

**The Florida West Coast  
Section of the IEEE**

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Pasco, Pinellas, Polk, and  
Sarasota Counties



# THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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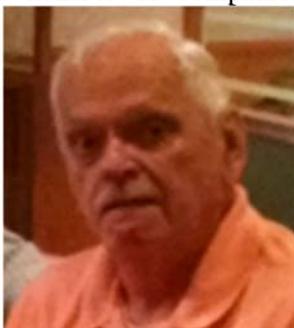
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## In Memoriam

On February 2, 2017, the Florida West Coast section lost a dear friend. John Stankowich had worked tirelessly for years as a member of the PES/IAS Executive Committee. Of the many duties John performed, he was best known as the “doorman” at meetings and seminars, logging attendance, collecting money, and greeting the attendees.

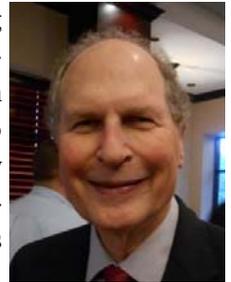
John worked for a number of companies throughout his career, including Westinghouse and Saudi Aramco. His outgoing personality, amusing stories, and devotion to the IEEE will be missed by all who knew him.



## E-Week Banquet Honors FWCS Members

The 2017 E-Week banquet was held on Thursday February 23 at TPepin’s Hospitality Centre. Among the engineers honored by various local engineering societies for their achievements at that event were three FWCS members.

Dr. Paul Schnitzler of the USF College of Engineering faculty was honored as Engineer of the Year. Paul’s career has been rich with accomplishments ranging from helping to develop the first CCD-based video camera to working on trans-Atlantic communication cables. Today he teaches in the Industrial and Management Systems engineering department at USF, where he inspires and leads the engineers of tomorrow.



Victoria Leppold was selected as Engineering Student of the Year by IEEE. Victoria serves as chair of the USF IEEE student branch, and provides direction and guidance to that group. Under her tenure, the student branch has started supporting underclassmen with student-led study sessions. Her leadership is invaluable to the student branch, which under her tenure as chair has grown in size and has increased their level of activity and visibility on campus.

Also recognized as Young Engineer of the Year was Ryan Copley. Ryan works in the Energy Supply division of Tampa Electric Company where, in addition to his “official” job duties, does volunteer work for IEEE and helps with in-house training. Ryan’s motivation and willingness to help make him an inspiration to all who work with him, particularly with the young engineers to whom he serves as an excellent role model.



## Upcoming Meetings

### EXCOM Meeting

Tuesday, March 4, 2017 5:30PM at TECO Plaza  
Register online at <http://time2meet.com/fwcs-excom/index.html>  
Open to all FWCS Members

### Nuclear Power: A Relic or the Sustainable Path Forward?

Friday, April 7, 2017 9:30AM at FRCC Headquarters  
Register online at <http://time2meet.com/fwcs-pes4/index.html>

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**Useful links:**<http://www.ieee.org/benefits> Global Benefits Finder<http://www.ieee.org/discounts> Discounts Page**PE Corner**Art Nordlinger, PE, Senior Member  
**You Renewed Your License; Now What?**

The deadline has passed for license renewal in Florida. Now what? If you are like many of us, you won't think about continuing education for another 20 or so months. And then rush to get your hours done before the next renewal deadline. However, it doesn't have to be that way. Let me suggest a few alternatives.

- You can earn double the hours by presenting a technical seminar to your peers under IEEE's continuing education program. Every one of us has an area of expertise. Sharing your knowledge with others provides personal satisfaction, as well as earning hours toward your next license renewal. Talk to me or any IEEE officer about topics that you can present and earn some hours.
- Lend your spare time to IEEE as an officer. You'll help yourself, your peers, and IEEE as a whole. And you'll earn Continuing Education Hours (CEHs) as well.
- Technology changes at an ever-increasing rate. Not just in electrical engineering, but in just about every field of engineering and science. You can get out of breath just thinking about trying to keep up with it. There are many ways to update your knowledge in your area of practice, or to branch out and learn about something new and different. You can do this through seminars offered by IEEE and other technical societies, online classes, or registering for classes at your local university or community college. Some of this may be eligible for CEHs. And some employers may reimburse you for some or all of the cost. But whether it is eligible for CEHs or not, you never know; you just might learn something new.

