

THE

SUNCOAST



IEEE

SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

<http://ewh.ieee.org/r3/floridawc>

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June 2003

Substation Protection and Integration Concepts and Implementation Seminar

Sponsored by the Florida Electric Cooperatives Association and the Power Engineering Society

Speaker: David Denison, P.E. Engineering Fellow
Tampa Electric Company

Date: June 12, 2003

Time: Registration and continental breakfast 8:00 AM – 8:30 AM
Seminar 8:30 AM – 3:00 PM with a one hour break for lunch (not provided)

Location: Adams Mark Hotel, 430 S. Gulfview Blvd., Clearwater Beach
(727) 443-5714

Registration: Register on-line at http://www.ewh.ieee.org/r3/floridawc/pes_titles.html
Registration is limited to 40 participants.

Cost: Members \$95, Non-members \$125 (Prices were incorrectly listed in May Signal)
Company name, attendee's name & PE license number must be provided along with payment

Registration must be paid in advance. Send checks payable to FECA to:

Raymond G. Trusik
Florida Electric Cooperatives Association, Inc.
2916 Apalachee Parkway
Tallahassee, FL 32301



For more information please contact Art Nordlinger 813-630-6203 or email a.nordlinger@tecoenergy.com

Five professional development hours will be awarded for completion of the seminar. Florida Provider Number EXP00015

Directions to hotel: Take I-75 or I-4 to I-275 to Memorial Hwy/ State Road 60 West. Take SR60 west across the Courtney Campbell Causeway, through Clearwater and across the Memorial Causeway. At the circle or roundabout take the 3rd exit onto Coronado Blvd., turn right on S. Gulfview Blvd. Follow S. Gulfview Blvd. along the beach for 1/2 mile. Hotel is on the right.

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Chair's Comment

By John Conrad

I am very pleased that our Executive Committee (EXCOM) meetings are very well attended these days. We had 24 attendees at the last meeting, including about six students for which we are especially appreciative.

We are encouraged when any of members take an interest in the Section activities but we are particularly satisfied when our young student engineers take the time to learn about the background organization and hard work that is involved in putting on all the section/chapter meetings, conferences, seminars etc. I remember how I was blown away the first time that I heard a discussion about a conference that would be held in Tampa four-years in the future. But that sort of long-term vision is necessary to bring conferences to Tampa Bay and maintain the vibrancy of our section. We try and keep the EXCOM meetings light hearted and not too long-winded and we do provide free food, so come along and see your membership dues in action. We promise that we will not pressure you to take a position on a committee!! Sign up on our website.

I was shocked – yes, shocked – last week when Quang told me that he will no longer produce the Suncoast Signal after the September edition. Quang has done a wonderful job producing a high quality newsletter month after month. The Suncoast Signal is held up as a benchmark for newsletters in Region 3 and beyond the region at headquarters in Piscataway. The Florida West Coast Section has been very fortunate in having such a dedicated and talented newsletter editor for so many years (He took on the job in 1997 from Mark McKeage.) but Quang has decided that it is time for him to hand over the responsibility to another volunteer.

This is a tough act to follow but I hope you will not be intimidated by Quang's high standards. We need a replacement. Do you have desktop publishing skills? Do you want to make a major contribution to your IEEE Section? Then give me a call or send an e-mail so that we can add your name to a short-list of candidates for this highly prestigious, but poorly paid, position.

"A life spent making mistakes is not only more honorable, but more useful than a life spent doing nothing."

