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**THE
SUNCOAST
SIGNAL**

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

IEEE

**Inside This
Signal...**

Page 2
*SP/Comm Presents
Kemet Design Tools

Page 3
* IEEE-USA's Free E-
Books to Members

* July Free E-Book

Page 4
* Are You and IEEE
Senior Members?

* Miscellaneous
Chapters
Announcements

Page 5
*Engineering Projects
In Community Service

Page 6
*Joint ISA / IEEE
Meeting – Variable
Speed Applications

*SP/Comm Future
Presentation

Page 7
*Advertising Section

*FWCS PES Utility
USERS Group Meeting

Page 8
*Calendar

This Month's Meetings
Tuesday, August 5: EXCOM Meeting
Meeting starts at 5:30PM At TECO Plaza
Register online at <http://time2meet.com/fwcs-excom/index.html>
Open to all FWCS Members

SP/Comm Presents Kemet Design Tools
[Details on page 2](#)

IEEE-USA's Free E-Books to Members - August Free E-Book
[Details on page 3](#)

Are You an IEEE Senior Member?
Miscellaneous Chapters Announcements
[Details on page 4](#)

Engineering Projects In Community Service
[Details on page 5](#)

Joint ISA / IEEE Meeting – Variable Speed Drive Applications
SP/Comm Future Presentation - Recent Advances in Speaker Recognition
[Details on page 6](#)

FWCS PES UTILITY USERS GROUP MEETING
[Details on page 7](#)

Calendar
[Details on page 8](#)

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SP/Comm Presents Kemet Design Tools

Topic: Kemet Design Tools

Date: Tuesday August 26th, 6 PM

Location: Largo STAR Center Corner of Bryan Dairy and Belcher
7887 Bryan Dairy Road Largo, FL 33777

Abstract:

- Spice Overview
- FIT Calculator
- Advantages/Disadvantages of Tantalum Polymer in various applications:
<http://www.kemet.com/Tantalum%20Capacitors>
- High reliability, better voltage derating, high voltage capability, etc. Kemet will combine a couple of examples of this technology using the Spice application to compare it with other capacitor technologies as Ceramic or Tantalum MnO₂.

Speaker: Hector Nieves –

Four years of Experience as an FAE in capacitor technology with KEMET Electronics Corp.

Ten years of electronics industry experience with previous positions at UDP Technology, L3 Communications and GE Industrial Systems.

BS Degree in Electrical Engineering from Purdue University and pursuing a MS Degree in Engineering Management from the University of South Florida in Tampa, FL.

Organizer: For more specific information please contact: Chris Lambrecht. E-mail: chris.lambrecht@ieee.org, Phone: 727-458-9061

Cost is \$2 for IEEE Member and \$4 for Non Members.

Food and beverages will be provided.

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

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IEEE-USA will offer "Leading and Managing Engineering and Technology – Book 1: Perspectives on Leading and Managing" free to IEEE members in July.

Author and IEEE Life Fellow Gerard H. "Gus" Gaynor writes that the competencies needed to lead and manage continue to be misunderstood. As a society, he says, we focus on leadership demonstrated by politicians, industry executives and individual effort related to some major accomplishment.

"Perspectives on Leading and Managing" takes a step beyond the usual focus on leadership to explore the following questions:

- * Are leading and managing different, the same or complementary?
- * Is it possible to lead without managing?
- * Is it possible to manage without leading?
- * Does the technical professional have a greater role in leading and managing?

"Leading and Managing Engineering and Technology, Book 1: Perspectives on Leading and Managing" can be downloaded at

<http://www.ieeeusa.org/communications/ebooks/files/jul14/28vniz3/Leading-and-Managing-Engineering-and-Technology-Book-1.pdf> for free to IEEE members. The nonmember cost is \$9.99

To purchase IEEE member-only products, and to receive the member discount on eligible products, you must log in with your IEEE Web account.

August Free E-Book

In August, IEEE-USA will offer "Survivor Planning: What Every Spouse Should Know," by the late George F. McClure.

In this practical reference, McClure urges readers "not to leave your family in the dark, digging to find important documents and information. Life has to go on after a spouse, partner, or parent passes away. Dealing with the myriad of decision processes immediately following a death in the family is a confusing ordeal."

"Survivor Planning" gives guidance in advance planning, retirement benefits, wills, living trusts and finances. It also has a checklist that will help you organize all the important information you will need and Websites where you can find additional assistance.

This e-book will be available free to members in August.



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Are You an IEEE Senior Member?

If not, you need to know that for many of you it is very easy to attain that grade.

But why should you seek Senior Member? Recognition: The professional recognition of your peers for technical and professional excellence. And this is valuable on your résumé.