Mentoring a young engineer, or an engineer intern, is a very rewarding way to give back to the profession. There are many ways in which you can help our younger peers to advance in their careers. For example, you can encourage new engineers just out of school to take the FE (EIT) exam now, while the information is still somewhat fresh. Few of us know where our career paths will ultimately lead. And they don't know at this early point in their careers whether they'll need to have a PE someday or not. We all know that if you don't take the FE exam shortly after graduation, it's a pretty monumental task for most engineers to "re-learn" enough of what they learned in college to pass the test. And the thought of studying all of that material in order to pass can be daunting. To help with this, at my company we have gathered a group of engineers who didn't take the FE exam right out of school and encouraged them to study together in order to prepare to take the exam. They meet several times a week to study different topics together with the goal of taking the exam after about 12 weeks of preparation. We even bought them their review manuals. We all wish them success.

Whether you are a PE looking to attain required CEHs, or an engineer looking to learn something new or keep current with the latest trends in the profession, IEEE has seminars that will meet your needs. Better start earning those CEHs now!

## Hurricane Matthew Panel Session

You really missed a GREAT meeting, unless you were one of the 20 that attended our Hurricane Matthew Panel Session on March 17<sup>th</sup>. We received a lot of good information about what happens and what it takes to restore power after a major Hurricane.

**Lee Collins, Tampa Electric, an EMERA company,** gave an outstanding review of the logistics encountered when Tampa Electric assisted the Grand Bahamas Power Company (GBPC) in restoration. There were 4 EMERA companies and 2 contractors for a total of 275 foreign crewmen and women on the ground. There was a need for getting sufficient people with passports. Getting the equipment and material to GBPC required considerable coordination of many people and organizations. The 275 folks were on island for 38 days and had no reported injuries. Logistical issues, especially for material was an ongoing problem. This was the first-time Tampa Electric has ever gone "overseas" and due to their success, they have been informed they will do it again. Learning to deal with customs, agents and shippers was a major learning experience, including insurance and getting the equipment back. The totals for the restoration efforts are listed below:

- 2000 poles set, hundreds of thousands of feet of wire replaced/restrung,
- over 1300 transformers & 6000 insulators replaced
- 120 trucks and 275 people from off island
- 56,000 gallons of fuel, 77,500 meals, 15,000 bags of ice
- 720,000 bottles of water, 72,000 cans of soda
- 4657 hotel nights, 1649 loads of laundry
- 130 local men and women for flaggers, meal prep, etc.

**Jim Guzman, Duke Energy Florida (DEF)** Major Storm Coordinator, gave a report of restoration efforts with Hurricane Matthew. Jim reported that center of Matthew tracked just east of Florida's Atlantic coast on October 7<sup>th</sup>. Despite causing extensive damage and power outages to the eastern Florida Peninsula, Matthew never officially made landfall on the Florida Peninsula. The highest storm surge of 6.91' was recorded at Fernandina Beach, FL, severely eroding beaches and dunes. During the Distribution Overview, it was stated that 316,000 customers were restored, thanks to the 2,665 total resources. DEF provided excellent and constant communications to its customers during the restoration process. Florida customers (521,000) were contacted through outbound call campaigns.



## Lignell Winners

Also recognized at the E-Week banquet were the 2017 Lignell award winners. These prestigious awards recognize outstanding math and science teachers from west-central Florida high schools.

Branden Anglin is a proud member of the Wiregrass Ranch High School science community. Mr. Anglin's students have surpassed state and national averages on both the Advanced Placement Biology and Biology State End of Course Exam. His proudest accomplishments, though, have come in inspiring young scientists to believe they can create a positive, sustainable change in the world through independent scientific research.



Mr. James Gunnin has taught all high school mathematics courses ranging Algebra 1 through AP Statistics during his 34-year tenure at Osceola Fundamental High School. In 2007, Jim was awarded as Pinellas County Schools' High School Math Teacher of the Year. Following in 2009, he was recognized as Osceola Fundamental High School Teacher of the Year. Additionally, he served 2 terms as President of the Pinellas Council Teachers of Mathematics.