George Bernard Shaw



Double-Header



MTT/AP/ED Chapter Meeting



DATE/TIME: Tuesday, June 17, 2003, 6:00pm – 7:00pm

LOCATION: TRAK Microwave Corporation
4726 Eisenhower Blvd., Tampa
For driving directions, contact Shawn O'Brien

A Planar Spiral Balun Applied To a Miniature Stochastic Dipole Antenna

SPEAKER: Mr. Kenneth O'Connor, Raytheon, St. Petersburg, FL

ABSTRACT: A planar spiral balun was developed and fabricated with a stochastic dipole antenna [1] showing a tip-to-tip size reduction of 42% compared to a straight dipole antenna. The desired size reduction of the antenna was achieved through the application of a robust optimization procedure based on genetic algorithms [1,2]. Agilent's Advanced Design System Momentum® Engine, a moment-method-based solver was used as the balun design tool. The antenna and balun are completely integrated, avoiding the cost and poor performance of more common hybrid (chip & board) techniques. Two separate integrated dipole elements with baluns were constructed; a straight dipole and a miniature genetically optimized stochastic dipole. One-port S-parameter measurements are shown for each design and radiation patterns are shown for the stochastic dipole thereby providing validation for the balun design.

BIOGRAPHY: Mr. Kenneth O'Connor is a Microwave Engineer at Raytheon Network Centric Systems, St. Petersburg, Florida. He received the Bachelor of Science degree in Electrical Engineering from the University of South Florida in 2001. While at USF, he worked in the area of chip resistor, inductor, and capacitor modeling. Since joining Raytheon in 2001, Ken has designed these GPS baluns, a C-band edge-coupled bandpass filter, coupler, and microstrip to stripline transition, as well as a Ka band edge-coupled bandpass filter. He serves as a Vice-Chair of the MTT/AP/ED Chapter of the IEEE Florida West Coast Section.

A Novel Meandered, Coupled-Line Band-Pass Filter

SPEAKER: Mr. Perry Vincent, Raytheon, St. Petersburg, FL

ABSTRACT: This paper presents a new technology for implementing parallel-coupled line filters with suppression of pass-band harmonics. The meandered line design suppresses pass-band harmonics by using numerous bends and angles to equalize the phase velocities of the odd and even mode field distributions that occur in conventional straight-coupled line filters.

BIOGRAPHY: Mr. Perry Vincent holds bachelor degrees in Mathematics, Electrical Engineering and Math Education from the University of South Florida. Mr. Vincent has 6 years experience in teaching advance placement Calculus and 2 years Antenna/ RF design at Raytheon, St. Petersburg. During that time Perry has designed and built microwave filters and couplers, developed and tested GPS antennas, and modeled satellite systems. Mr. Vincent currently has 1 patent pending.

PLEASE RSVP: Leave name & country of citizenship with Shawn O'Brien at (727) 302 3493 e-mail: shawn_k_obrien@ieee.org Appetizers will be provided by TRAK Microwave during the presentation.

Tour of the Raymond James Stadium

Presented by PES/IAS Chapter

Date/Time: Wednesday June 18, 2003, 4:00pm – 6:00pm

Speakers: Howard Marsh, Jim Duffy and Jack Hawe

Reservations: http://www.ewh.ieee.org/r3floridawc/pes_titles.html or
Call Ghaff Khazami at (813) 960 0990, E-mail gkhazami@ieee.org

Power Engineering Society Chapter of IEEE FWCS invites you to a tour of Raymond James Stadium which is one of the top Stadium facilities in the country, right here in our back yard. During the tour you will see the power distribution system and find out about the designed, control system and monitoring systems of HVAC, lighting, locker room and more...

