

THE



SUNCOAST

SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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Volume 43 - No. 5

May 2000

Joint PE/IA & ASME Chapter May Meeting Tour of the Ybor City Central Chiller Plant



DATE: Wednesday, May 3, 2000

TIME: 6:00pm Social & Tour of the Historic Centro Asturiano Building
7:00pm Dinner
7:45pm Speaker followed immediately by the tour of the Chiller facility.

LOCATION: Latam Restaurant, Centro Asturiano,
1913 N. Nebraska Ave., Tampa, Florida (Southeast corner of Palm Ave &
Nebraska - parking lot on south side of building)



ASME International

RESERVATIONS

REQUIRED: Helen Prince at 727-734-5546. Bring a guest; non-members welcome!

SPEAKER: Mr. Robert Garcia
Mechanical Engineer and Sales Manager, Tampa Bay Trane

COST: \$12.00

Ybor's Central Chiller Plant, serving the Hillsborough Community College, (Ybor City Campus). The Hilton Garden Hotel, and the huge new entertainment complex, Centro Ybor. The Speaker is Mr. Robert Garcia, Mechanical Engineer and Sales Manager for Tampa Bay Trane. He was responsible for the design and installation of this 2400-ton central plant. He will describe the technical details of the equipment installed, the benefits of a central plant, and how the necessary critical mass of customers was formed to ensure economic viability. It is a partnership of Tampa Bay Trane and TECO/BGA. A short tour to the Central Plant at 16th and Palm Avenue (half mile away) will take place after dinner and Mr. Garcia's presentation.

The meeting site will be held at the Latam Restaurant at the historic Centro Asturiano. The Asturianos, immigrants from Northwestern Spain, banded together in 1902 and formed their own Society. This led to the construction of the Centro Asturiano, completing in May 1914. The building is a splendid example of the entertainment complexes of that time, and is a monument to those immigrants who struggled and persevered in their newly adopted country. The beneficial impacts of the diversity of all the immigrants to Ybor City, from Spain, Cuba, Germany, Hungary and many other countries, has not only enriched this Tampa Bay area but also the nation. Early arrivals will be rewarded with a tour of this historic facility.

The Latam restaurant has been in operation in Tampa for many years and has helped revive the Centro by its move there in 1994. Its forte is Cuban cooking (with a Spanish influence) by owner and chef, David Morejon. The Centro is located at the Southeast corner of Palm and Nebraska Avenues, with its own parking lot inside the gate (on the south side of the building). The Central Chiller Plant is a half-mile away to the east on Palm Avenue.

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All material for THE SUNCOAST SIGNAL is due by the Friday following the 1st Thursday of the month preceding the issue month. Address all correspondence to:

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Chair's Comment

by Al Rosenheck

Southeastcon 2000 was held 7-9 April, 2000 in Nashville, Tennessee and was a great success. Southeastcon, the annual IEEE Region 3 Conference, was hosted by our section in Tampa 1996. Southeastcon 2000 offered a wide variety of activities bringing together industry professionals, university staff and students to share information through technical sessions, tutorials, and student contests. It also provided a forum for region 3 professional meetings. We were fortunate to have Ken Laker, 1999 IEEE past President, participate in our meetings this year. The technical program featured 18 technical sessions and 6 tutorials. The student program featured paper contest, hardware and software competitions.

Our Section was well represented at the conference since many of our members attended in their capacity as region 3 and Florida Council officers. As FWCS Chair, I represented our Section and FWCS member Mark McKeage represented Section PACE.

As usual, the Nashville weekend was packed with informative meetings, far too many to report on in this limited space. However, I would like to at least mention a few of the highlights.

- A session with discussions and training for e-conferencing meeting software and pilot tests show it can be a real winner.
- A report on how IEEE-USA is taking the lead to advance the professional and career interests of US members.
- Ken Laker's 1999 status report and the news that IEEE 1999 membership reached an all time high, a 5.2 percent increase over 1998.
- The branding project agreed to keep the IEEE logo "right hand rule"

The conference ended Sunday with a region 3 awards luncheon organized by our own John Twitchell, Region 3 Awards and Recognition chair.

Students' Corner

USF IEEE Student Branch Chapter

By Brian Zilka

It has been another good semester and just as fast as it started it is over. I hope all students did well their final exams.

This past month Honeywell visited one of our meetings and we would like to thank them for taking the time to come and visit with us. We would also like to thank all those who helped sponsor our senior banquet, It was a memorable experience for everyone. We also held student elections this past month. The results of the election and details of our other current activities are available on our web site at <http://org.eng.usf.edu/IEEE-EE/>

Thanks again for all your support.