Debbie A. Hirth is a fourth year teacher of Anatomy and Physiology at Gaither High School. Prior to her start at Gaither, Gaither had four anatomy classes; the students' exam rates were near the district level ( $\pm 3\%$ ). Debbie has since built up the anatomy program at Gaither. Currently there are eight anatomy classes with the average exam rate being 19% above district average. She's won the Florida's Best and Brightest teacher award twice since its inception. She has a passion for science and has instilled it within her students.



*Continued on Page 4*

## Lignell Winners (continued)

Jason Ness is the Applied Robotics teacher at the Center for Advanced Technologies at Lakewood High School.



While teaching Physics and serving as the faculty sponsor of the extracurricular First Robotics Club, Jason saw a need for an in-school Robotics/Engineering class to reach more students. Starting with one class of 20 students, the program has grown to a four-year honors track in Applied Robotics, with seven classes and over 180 students.

Valarie Pinzon is a mathematics teacher at Dixie Hollins High School in Pinellas County. Her contributions to Pinellas County Schools include serving as a mathematics department chair, district professional development facilitator, curriculum writing team leader, textbook adoption committee lead, tutor and new teacher mentor. As a teacher, Valarie incorporates various technologies into the classroom, from facilitating mathematical discourse to investigative learning activities to small group peer teaching. She is a self-starter with a “can do” spirit.



Samantha K. Weeks is an Advanced Placement Biology and Environmental Science teacher at Boca Ciega High School. Samantha comes from a family of educators. Prior to teaching Samantha worked many years in the veterinary field which she continues during the summer months. On campus Samantha serves as the sponsor for the Science National Honor Society. Samantha serves as a head Cross Country coach and a volunteer Track and Field coach.



These outstanding teachers are essential for developing our future engineers. Chances are an excellent math or science teacher helped influence your decision to become an engineer. The FWCS is proud to be able to help recognize these exceptional teachers through the Lignell awards. Congratulations to this year’s recipients!

## Robofest Regionals

On March 11<sup>th</sup>, the *Robofest Regionals 2017* were held at Nielsen Corporation in Oldsmar. The IEEE-RAS Chapter was represented by Vice-Chair Jim Cavanaugh as a BottleSumo Judge, Former Chair Ken Fiallos as a mentor for Leto High School, and Bill Collins as judge advisor. Russell Grieshop also volunteered as a judge.

The teams in the competition were: Flying French Fries, Red Wampus, Robotic Ants, Girl Power, SHMS Team D, Biblio Bots, and Leto Robotics Omega. Rose Mack opened the ceremony at 9am. Leto High School won the first round for the Senior Division. Sean Denny introduced the coaches from Farnell High School Alicia Ponds and Robert Carr to Russell Grieshop of Middleton High School. After a Hungry Howies Pizza lunch, the second round began at 12:30pm. While the scoring was being tallied, the coaches introduced their teams and a group photo was taken.



Jim Cavanaugh reported the Exhibition Winners. Lego tech First Place: Explore Space and Second Place: Falcon One Robotics. RoboHit Winners First Place: Lego tech Girlpower and Second Place: Bibliobots. Senior division First Place: Leto Robotics Omega.



## FWCS PE/IA Outstanding Engineer Award

Your PE/IA Chapter, each year, selects an individual to receive the PES Chapters Outstanding Engineering Award. For 2016 we chose Glenn Spurlock.

Glenn Spurlock has been one of those behind-the-scenes volunteers that has always been there to help the local FWCS PE/IA Chapter.

Your PE/IA Chapter depends on these type volunteers that work behind the scenes to make sure our meetings get planned, the details are handled, and are there to support the entire organization. Without strong volunteer support, there would be no PE/IA Chapter.



*Jim Howard, Vice-Chair of the FWCS PE/IA Chapter, presents Glenn Spurlock the 2016 Outstanding Chapter Engineer Award.*

A special thanks to Glenn for all his past, current, and future help with our Chapter.

## Membership Benefits of the Computer Society and Big Data Discussion

Along with the IEEE student branch members and Computer Society student members, the IEEE Computer Society and AESS will meet to discuss the benefits of membership in the Computer Society. Additionally, an introduction and update of recent activity regarding the Big Data group underway on campus at USF will be provided.