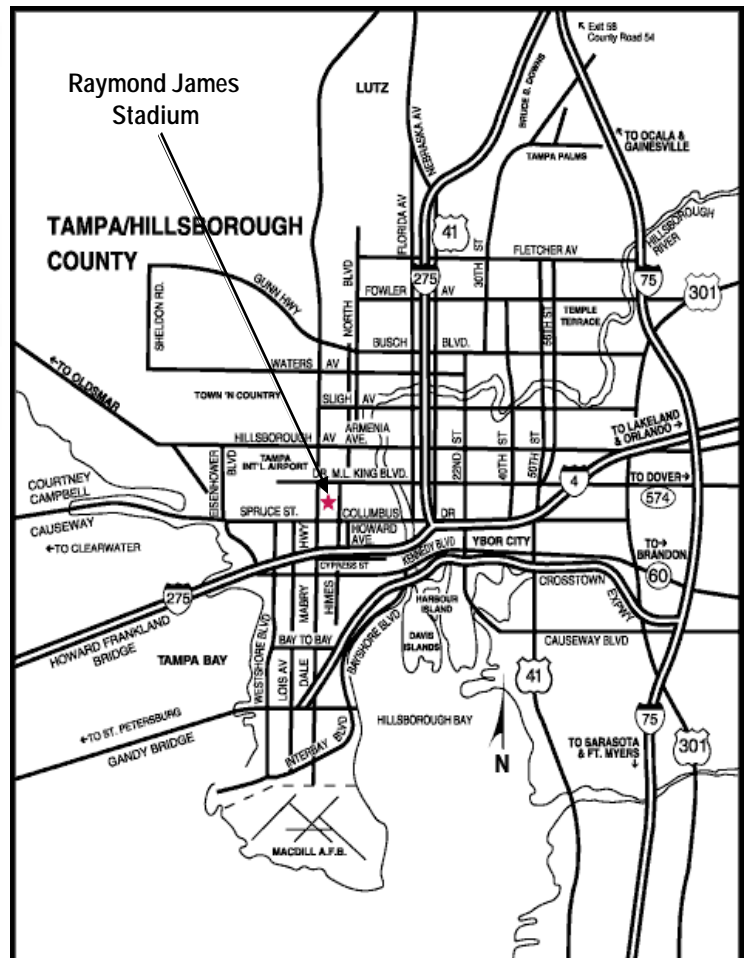
Speakers: Mr. Jim Duffy is Systems Operations Manager of the stadium with over 18 years of experience with TSA, Tropicana and Disney.

Mr. Howard Marsh is an Electrical Engineer from Tampa Electric department of engineering and design. Mr. Marsh was involved in design of the utility side of the electrical service to RJ stadium.

Mr. Jack Howe is the Chief electrician at RJ stadium. He will go over the stadium's electrical system and controls.

Directions: From I-275 take Dale Mabry exit and head north until you see the stadium on your right. Go to gate B from Himes Ave. to TSA office and conference room.

RAYMOND JAMES STADIUM



IEEE Florida West Coast Section GOLD

presents

Behind the Screen at MOSI IMAX

A Tour of MOSI's IMAX® Dome Theater
Followed by a **DOUBLE FEATURE!**

Date: Tuesday, June 24, 2003
Time: 6:00PM
Place: MOSI, 4801 E. Fowler Avenue, Tampa, FL 33617
Admission: Cost of IMAX Double Feature
Adults: \$9.25
Children: \$6 (age 2 – 12), under 2 is free
RSVP: Dennis Trask at d.trask@ieee.org or 727-773-4685

Bring the whole family out for fun and education as MOSI takes you behind the screen and in the projection booth on a tour of their IMAX *Dome* Theater. Then, enjoy a double-feature showing of two great IMAX films!

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For more information on MOSI and the MOSI IMAX *Dome* Theater, logon and go to <http://www.mosi.org>, or call MOSI at 813-987-6100.

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VINNY™

The NASA Center for Distance Learning in cooperation with Christopher Newport University and Institute of Electrical and Electronic Engineers (IEEE) announce the VINNY™ award. Named in honor of Leonard da Vinci, a man famous for the creative use of science, technology, engineering, and mathematics to solve human problems, designed to help heighten and increase awareness of science, technology, engineering, and mathematics (STEM). VINNY is a global video competition. Registration is now open to K-12 (pre-college) teachers and students worldwide.

VINNY can be used to supplement curricula and support commonly recognized standards of learning. The competition challenges teams, made up of three students and one teacher, to identify and research a global problem and discover ways that STEM can be used to help solve it. The final product to be submitted for judging is a one-minute video explaining the global problem and a possible STEM solution. Submissions can be made in six categories:

- Grade level: elementary grades 3-5, middle grades 6-8, and high grades 9-12, and
- Two languages: English and Spanish.

