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# THE

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## *This Month's Meetings*

*Coming This May, Save the dates!*

## *INDUSTRIAL and COMMERCIAL POWER SYSTEMS TECHNICAL CONFERENCE*

# *I&CPS 2008*

## *Clearwater Beach Florida*

*May 4 - 8, 2008*

## *Sheraton Sand Key*

**FWCS members are encouraged to participate with this international group of engineers.**

These are the engineers that write the electrical power system standards for Industrial, Commercial and Health Care installations, well known as the Color Book Standards. Yes, we are also socially minded. Join us for the reception, the boat trip dinner and the awards luncheon.

Information on Registration, Technical Sessions, Tutorial and Social is on the web at:

[www.ieee.org/icps2008](http://www.ieee.org/icps2008)



More information inside this newsletter

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All material for THE SUNCOAST SIGNAL is due in electronic form by 1<sup>st</sup> Friday after the 1<sup>st</sup> Tuesday of the month preceding the issue month.

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## This Month... (Editor's Column)

I would like to thank this month's contributors for having "print ready" submissions. First is Sean Denney for the pictures of the Celebrate Engineering Banquet and the information on Teacher in Service. Jim Beall and Jim Howard sent in event information on X and X and X. Hector Martinez sent the information on the Signal Processing and Communication event for April and Tim Doolittle for his GOLD submission.

There is an event in the works between the FWCS PACE and GOLD groups to bring the IEEE Washington Lobbyist, Russell Harrison to give a presentation on how the legislative process works and how we can have an influence on policies of interest to us. It will be in May and the location has yet to be determined. When plans are finalized they will be announced in this newsletter.



**Richard E. Beatie, P.E.**  
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## IEEE's Position: Four Years Is a Good Start

The IEEE will recommend that the traditional four-year degree, such as a Bachelor of Science or of Engineering in the United States, remain the first professional degree in engineering. This position, taken by the IEEE Board of Directors at its November 2007 meeting, is in response to requests from several organizations and IEEE units that the IEEE take an official stance on what the first degree should be.

Reasons cited included not wanting to increase barriers to admission to the profession and the apparent lack of demand from employers or the public that engineers have graduate degrees when entering the workforce.

For more information on this topic, follow the link to the complete article

<http://bmsmail3.ieee.org:80/u/10740/80496549>



## State Science and Engineering Fair

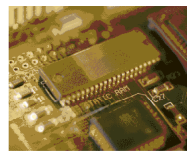
The 53<sup>rd</sup> State Science and Engineering Fair of Florida will be held at the Lakeland Center in Lakeland, Florida April 16<sup>th</sup> – 18<sup>th</sup>, 2008.

We invite you to share your professional expertise as a Judge for the State Science and Engineering Fair (SSEF) of Florida on Thursday, April 17th, 2008 at the Lakeland Center. In order to facilitate the Judging process efficiently, we need more than 400 Judges who have exemplary credentials in their area of science research.

The evaluation and recognition of student research are the most important aspects of the SSEF, and we welcome your willingness to serve. Approximately 900 outstanding student science research projects will be entered in one of two Sections of the SSEF: Senior (9-12 grades) and Junior (6-8 grades). Students will compete for Place Awards, Special Awards, Scholarship Awards, Opportunity Awards, and Grand Awards. Each project will be placed into one of 14 Categories established in each Section:

### REGISTER for JUDGING

by going to our website [www.floridassef.net](http://www.floridassef.net) to register online. You will receive a confirmation for Judging and several updates as the time nears for Judging. Please mark your calendar.