Date: April 6, 2017 Time: 5:00 – 6:00pm  
 Location: Engineering Building ENB – Room 313  
 USF Tampa Campus  
 4202 E Fowler Ave, Tampa, FL 33620

Cost: Free

Please bring questions regarding membership in the Computer Society (student or professional), ideas for future discussion topics and any interest in the Big Data group.

Contact Jim Cavanaugh, Allen Tools, Victor Basantes, or Victoria Leppold with any questions about this upcoming meeting.

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[vbasante@mail.usf.edu](mailto:vbasante@mail.usf.edu) [victorialepp@mail.usf.edu](mailto:victorialepp@mail.usf.edu)

Because there may be limited space, register in advance:  
<https://events.vtools.ieee.org/m/43770>.

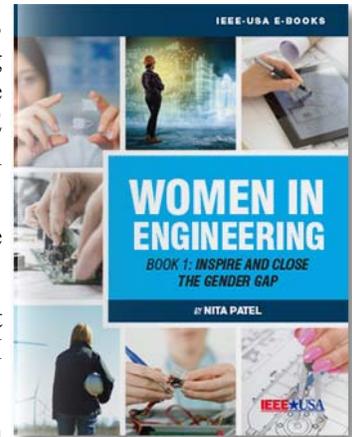
Hope to see you there!

## FREE IEEE-USA E-BOOK Explores Inspiring & Closing the Engineering Gender Gap

Women are earning a larger share of college degrees, and the demand for STEM-educated professionals has grown more than four times the rate of the U.S. labor force as a whole. Nevertheless, women's representation in STEM occupations has remained relatively flat -- or is decreasing -- worldwide.

In March, IEEE-USA E-BOOKS will offer "Women in Engineering -- Book 1: Inspire and Close the Gender Gap" free to IEEE members. In it, author Nita Patel examines the questions:

- \* How many women pursue STEM career fields?
- \* Why are more women not graduating with STEM degrees?
- \* How can we recruit and retain women in engineering?



Readers should note that data representing a global perspective on the issue of women in STEM fields is included, wherever available. Employment, education and statistical data are most readily available and detailed for the United States, so many of the statistics and trends identified pertain strictly to this country.

IEEE-USA's award-winning *Women in Engineering* e-book series has two purposes: to present a high-level overview of women in STEM fields, and to provide first-hand accounts of the professional journeys of some notable contemporary female engineers.

Now through 15 April, IEEE members can get a free download of this e-book by going to: <http://shop.ieeeusa.org/usashop/product/careers/76657>. Log in with your IEEE Web account, add the book to your cart and use promo code MARFREE17 at checkout.

### APRIL FREE E-BOOK

In April, IEEE-USA will offer "Developing Your People -- Commonsense Leadership in the Workplace -- Volume 1: Key Skills Employees Will Need," free to IEEE members.

Your people are your most important and versatile resource. They can be upgraded, renewed, rejuvenated and adapted to a wide variety of jobs. They are the most ideal resource any company can possess. Equipped with the right support, tools, information and leadership, they will make the difference in the global race for market share. Mistreat them, fail to use them effectively, demotivate them, refuse to lead them, and ignore the value of their skills -- and you risk certain failure.

		
<h2 style="color: red; margin: 0;">Nuclear Power: A Relic or the Sustainable Path Forward?</h2>		

Date: Friday, April 7, 2017

Time: Registration 9:30am—10:00am  
Meeting 10:00am—2:30pm

Location: FRCC 3000 Bayport Dr. #600  
Tampa, FL 33607

Parking: Use parking lot for Hyatt  
(North side only)

Cost: \$50 Members, \$100 Non-Members, and \$10 Students  
**Lunch Included**

4 Continuing Education Hours (CEHs) will be awarded

Speaker: **Matthew Lovitt**  
Chemistry and Environmental Manager  
Sequoyah Nuclear Plant  
Tennessee Valley Authority

RSVP: Online at: <http://time2meet.com/fwcs-pes4/index.html>  
Make checks payable to: IEEE FWCS  
Send checks to: Jim Howard, IEEE FWCS Treasurer  
3133 W. Paris Street  
Tampa, FL 33614-5964

**Space limited to the first 50 registrants!!!**

Questions: Ralph Fehr at [r.fehr@ieee.org](mailto:r.fehr@ieee.org)



Energy ranks as one of the most important geopolitical issues we face. As the world requires substantially more energy due to increased energy usage in developing countries, the ability to produce this energy while minimizing impact to the environment poses a major engineering problem. Is nuclear power part of the solution?