Prizes and recognition for schools, students, and teachers will be awarded in each of the six categories. In addition to the prizes and recognition, winning one-minute videos will be exhibited on the NASA's Kids Science News Network™ (NASA's KSNN™) web site. Competition explanation, rules, and registration information is available on the web at <http://vinny.pcs.cnu.edu>. Registration deadline is October 31, 2003.

Funding for the VINNY is provided by the Institute of Electrical and Electronics Engineers Foundation. The IEEE is a non-profit, technical professional association of more than 377,000 individual members in 150 countries. Through its members, the IEEE is a leading authority in technical areas ranging from computer engineering, biomedical technology and telecommunications, to electric power, aerospace and consumer electronics, among others. Information on the IEEE Foundation can be found at www.ieee.org.

For VINNY registration and guidelines, visit <http://vinny.pcs.cnu.edu>. For NASA Center for Distance Learning information, visit <http://dlcenter.nasa.gov> or contact Harla Sherwood at (757) 864-5287 or h.r.sherwood@larc.nasa.gov. Information about Christopher Newport University is available at www.cnu.edu.



Student Corner

By Angela Alexander, Student Branch President

The spring semester has come to a close, and the busy summer is here. Congratulations to all the recent graduates and thank for the great showing at the Semi-Annual IEEE Senior Banquet in April. A special thanks to our sponsors, Electronic School Supplies, Honeywell, IEEE Florida West Coast Section, Tampa Electric Company, and USF's EE Department, for making such a celebration possible.

Just before the end of the semester, we held Officer Elections for the upcoming year. Here are the new Student Branch Officers:

Chairperson	Angela Alexander	angela.alexander@ieee.org
Vice-Chair	Kristy Baksh	kbaksh@eng.usf.edu
Secretary	Kristen Shipp	kshipp@eng.usf.edu
Treasurer	Lantz Critel	lcritel@helios.acomp.usf.edu
SPACs Chair	Be Nguyen-Tucker	nguyentu@eng.usf.edu
EXPO Chair	Scott Reed	skreed2@eng.usf.edu
Webmaster	Brian Dorman	bdorman@helios.acomp.usf.edu

As a kickoff of sorts for the summer, the Student Branch is hosting a barbecue at the USF Riverfront Park on Saturday, June 7, 11:00 AM – 3:00 PM. For additional information, send an email to ieee@eng.usf.edu.

Tour of Tampa Bay Water's Desalinization Plant

Date/Time: Tuesday, July 22, 2003, 11:30 A.M. Lunch and Speaker; tour will follow

Location: Meet at TECO Energy's Production Services Center, 6944 U.S. Hwy. 41 North, Apollo Beach

Cost: Members \$10, Non-members \$20, Student Members \$5

Reservations: http://www.ewh.ieee.org/r3/floridawc/pes_titles.html
For additional information, contact Art Nordlinger at 813-630-6203 or a.nordlinger@ieee.org

Important: For security reasons, all reservations must be made by July 15 and include your name and company affiliation. Space is limited so reserve early.



June 2003 Calendar of Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 <i>IEEE FWCS EXCOM Meeting at 5:30pm TECO Plaza</i>	4	5	6	7 <i>Student Branch Barbecue at Riverfront Park 11am to 3pm</i>
8	9	10	11	12 <i>IEEE/PES & FECA Seminar Substation Protection 8:00am-3:00pm</i>	13	14
15	16	17 <i>MTT/AP/ED Chapter Meeting Double-Header 6:00am-7:00pm</i>	18 <i>PES/IA Chapter - Tour of Raymond James Stadium 4:00pm-6:00pm</i>	19	20	21
22	23	24 <i>GOLD Presents Behind Screen of MOSI IMAX 6:00pm</i>	25	26	27	28
29	30					

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Or fax your address changes to (732) 562-5445