIONS

REQUIRED: Contact James Reed at 813-483-2271
JAMES.REED@TELOPS.GTE.COM
Bring a guest; non-members welcome!

COST: FREE - Reservations Required

Ever wonder when Solar Power was going to become a viable source of energy? Guess what, it's here. Meet with us on 25 July at 4:30 P.M. at the Museum of Science and Industry, "MOSI" to touch and feel the new 18 KW Solar Power Generator on display through a partnership by MOSI and TECO. While you are there, learn about the MOSI programs such as who they belong too and where they obtain their funding. Also learn how they go about obtaining new displays and how the organization affects your everyday. Don't miss this special summer meeting.

PE/IA Chapter - Call for Volunteers

The Florida West Coast PE/IA Chapter is in need of officers for next year. We are looking for several individuals to fill in various positions: Secretary, Treasurer, Membership Development, Awards Program, etc. If you would like to have an opportunity to change those things that you have always wanted to, now is your chance. Else, this is an opportunity to give back to society. The chapter is hoping to find new officers in time to have a smooth transition. Contact any of the IEEE West Coast Section Officers if you would like to volunteer a few hours a month. For more information or to volunteer to help, please contact:

James Reed, PE/IA Chapter Chair at 813-483-2271
JAMES.REED@TELOPS.GTE.COM

July 2000 Calendar of Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 <i>Independence Day</i>	5	6	7	8
9	10	11 <i>EXCOM Meeting TECO Data Center 6:00 PM Guests Welcome</i>	12	13	14 <i>Material Due for Next Month's SIGNAL</i>	15
16	17	18 <i>MTT/AP/ED "Beat the Heat" Summer Series Video course 6:00PM</i>	19	20	21	22
23	24	25	26	27	28	29
30	31					

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