FLORIDA WEST COAST CHAPTER IEEE MTT/AP/ED MAY MEETING

"Characterizing the Radio Channel for Modern Wireless Systems"

DATE/TIME: Tuesday, May 9, 2000 6:00 pm

LOCATION: Raytheon Systems Company St. Petersburg, 1501 72nd Street North,
St. Petersburg **Gill Robb Conference Room**

RESERVATIONS: Leave name & country of citizenship with Greg Bonaguide at (727) 302-3367. Join us for dinner after the meeting. Bring a guest; non-members welcome!

SPEAKER: Henry L. Bertoni, Polytechnic University, Brooklyn, NY

ABSTRACT:

Implementation of modern wireless systems is a major growth area. The penetration of cellular telephones has only now begun to saturate in a few countries. We have yet to cut the cord on the office telephone, and wireless LAN and WAN applications are just beginning. All of these systems employ spectral reuse to increase the capacity of the radio channel. Spectral reuse pits the need to achieve coverage against the need to avoid interference. As a result, the design of such systems is strongly dependent on the characteristics of radio propagation in the physical environment, which is typically urban. The design of sophisticated systems to wring more capacity out of limited radio spectrum requires increasingly detailed knowledge of the radio channel, including higher order statistical measures and correlation.

This talk will review the channel characteristics that have been identified for current and projected narrow band and wide band (pulsed) systems and describe the results of measurements that have been made. It will then describe various theoretical approaches that have been developed in order to understand and give quantitative prediction for some of the measurements. These include ray methods for high-rise urban environmental predictions and diffraction models for residential environments. The effects of terrain, foliage and randomness in the environment will also be discussed.

BIOGRAPHY:

Henry L. Bertoni received the B.S. degree in Electrical Engineering from Northwestern University in 1960, and the M.S. and Ph.D. degrees from the Polytechnic Institute of Brooklyn (now Polytechnic University) in 1962 and 1967, respectively. After graduation he joined the faculty of the Polytechnic, serving at different times as Head of EE and as Vice Provost for Graduate Studies. Dr. Bertoni is a Fellow of the IEEE, and a member of the International Scientific Radio Union, the New York Academy of Science and the Radio Club of America. He has served as Chairman of the Technical Committee on Personal Communications of the IEEE Communications Society, as Chairman of the Hoover Medal Board of Award, and was on the ADCOM of the IEEE UFFC Society.

RESERVATIONS:

Leave name, number and country of origin with Greg Bonaguide at:

Phone: 727.302.3367

Email: g.bonaguide@ieee.org

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

Joint ASME & PE/IA Chapter May Meeting Ground Transportation for the 21st Century

DATE/TIME: Wednesday, May 31, 2000 - 6pm Social, 7pm Dinner, 8pm Speaker

LOCATION: Radisson Bay Harbor Inn,
7700 W. Courtney Campbell Causeway

**RESERVATIONS
REQUIRED:** Contact Helen Prince at 727-734-5546
Bring a guest; non-members welcome!

SPEAKER: Mr. Frank Kreith,
Distinguished Lecturer for the ASME.

COST: \$17.00

We are fortunate to have a Distinguished Lecturer for the ASME coming to speak to us on the outstanding topic. This meeting will be discussing many issues about the Transportation systems for the 21st century. Mr. Frank Kreith, along with Dena Sue Potestio, and Chad Kimbell have written a book, with this same title and Mr. Kreith will share with us some of the interesting and unique transportation system for the future. These include Electric Battery, fuel cells, alternative fuels, hybrid vehicles, as well as high efficiency gasoline and diesel engines. Be sure not to miss this outstanding meeting.

Joint ISA & PE/IA Chapter May Meeting Racy Goings-on in Your Neighbor's Garage (Last ISA Meeting until September 2000)

Date/Time: Monday, May 15, 2000
5:45 to 6:45 PM Social/Restaurant dining available
7:00 to 8:00 PM Program

Location: Sheraton Inn Four Points Hotel Tampa East, 7401 E. Hillsborough Ave., Tampa
(813) 626-0999 (Off I4 exit at Orient Road)

Speaker: Mystery Guest! (*Show Up and find out who it is?*)

Reservations: **Not Required, No Charge, Informal**

2001 IEEE-USA Officer Nominations

IEEE-USA is seeking 2001 officer nominations. Nominees must be IEEE Senior member grade or higher, and must be from IEEE Region 1-6. They are especially interested in nominations of Senior members who are also Graduates of the Last Decade (GOLD) members. Members who may be interested in, and well-qualified for, service in the following IEEE-USA offices:

- * IEEE-USA President-Elect
- * IEEE-USA Secretary-Treasurer
- * IEEE-USA Vice President - Member Activities
- * IEEE-USA Vice President - Technology Policy Activities
- * IEEE-USA Member-At-Large
- * IEEE-USA Vice President - Career Activities
- * IEEE-USA Vice President - Professional Activities

Nomination forms are available on the World Wide Web at <http://www.ieeeusa.org/ELECTION/>

Plan to Attend



I&CPS 2000

Sheraton Sand Key, Clearwater, Beach, FL

The

Industrial & Commercial Power Systems Technical Conference

May 7-11, 2000

The Florida West Coast Section and the Industrial and Commercial Power Systems Department of the Industry Applications Society invite you to attend the May 2000 I&CPS Technical Conference.