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## Training on NFPA 70E-2004 Electrical Safety in the Workplace

- Date:** Friday April 4, 2008
- Time:** Registration & Breakfast: 7:15AM-8:00AM  
Seminar: 8:00AM – 4:00PM
- Speaker:** John Leedy, P.E., President, LEEDY ELECTRIC CORP.  
Member, IEEE
- Location:** Lakeland Center, Room: Hollingsworth A  
701 West Lime Street, Lakeland, FL 33815  
[http://www.thelakelandcenter.com/h\\_aboutus/directions.asp](http://www.thelakelandcenter.com/h_aboutus/directions.asp)
- Cost:** \$250 Members, \$300 Non-Members (Non-Members interested will receive a membership in IEEE) , \$100 Students. Includes Breakfast, Lunch, & Seminar text, “NFPA 70E – Standard for Electrical Safety in the Workplace” (a \$50 value)
- PDH Credits:** Eight (8) professional development hours will be awarded. Be sure to enter your name and PE number on the signup website as it appears on your license. Florida exempt provider #0003849.
- RSVP:** Online at <http://time2meet.com/fwcs-pes3/index.html>  
Make checks payable to: Leedy Electric  
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520 Prairie Industrial PKWY  
Mulberry, FL 33860  
Space limited to the first 50 registrants!
- Questions:** John Leedy at 863-425-2698 or by email at [jpleedy@leedyelectric.com](mailto:jpleedy@leedyelectric.com)  
Tom Blair at 813-228-1111, ext 34407 or [thblair@tecoenergy.com](mailto:thblair@tecoenergy.com)

## *More on the Celebrate Engineering Banquet...*

The Celebrate Engineering Banquet on February 15, 2008 was held at the A La Carte Pavilion Conference Center in Tampa. Dick Crippen, former WFLA Sportscaster and spokesman for the MLB Tampa Bay Devil Rays was the Master of Ceremonies. Mr. Amal Patel was awarded the IEEE FWCS Student Engineer of the Year before dinner. The guests enjoyed the steak or chicken dinners. Richard Wainio, Chairman of the Port of Tampa was the principle speaker. Congratulations to Mr. Eric Shelton of Sickles High School in Hillsborough County, Mrs. Andrea Carvill of Lakewood High School in Pinellas County, Mr. Luigi Galati of Hudson High School in Pasco County who each were awarded the Outstanding Science Teachers Lignell Award. A big thank you to the Science Supervisors Nancy Marsh (Hillsborough), Blythe Lodermeier (Pinellas), and Laura Hill (Pasco) whom were present to support their district's winner. The IEEE FWCS very own Tom Blair was awarded Engineer of the Year.




Lignell Award Winners Mrs. Andrea Carvill and Mr. Luigi Galati



Dr. Jim Anderson,, Mr. Amal Patel, and Dr. Paul Schnitzler



Dr. Jim Anderson and Tom Blair



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## *Teacher in Service*

I sent welcome packets to Carmen Austin of Wharton High School and the three Lignell winners to invite them to participate in the Teacher In Service Program. I request that if anyone who receives this email, please reply how the IEEE can help a science fair, Professional In Service Day, Great American teach-in or Engineer presentation.

I attended the Hillsborough Regional Science Fair on February 20th at the USF Sun Dome. The big announcement was that Nancy Marsh is retiring from being Secondary Supervisor of Hillsborough County after this school year. I thank her for being an exceptional help for the Teacher In Service Program for all these years. Wing Ying Kwong and I served on the High School Physics for the Junior and Senior classes. We were asked by Carmen Austin to judge the special IEEE award. It was our pleasure to pick Mark Parrish of Chamberlain High School. His project "A COMPREHENSIVE STUDY OF WINGTIP VORTEX CHARACTERISTICS" was well organized and presented.

Sean Denney





## Signal Processing and Communications Society Joint Meeting A Branch and Bound Approach to Multi-user Detection in Asynchronous CDMA

**Main Guest Speaker:** *Patrick H. Stanley, P.E.* – LTC Engineering Associates

Sarasota, Florida USA

**Date:** Wednesday 16 April 2008

**Time:** 6:00 pm

**Location:** University of South Florida, Building ENB, Room 109

4202 E. Fowler Ave., Tampa, FL 33620 For driving directions, contact [Hector A. Martinez](#)

**ABSTRACT:** Multi-user detection (MUD) is a technique that can be used at code-division multiple-access (CDMA) cellular base stations to improve performance in systems with a large number of users. A literature search found prior published work that has shown the relative speed and accuracy of the Branch and Bound (BBD) based fast optimal algorithm method for MUD. In this prior work, BBD was compared with several methods in synchronous CDMA transmissions over AWGN channels, and was found to lie on the “efficient frontier,” which is a convex hull of algorithms plotted on the probability of error versus computational demands axes. This work extends the BBD method for MUD in synchronous CDMA channels to asynchronous CDMA, where a noise whitening filter is employed at the output of a matched filter. This work set out to test whether the relative performance compared to other techniques found on the “efficient frontier,” including decision-feedback (DF) detection, probabilistic data association (PDA), and sphere detection (SD), holds for asynchronous channels.