From the IEEE site to be eligible for this grade candidate must:

- be engineers, scientists, educators, technical executives, or originators in IEEE-designated fields;
- have experience reflecting professional maturity;
- have been in professional practice for at least ten years;
- show significant performance over a period of at least five of their years in professional practice.

The Florida West Coast Section leadership will help you; and for more information check the IEEE website at http://www.ieee.org/membership_services/membership/grade_elevation.html or contact Paul Schnitzler at paulschn@ieee.org

IEEE Robotics & Automation Society, FWCS Section

“Learn, Do, Teach”

You are invited to the Monthly Meeting of the IEEE Florida West Coast Section of the (RAS) Robotics and Automation Society. It is every third Tuesday at 6:30pm at the location below under normal conditions.

Location: DeVry University at 5540 W. Executive Drive, Tampa, FL, 33609

Room: 210

Date: August 19, 2014

Time: 6:30pm to 8:30pm

TOPICS: Ken Fiallos will discuss the Florida Robotics Alliance Project for the Fall 2014. This year’s Robotic Competition with BizBots Competition will be announced.

All STEM Directors encouraged to Attend!

Please join us for exciting evenings of discussions on local robotics and how we can help schools throughout the Florida West Coast



Computer Society September Meeting

Also, keeping fair and balanced, in September (Date not set yet), the Computer Society will offer Cisco's response presentation to Software Defined Networks, a presentation that Dr. Jim Anderson presented in May of this year. The topic will be **Next Generation Networks, SDN and ACI**. Date will be set in July for this meeting



PROFESSIONAL STUDY DAYS 2014-2015:

Attention Science Supervisors of each county, please send the dates and locations for the Professional Study Days for the summer to Sean Denny (venner20@aol.com) immediately, please? Each and every High School, Middle School, or Elementary School Science Supervisor is encouraged to look for STEM Lesson Plans on www.tryengineering.org. An electrical engineer can do one or two 50 minute sessions based on the Lesson Plan of a topic you feel meet the needs of the teachers. For example, if your Professional Study Day is in August, I need this information by July. Please also forward to me, the dates for the Regional & State Science or STEM Fairs coming up for the 2014-2015 School Year.



Engineering Projects In Community Service

The Engineering Projects In Community Service - in - IEEE (EPICS-in-IEEE) is a social innovation initiative. This initiative, in its fifth year, will empower IEEE members to work with community organizations and high school students on community service-related engineering projects with the objective to increase student interest in pursuing an engineering-related career path. We now have fifty such projects running in IEEE sections all over the world and are currently seeking proposals for additional projects.

The EPICS-in-IEEE program is looking for applications for project funding. Each project must involve IEEE volunteers (e.g., student branch, Young Professional, section, affinity group) working with a local community based organization. Outreach and mentoring of local high school students on project related activities is also encouraged. Projects may address local community service needs such as access & abilities, education & outreach, environment, and human services. Typical awards use IEEE funding for project related supplies (as opposed to personnel costs) with award amounts in the \$5-10k USD range. Past successful projects included the 2010 “Poverty Reduction and Environmental Conservation Through Solar Powered Solutions” project in Uganda at Kyambogo University. Twelve students from the university partnered with local non-profit organization LOG’EL Project, and high school students from Agha Khan High School, to design, build and install environmentally friendly solar powered phone chargers and charging controllers for low income communities.

2011 project “Humanitarian Computing Local Solutions For The Visually Impaired,” was approved at the National Institute of Technology, Karnataka, Surathkal, in the Bangalore section of India. Twenty-one university students produced seven different education tools that were aimed at making learning fun for the visually impaired. Overall, they developed seven programs, which are still accessed today at the Roman & Catherine Lobo School For The Blind, and have since expanded to be used in five additional institutes.

In 2012, the University of Cape Town project “Modelling and Installation of Solar Water Geyser + Photovoltaic Power Generation at Emasithandane Children’s Home in Nyanga” was approved. Seven graduate students and two undergraduate university students partnered with several local non-profit organizations and high school students to build a model of a complete solar water heating system, which was installed at the children’s home. The installation of this system helped sixty people, ranging from toddlers to the elderly, to gain access to hot water and other facilities.

For further details, please view our free e-Learning tutorial:

<http://epicsinieee.ieee-elearning.org/>

The tutorial can be accessed through a free IEEE online account. If you do not have an account, you can register for free.