Mr. Matthew Lovitt from Tennessee Valley Authority, one of the nation's largest nuclear operators, will make a presentation including a brief history of nuclear power, a technical description of how nuclear reactors work, challenges to the nuclear industry, as well as an overview of career opportunities in the nuclear field.

Matt is the Chemistry Manager at Sequoyah Nuclear Plant in Soddy Daisy, Tennessee. He previously held multiple roles in the Operations Department, including onshift Senior Reactor Operator, Shift Technical Advisor, and Shift Manager.

Prior to Sequoyah and TVA, Matt served in the U.S. Navy as a Nuclear Surface Warfare Officer, performing tours onboard USS Roosevelt (DDG 80) and USS George Washington (CVN 73). He was also a Navy ROTC Instructor at the University of South Florida, where he taught naval engineering and navigation courses.

Matt's education includes a Bachelor of Science in Systems Engineering from the U.S. Naval Academy and a Master of Science in Electrical Engineering from the University of South Florida.

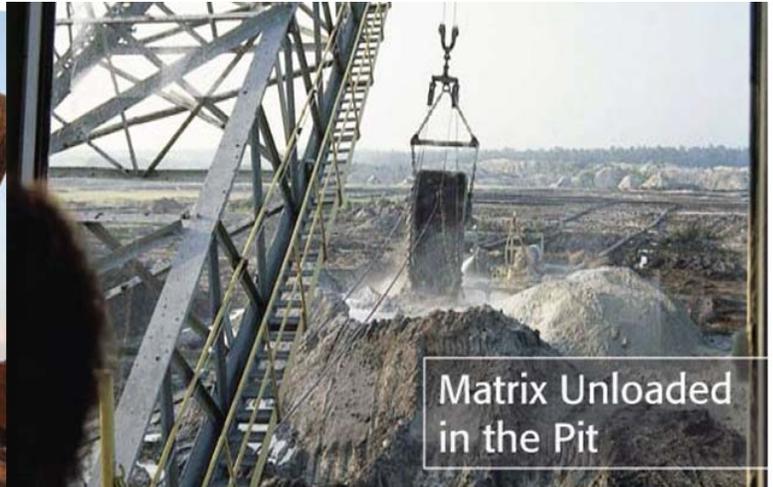
Matt and his wife Amy reside in Hixson, TN with their 3 children Carson, Stella, and Ellie.



		
<b>Mosaic Four Corners Mine Drag Line Tour</b>		

- Date: Friday, May 26th
- Time: Tour begins at 2:30 PM
- Cost: Free for Members, \$10 Non-Members and \$5 for Students
- Make checks payable to IEEE FWCS and mail a check in advance to IEEE PE/IA Chapter Treasurer:  
**Jim Howard**  
3133 W. Paris St.  
Tampa, FL 33614-5964
- Speaker: Wayne A. Pilliner | Manager Maintenance Services, CRE, CMRP, Green Belt
- Location: Mosaic Four Corners Mine; 21699 CR 39 South; Lithia, FL 33547
- RSVP: Online at: <http://time2meet.com/fwcs-pes2/index.html>  
Space limited to the first 25 registrants!!!
- Questions: Steve Antman at 863 701-4170 or [steveantman@gmail.com](mailto:steveantman@gmail.com)

Wayne has offered to lead us in a tour of an out of service drag line to enable us to get close as he explains the process. Phosphate rock is usually found 15-50 feet beneath the ground in a mixture of phosphate pebbles, sand and clay known as phosphate "matrix." The sandy layer above the matrix, called the overburden, is removed using electrically operated draglines. Equipped with large buckets, these draglines remove the overburden, placing it in the previously mined voids, and excavate the matrix, depositing it into a shallow containment area or slurry pit. There, high-pressure water guns turn the material into a watery mixture called slurry, which is sent through pipelines to a processing facility, referred to as a beneficiation plant, where phosphate rock is physically separated from the sand and clay in the matrix.