**BIOGRAPHY:** PATRICK H. STANLEY, P.E. received the B.S.E.E. degree with Honors from the University of Florida in 1991, and the M.S.E.E. from the Georgia Institute of Technology in 1994. Mr. Stanley is currently a Senior Member of IEEE and works designing communication systems at LTC Engineering Associates, an engineering services company in Sarasota, FL. Prior to LTC from 1997 to 2003, Mr. Stanley designed DSL modems for Elastic Networks/Nortel Networks/Paradyne in Alpharetta, GA. During that time, Mr. Stanley was an active contributor to the ANSI T1.417 Spectrum Management for Loop Transmission Systems and IEEE 802.3ah Ethernet in the First Mile (EFM) Standards, and was appointed to the FCC NRIC5-FG3 Federal Advisory Committee on Spectrum Management. In addition, Mr. Stanley has worked at Electromagnetic Sciences (EMS) Wireless (1994-1997, Norcross, GA), Bell Northern Research (BNR) (1993, Stone Mountain, GA), and Andrew Kintec (1989-1992, Pinellas Park, FL), on telecommunications systems, spread spectrum communications and location systems, GPS location systems, electronic countermeasures, and servo control systems.

**SECOND GUEST SPEAKER:** *Dr. Shri Goyal*, – College of Technology and Management  
St. Petersburg, Florida USA

**ABSTRACT:** Membership Relations Council, ComSoc has made major strides in expanding membership services and connecting with the members and taking the services worldwide. Our current key membership programs include:

1. Chapter Funding: All ComSoc Chapters are entitled to receive chapter funding. Distinguished Lecturer Program: ComSoc identifies exceptional speakers from around the world and timely topics and arranges visits to different countries and regions by engaging the local chapters.
2. Membership Development Support Grant (MDSG): The grant is an organizational and financial vehicle to support membership development activities across ComSoc regions.
3. IndustryNow Program: In this program, a special relationship between ComSoc and key corporations is developed through special membership packages.
4. Recognizing the excellent work of Chapters through the Chapter Awards: We have Chapter Achievement Awards (CAA) and Chapter of the Year (CoY) Awards in place.
5. Leverage Sister Society Relationships: A number of our chapters are located in countries having ComSoc Sister Societies. This may provide an opportunity to do more joint activities and further spread the word about the value of ComSoc to engineers in these communities.

**BIOGRAPHY:** Shri Goyal received his Ph.D. in Electrical Engineering from North Carolina State University. Since 2001, he is serving as the Dean, College of Technology & Management in St. Petersburg, FL. Previously he was Director, Technology Programs at GTE/Verizon Laboratories. Shri has 30 plus years experience spanning R&D, management, operations and engineering of wire-line and wireless networks/services. He has published extensively and was Guest Editor of several IEEE publications. An IEEE Fellow, a member of the Board of Governors, ComSoc, he is serving as the Director of Membership Program Development.



# **HIGHLIGHTS**

## ***I&CPS Technical Conference***

***May 4-8 Sheraton Sand Key***

***Clearwater Beach***

**Sunday evening** starting at 6 pm the Conference Reception will be by the pool with cash bar. After the reception our long time friend and supporter Cooper Industries is hosting a Dessert Reception.

All day **Monday** there are Committee, Subcommittee and Working Group meetings. The subject of these meetings is the standards written by this group of engineers. You are invited to join any of these meetings. The primary work at the moment is the reorganization of the Color Book Standards into a new format.