SPECIAL NOTICE

The Florida West Coast Section has arranged to partially subsidize a limited number of Section members to attend the technical portion of the conference. Contact Jim Howard, 813/630-6233, Mark McKeage, 727/826-4393 or Randy Strain, 727/384-7953 for details.

This is a chance for local IEEE members, working in the field of Industrial and Commercial Power Systems to meet and talk with their peers from around the world. These are the engineers that write the standards related to Industrial and Commercial Power Systems (the Color Book Series). This meeting is useful to engineers working for A&E firms, building management, equipment manufacturers and the power companies supplying this important load.

For those that are interested in standards writing the working groups will be meeting Sunday afternoon and all day Monday, May 7 and 8.

The technical sessions start Tuesday morning, May 9 and run through Wednesday afternoon, May 10. On Thursday, May 11 there is an all day tutorial on "Energy Management in Illuminating Systems."

For complete information on this important conference, including scheduling and paper titles, please visit our web site at:

<http://www.ewh.ieee.org/soc/ias/icps2k/>

Registration form for this I&CPS Technical Conference is on page 6 of this newsletter.

James Beall, Chair

For further information contact I&CPS 2000, P.O. Box 1381, Tampa, FL 33601-1381



You Are Invited to Attend the ASME Sponsored
Management Skills Development Seminar

Saturday, May 13, 2000
8:00 AM – 5:00 PM

Space is Limited – Register Early

The career paths of most engineers include management responsibilities. ASME has developed a seminar to enhance your management skills. Whether you are an experienced manager who desires to enhance your management skills, an engineer who desires to move into management or a student who desires to do a better job of preparing for a professional career, this seminar is for you. This seminar will be facilitated by an experienced engineering manager.

In this seminar, you will learn skills in time management, delegation, communications, motivation, and will discuss leadership principles, team development and evaluation. You will learn where your time is going, and how to make certain that your activities are in line with the results to be achieved. You will learn to sharpen listening and speaking skills, to improve writing skills, and to conduct effective meetings. The latest motivational theories will be explored as well as learning what makes subordinates “tick” and gaining knowledge in sensitivity to human needs, a skill so necessary in a good manager. In this seminar you will explore the problem of how to be “democratic” in your relations with subordinates and at the same time maintain the necessary authority and control in the organization. You will also learn how to do an economic analysis of your company and the principles of total quality management.

A certificate for eight Professional Development Hours (PDH's) or 0.8 Continuing Education Units (CEU's) will be given to each participant.

To gain maximum benefit from this seminar you must spend about 16 hours in study/preparation with the seminar workbook before the seminar meeting.

- Location:** The Energy Technology Resource Center (ETRC)
3650 Spectrum Boulevard, Suite 100
Tampa, Florida (on the USF Campus)
- Cost:** \$60 for Members, \$70 for Non-Members, \$40 for Students.
Price includes the ASME Management Skills Development Program Workbook and lunch.
- Registration:** Send name, company, address, and telephone number with check to:

Carl Riddlemoser
503 Jeanal Place
Tampa, Florida 33612

Make check payable to the Florida West Coast Section – ASME.

For more information contact Carl Riddlemoser at (813) 932-7332 or (813) 626-4646 x15

Course sponsored by the Florida West Coast Section, American Society of Mechanical Engineers (ASME).



Southcon^a/2000 Tradeshow and Conference

May 23-25, 2000
Orlando EXPO Center
Orlando, FL USA

The Southeast's Largest Component Technology Event Returns to Orlando!

The Year 2000 marks Southcon's 20th Anniversary as the Southeast's largest component technology event for electronic systems design and OEM engineers and professionals. On May 23-25, 2000, the Orlando Expo Center will be the site of Southcon 2000 – "One Stop Solutions".

Centrally located in Orlando, FL, our three-day tradeshow and conference (over 25 Short Courses and Workshops scheduled) will provide "One-Stop Solutions" for the hundreds of Southeast companies associated with OEM design, testing, and manufacturing of electronic products. Industry focus includes Laser, Optical, Medical, Communication, Transportation, Aerospace and Research.