Visit the EPICS-in-IEEE website for an application form, examples of past and current projects, and other information:

<http://www.ieee.org/go/epics-high>

If you have any questions regarding EPICS-in-IEEE, or how to develop a project, please contact our team at epics-high@ieee.org

Regards,
Kapil R. Dandekar

EPICS-in-IEEE Initiative



Joint ISA / IEEE Meeting – Variable Speed Drive Applications

Date: Thursday, Aug 21, 2014

Time: 6PM to 7:30PM

Speaker: Tom Blair, IEEE Senior Member

Location: Big Bend Power Station
13031 Wyandotte Road, Apollo Beach, FL 33572
Space is limited to 35 attendees.

Cost: Free

Reservations: **Reservation is required.**
Please Contact Shaun Cross @ 813-228-1111, ext 48306 or by email at sfcross@tecoenergy.com to reserve a space.

This is our first joint meeting between ISA and IEEE. Our presenter will be Tom Blair with Tampa Electric Company. We will cover variable speed drive technology. In this meeting we will cover basic variable speed drive theory and applications. We will cover topics of constant torque and variable torque applications and energy saving applications. We will present several existing low and medium voltage variable speed applications and discuss lessons learned from each installation. There will be a question and answer session where attendees can bring their application questions and we can discuss those questions as a group.

Thomas H. Blair graduated from the University of South Florida, Tampa, FL in 1991 with a BSEE degree and in 2001 with a MSEE degree. He is a senior member of the IEEE. He has over 25 years of industrial and utility experience. He is currently a Fellow Engineer at Tampa Electric Company and he is a licensed Professional Engineer in the State of Florida. Thomas has worked as an adjunct professor at the University of South Florida and instructed courses in Electric Machine and Design & Energy Production Systems.



SP/Comm Future Presentation

The IEEE FWCS SP/Comm chapter is pleased to let you know that we will be conducting a meeting in September with the Student Chapter and GOLD. Dr. Sankar from USF will be giving a talk on Speaker Recognition.

Recent Advances in Speaker Recognition

Speech has been widely used as a man-machine interface in controlling or operating a system. In contrast, speaker recognition is the art of recognizing a speaker from a given database using speech as the only input. Speaker recognition has potential applications in keyless entry to secured areas or access control to a computer/smartphone, access to secure services such as online transactions, etc. Speaker accent also plays a critical role in the evaluation of biometric systems when users may be international in nature.

This talk will present a novel approach to detect speakers by introducing the concept of shifted Mel-Frequency Cepstral Coefficients (MFCC) to improve the performance of past research, where MFCC with Gaussian Mixture Model (GMM) was used. The developed speaker recognition system provided an improved performance when evaluated using a standard TIDIGIT database. The speaker recognition rate was further increased by including accent information added with pitch and higher order formants.



FWCS PES UTILITY USERS GROUP MEETING
PROTECTION MODERNIZATION
Open only to IEEE Members in Good Standing



Date: Friday, August 29, 2014
 Time: 9:00AM – 1:00PM
 Speaker: Thomas Blair, P.E., Engineering Fellow, TEC

Location: MCS Building, Big Bend Station, 13031 Wyandotte Road, Apollo Beach, FL 33572
Cost: FREE (lunch will be provided by Tampa Electric)
RSVP: Online at: <http://time2meet.com/fwcs-meetings/> (Select Reservations)
Questions: Tom Blair at 813-228-1111, ext. 48179 or tom_blair@ieee.org

Your IEEE PES West Coast Chapter is hosting the next local utility users group meeting on Friday, August 29, 2014 at the Tampa Electric Big Bend Power Station where TECO will present their work on projects to modernize the protection and control systems. This meeting will cover projects just completed on a unit at Big Bend Station where a 30 year old, 540MVA, hydrogen and water cooled generator had various protection and control systems modernized.

The excitation control system was replaced with an updated unit utilizing solid state controls, the generator protection system was updated to modern relaying, the pilot wire transfer trip system was updated, and the station service transformer protection relaying was updated. The meeting will conclude with a plant tour of the systems and equipment replaced during this latest outage.

To ensure everyone's safety, we ask that attendees wear casual clothing. No shorts are allowed onsite. We also request that attendees wear closed toed shoes (steel toed shoes are preferred). Hard hats, hearing protection, and safety glasses will be provided to attendees, but if you have this PPE, you are welcome to bring it and use it at the meeting. Please have a government issued photo ID when arriving



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

August 2014 Calendar of Events (For more information see P. 1) *inside this Signal...*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	31	1	2
3	4	5 <i>EXCOM Meeting, 5:30 TECO Plaza</i>	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21 <i>Joint ISA / IEEE Meeting – Variable Speed Drive Applications</i>	22	23
24	25	26 <i>SP/ Comm Presents Kemet Design Tools</i>	27	28 <i>PES/IAS EXCOM Village Inn - 6am</i>	29 <i>Utility PES User Group Meeting</i>	30
31	1	2	3	4	5	6