## **Technical Sessions**

### **Tuesday 8 AM – 12 noon**

- **Session 1** Power Systems Engineering Maintenance - Operation - Safety.
- **Session 2** Power Systems Protection

### **Tuesday 1 PM – 5 PM**

- **Session 3** Power Systems Engineering Power Quality
- **Session 4** Energy Systems

### **Wednesday 8 AM – 12 noon**

- **Session 5** Power Systems Engineering Reliability
- **Session 6** Power Systems Protection

### **Wednesday 2 PM – 5 PM**

- **Session 7** Power Systems Engineering Analysis
- **Session 8** Energy Systems

Each session contains three or four papers, with time for questions and discussion.

## **Tutorial**

On Thursday May 8 there is an all day tutorial on changes to the National Electric Code. While it is part of the conference, it may be registered for without registering for the conference.

## **Social Activities**

Tuesday Evening there is a Boat trip with Dinner aboard the Starlite Princess traveling along the Inland Waterway and with the weather cooperating a great sunset. Wednesday noon is the annual Awards luncheon with Prize Paper Awards and other Honors.

## **Spouse-Companion Activities**

There is a continental breakfast for the spouse-companions on Monday, Tuesday and Wednesday mornings. Other activities include a tour of the Vatican Splendors at the International Museum in St. Petersburg on Monday and Lunch Wednesday at the Historic Columbia Restaurant in Tampa's Ybor City. Registration for these events is available through the Web Page. Tuesday is a day of leisure on the beach or local shopping using the Trolley.

For more details and registration information see the web site at [www.ieee.org/icps2008](http://www.ieee.org/icps2008)



## *IEEE.tv Launches New Series Addressing Environmental Concerns*

25 February – IEEE.tv has produced an “Energy Innovations” series of programs that explore how solar, renewable and coal energy are being implemented to meet growing energy needs.

All three videos in the Energy Innovations series will be available free to the viewing public. The first program, “The Hydrogen House,” profiles Mike Stritzki, an engineer who designed and built a house run entirely by solar energy. “The Hydrogen House,” can currently be viewed at <http://www.ieee.org/ieeetv>. The other programs in the series will be added at a later date.

Full descriptions of the upcoming programs appear below:

- **“Solar Goes Small”** – profiles an American group building a solar panel manufacturing plant in Cardiff, Wales. This plant will be the first facility that makes renewable energy products using only renewable energy. In addition to generating power from “traditional” solar sources, the panels made in the Cardiff facility will also generate power from indoor lighting and moonlight.
- **“Schwartz Pump: Re-imagining Coal Power”** – outlines the anticipated coal depletion and the steps being taken to maximize the current reserves. Located near the Polish/Czech border in former East Germany, the Schwartz Pump is a massive power plant with boilers over 160 meters high. A new plant is under construction which will generate efficient, nearly clean power from coal, the first power plant to attempt such a feat.



## *Planning for the Future GOLD Meetings*

**Date:** 6:30pm, Wednesday, April 30, 2008

**Speaker:** HR professional on career advice

**Location:** Champs Americana, at the International Mall between Capital Grille and the Food Court

**Cost:** \$15 per member, \$20 per non-member

**RSVP:** Required

Online at: <http://time2meet.com/fwcs-meetings/> (GOLD section, Select Reservations)

Space limited to the first 25 registrants!!!

**Questions:** Timothy M Doolittle - [tdoolittle@tmdvault.fastmail.fm](mailto:tdoolittle@tmdvault.fastmail.fm)

**Your local GOLD (Graduates of the Last Decade) Chapter is hosting this meeting to plan for your future and the future of your GOLD Chapter. Join us for a great discussion and presentation. Friends, spouses, etc. are all invited to this most unique opportunity.**



**April 2008 Calendar of Events (For more information see P. 1) *inside this Signal...***

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	1	2	3	4 <i>NFPA 70E-2004 Training [p. 3].</i>	5
6	7	8	9	10	11	12
13	14	15	16 <i>Signal Processing Meeting [p. 5]</i> <i>State Science and Engineering Fair, Lakeland [P.3]</i>	17	18	19
20	21	22	23	24	25	26
27	28	29	30 <i>GOLD Meeting, [p.7]</i>	1	2	3

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