<u>Orlando EXPO Center</u>	<u>Show Hours</u>	<u>Conference Hours</u>
May 23, 2000	10am – 5pm	9am – 5pm
May 24, 2000	10am – 5pm	9am – 5pm
May 25, 2000	10am – 3pm	9am – 5pm

What's New:

- Electric Vehicle Exhibit
- Robot Exhibition
- Welcome Reception, Wednesday, May 24th
- Eight (8) Short Courses and Workshops sponsored by National Association of Purchasing Management

Advanced registration information for the tradeshow and conference is available on our web site at www.southcon.com.

Southcon is co-sponsored by the **Electronics Representatives Association (ERA)**, Florida/Sunshine Chapter and the **Institute of Electrical and Electronics Engineers (IEEE)**, Region 3 and Florida Council.

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and Region 3, Florida Council, IEEE



Brain Teaser Challenge Column

by Butch Shadwell

April BTC Solution

The part of my anatomy that was injured in the roller skating incident (in the vicinity of the gluteous maximus) has recovered sufficiently that my memory of the 8th grade is much improved. Unfortunately, I'm not sure my readers are in as good a condition, since I have received no answers to the last BTC as I am writing this answer column. This is unusual.

Of course the circular projectiles that Mr. Kosinski used to impress us young electrical devotees, were made of aluminum. The iron rod was magnetically biased by a coil wrapped around one end with AC power from the mains applied. The propulsion of the ring was supplied by counter EMF (Electro-Motive Force) induced into the ring as a movable shorted secondary winding of a transformer. Kids, if you try this at home, make sure your parents supervise this experiment.

May BTC

As we are in the middle of our national census, I am very interested to find out how well read this column is. I won't be able to direct any more federal entitlement money toward the respondents, but I can guarantee everyone that responds that they will have 15 minutes of good luck sometime in the next ten years. My web page hit counter is currently 1099. I usually get only a few hits a week. If you will be so kind as to browse my site (<http://www.ccse.net/~butchs/>), my counter will give me an idea of the reader activity. Please don't feel obliged to actually read anything on the site, I really appreciate your just popping in for the purpose of the census. (In case you are concerned, I get no revenue based on hit counts. I have no paying advertisers.)

I just realized that the above request bares some resemblance to one of those chain letters that promises good fortune of you don't break the chain and dire consequences for those who do. This reminds me of a tale I once heard about a distance cousin of mine, who lives in Bihar, a province in central India. Bob was looking to supplement his regular two dollars a day salary he earned at a corner cow wash. In spite of his meager income, at home Bob was master of his Apple Power PC and had a T1 pipe to the internet. To help with his income problem Bob planned to start a web site that featured unclothed cattle in suggestive poses. Since Bob had been "borrowing" his access to a T1 circuit from a nearby office building, he had to use a switch to move the connections at the demarcation point from the office CSU/DSU to his own. The question is, would this switch be a SPST, DPDT, DP4T, or a 4PDT? To complete the original reference, Bob was going to use a chain email to get the word out about his hot new site.

If you'd like to give your professional life a boost, come to Southcon 2000 in Orlando, May 23-25. For the last 18 years Southcon has been the foremost electronics show in the southeast. I am one of the IEEE members on the board of directors for Southcon and will be on the floor throughout the entire show. If you'd like to say hi, or even offer some advice on what to do with the BTC, just ask any staff member to tell you where to go ... to find me, that is.

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/>).


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May 2000 Calendar of Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2 <i>EXCOM Meeting TECO Data Center 6:00 PM Guests Welcome</i>	3 <i>Joint ASME & PE/IA Meeting Tour of Chiller Plant, Ybor City At 6PM</i>	4	5	6
7 <i>I&CPS 2000 Technical Conference May 7-11, 2000</i>	8 <i>I&CPS 2000 Technical Conference May 7-11, 2000</i>	9 <i>MTT/AP/ED Meeting Raytheon Systems Company, St. Pete at 6PM</i>	10 <i>I&CPS 2000 Technical Conference May 7-11, 2000</i>	11 <i>I&CPS 2000 Technical Conference May 7-11, 2000</i>	12 <i>Material Due for Next Month's SIGNAL</i>	13 <i>ASME Management Skills Developmt Seminar at USF ETRC 8AM-5PM</i>
14	15 <i>Joint ISA & PES/IAS Meeting Sheraton Inn Four Points Hotel @ 5:45PM</i>	16	17	18	19	20
21	22	23 <i>Southcon2000 Orlando EXPO Center May 23-25, 2000 10 AM – 5 PM</i>	24 <i>Southcon2000 Orlando EXPO Center May 23-25, 2000 10 AM – 5 PM</i>	25 <i>Southcon2000 Orlando EXPO Center May 23-25, 2000 10 AM – 5 PM</i>	26	27
28	29	30	31 <i>Joint PE/IA & ASME Meeting Bay Harbor Inn 6PM Social 7PM Dinner</i>			

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