		
<h2 style="margin: 0;">FWCS PES UTILITY USERS GROUP MEETING</h2> <h2 style="margin: 0;">GENERATOR / TRANSFORMER PROTECTION</h2>		

**Date:** Friday, July 14, 2017      **Registration:** 8:00AM – 8:30AM      **Time:** 8:30AM – 3:30PM  
**Speaker:** Wayne Hartmann VP, Protection and Smart Grid Solutions Beckwith Electric  
**Location:** 13031 Wyandotte Road, Apollo Beach, FL 33572  
**CEH Credits:** 6 Continuing Education Hours (CEH) will be awarded.  
 Be sure to enter your name and PE number on the signup website as it appears on your license.  
 IEEE Florida Provider Number is 3849.  
**Cost:** \$50 Members, \$100 Non-Members, \$10 Students. Includes Breakfast, Lunch.  
**RSVP:** Online at: <http://time2meet.com/fwcs-pes2/index.html>

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**Questions:** Tom Blair at 813-228-1111, ext 48179 or [tom\\_blair@ieee.org](mailto:tom_blair@ieee.org)

Your IEEE PES West Coast Chapter Utility Users Group is meeting in July and will cover generator and transformer protection systems. The course will cover aspects of IEEE C37.102, IEEE Guide for AC Generator Protection and IEEE C37.91, IEEE Guide for Protecting Power Transformers.

Our distinguished speaker will be Mr. Wayne Hartmann VP, Protection and Smart Grid Solutions Beckwith Electric. Mr. Hartmann provides customer and industry linkage to Beckwith Electric’s solutions, contributing expertise for application engineering, training and product development. Before joining Beckwith Electric, Wayne performed in application, sales and marketing management capacities with PowerSecure, General Electric, Siemens Power T&D and Alstom T&D. During the course of Wayne's participation in the industry, his focus has been on the application of protection and control systems for electrical generation, transmission, distribution, and distributed energy resources.

Who Should attend this course? Power plant and substation protection engineers and technicians, as well as power plant operators and protection generalists who desire a deeper background on the subject of generator & transformer protection at utility generation and substation locations. Topics to be covered will be:

Generator & transformer construction and operation - Grounding and connections - IEEE standards for generator and transformer protection - Generator and power system interaction - Generator & transformer protection element review - Internal faults vs External faults - Tripping considerations and sequential tripping - Discuss tactics to improve reliability - Redundancy concepts - Lessons learned from NE Blackout (2003) - Explore Setting, Commissioning and Event Investigation Tools

## *USF Engineering Expo Impresses Thousands of Visitors*

The 45th annual USF Engineering Expo got Engineers Week off to a great start by impressing the 10,000+ visitors with displays and demonstrations from some of the area’s biggest names in engineering. The Friday event drew K-12 students from the entire west central Florida area as well as Boy Scouts, Girl Scouts, and other youth organizations. New this year was a lecture series, designed to engage future engineers and show them some of the challenges and opportunities their generation will face. The two lecture topics this year were “Engineering the Future” by Dr. Ralph Fehr and “Engineering on Mars” by Prof. Antonio Paris. The lectures were enjoyed by the youth and by their parents too.

The Chemistry and Physics shows and the “Wave Demo” by the X-Labs student organization (featuring their 10-foot tall, 2 million+ volt Tesla coil modulated to music and accompanied by a bass guitar and drum set) were crowd pleasers, as were the Electrathon car races, 3D printer demos, flight simulators, and the many, many robots that seemed to overtake the USF campus during the expo. Fun was had by all, and everybody in attendance couldn’t help but to learn something about engineering and how the field is evolving at an almost unbelievable pace. Plans are already underway for next year’s Expo. If you missed it this year, be sure to mark your calendar for 2018!



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**April 2017 Calendar of Events (For more information see P. 1) in this Signal...**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 <i>EXCOM Meeting 5:30 TECO Plaza</i>	5	6	7 <i>Nuclear Power Seminar Details P. 4</i>	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						