



THE SUNCOAST IEEE SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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

Volume 46 - No. 1

January 2003

What's New in Biomedical Engineering?

Joint Section and Life Member Chapter Meeting

- Date/Time: Thursday, Jan. 23, 2003 at 11:30 AM
- Speakers: Jim Ruggiero, Rick Snyderwine, Eric Koller, and Dave Weeden.
- Location: Sarasota Memorial Health Care Center. 5350 University Parkway, Sarasota, Florida Community Conference Room.
- RSVP: Jules Joslow @ 1-800-274-2383 or e-mail- jjoslowemi@aol.com. by January 21.
- Price: Gourmet Box Lunch \$10.00. Make checks payable to IEEE-FWCS.

Speakers:

Jim Ruggiero, Manager of Biomedical Engineering Services, at Sarasota Memorial Hospital, has assembled a group of his associates to present up-to-date information on Imaging, Surgical Robotics, and Asset Management Technologies.

Rick Snyderwine, from Siemens Medical, will discuss Diagnostic Imaging Technology. He will tell of the different types, and the trend to have filmless presentation of the scans, through computer, available anywhere.

Eric Kollar, from Sarasota Memorial Health Care Center for Advanced Surgery, will present Surgical Robotics Technology.

Dave Weeden, from Versus Technology, will tell of new technology to keep track of the location of equipment and personnel using IR and RF systems.

Directions:

Take Route 75 to Exit 213 (Old Exit 40) University Parkway. Head West on University to Honore Ave. (Second traffic light after those at the exit.). Turn Left and building is on the Left. Car pools can be arranged, please call Jules at the number listed above.



National Engineers Week®

CELEBRATE ENGINEERS WEEK BANQUET

Friday, February 7, 2003 - 5:30PM Social, 7:00PM Dinner, 8:15PM Program

A La Carte Event Pavillion - 4050 Dana Shores Dr., Tampa, FL 33634

(813) 381-5390 Website: <http://www.event-pavilion.com/>

Speaker: NASA Representative – International Space Station

Emcee: Dick Crippen, Television Personality

Seating is limited. Make your reservations today!

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Chair's Comment



Welcome to 2003. May it be a happy and prosperous year for you and your family.

After two hectic years as Section Chair, Quang Tang is stepping down from that role but will be continuing his excellent work as editor of the Suncoast Signal. I would like to thank Quang for his tremendous hard work during his term of office, and for his multitude of achievements. He has handed over a vibrant Section with a lot of organizational momentum.

Just around the corner is our annual Awards Banquet on Friday, February 7th. I urge you all to consider attending this event. It was very successful last year with about 270 attendees and this year we are holding it at the elegant A La Carte Pavilion on Dana Shores Drive, which has an even larger capacity. This is joint event with ASME and other local engineering societies and is a great opportunity to showcase the Engineering Profession in our local area.

As incoming Section Chair, I am excited about leading the Section. There are many members who regularly offer to donate their time to the Section to give something back to the profession that has rewarded them over the years. We have access to the financial resources of the Section, Region and Headquarters, so I see my role in the coming months as a facilitator to ensure that we use these valuable assets, both human and financial, to effectively enhance the professional lives of our members. I look forward to working with a highly motivated group of volunteers.

I thank you giving me this opportunity.... I hope I exceed your expectations.

John Conrad
Florida West Coast Section Chair

PES/IAS Chapter Needs Your Help!

We are planning an upcoming meeting for the PE/IA Chapter on Hybrid Cars and wanted to get the input from some of our members who have these vehicles. If you own, or have owned, one of the new production type hybrid vehicles, please contact Jim Howard, J.Howard@ieee.org or by phone (813) 876-1748.



Tour of the Pinellas County Waste to Energy Plant

Presented by PES/IAS Chapter



Date: Tuesday, January 21, 2003
Time: 12 Noon- 1:30PM
Speakers: Wayne Hefty and Steve Reinhart
Location: 3001 110th Ave North, St. Pete FL 33716
Cost: \$5 for Students, \$10 for IEEE members, \$15 for non-members
Reservations: Make reservations by calling Ghaff Khazami at (813)960-0990 or e-mail gkhazami@ieee.org

PES/IAS has scheduled a tour of the Pinellas waste to energy facility in St. Petersburg. This facility generates 75 MW from tons of waste. The plant is considered the largest in North America to provide energy from over 3000 tons of waste daily. At the facility conference room while you are lunching the speakers will provide detailed information about the energy plant then, the tour will begin. If you're traveling from Tampa, allow for 45 minutes travel time.

Speakers:

Steve Reinhart is the Operations Manager at Wheelabrator Pinellas, Inc. (WPI). He has been a part of the WPI team for 4 years with over 15 years of industry experiences. Steve is a graduate from the University of South Carolina with a BS in Mechanical Engineering.

Wayne L. Hefty is the Pinellas County Utilities Recycling Coordinator and also the Pinellas County School Recycling Coordinator. Wayne has been employed with Pinellas County since 1998. Previously he was the Director of Public Works at Indian Rocks Beach with over 20 years experiences in design and building of Parks and Playgrounds.

Directions to the Pinellas Waste to Energy Plant:

I-275 to Gandy exit - go west on Gandy Blvd. to Gateway Complex - Gandy Drive- go north 1/4 mile to right turn - follow curved road to our entrance - 110th Avenue. Turn in parking lot on the right and meet inside Plant Administration Building. Phone (727) 572-9163.

Congratulations to Our New Senior Members

Eleven of our members were elevated to Senior Members on Nov. 16, 2002 at a panel meeting held in Itasca, IL.

- | | |
|----------------------------|---|
| ▪ James M. Anderson | <i>Communications Society & Computer Society</i> |
| ▪ Timothy Bates | <i>Power Engineering Society</i> |
| ▪ Thomas H. Blair | <i>Industry Applications Society & Power Engineering Society</i> |
| ▪ Wade Carlan | |
| ▪ Alfred Dodd | |
| ▪ David Gammon | <i>Power Engineering Society</i> |
| ▪ Allen J. Honey | <i>Power Engineering Society</i> |
| ▪ Peter Lefferson | <i>Industrial Electronics Society & Instrumentation & Measurement Society</i> |
| ▪ Richard Lowrie | |
| ▪ Dennis Trask | <i>Computer Society</i> |
| ▪ Gregory Watson | <i>Engineering Management Society</i> |

Are You Unemployed?

If so, do you know that IEEE has many benefits to help you, one of which you can take advantage of right now - half priced dues - just be sure to check the box on your renewal form to take advantage of this benefit. This also applies if you are unemployed due to being forced into retirement.

Other benefits include low or no cost publications, job database access, insurance and other financial programs, information on consulting, and other resources for finding a job. Please visit <http://www.ieeeusa.org/careers/help/> for more information on IEEE-USA's resources for unemployed or at-risk IEEE members.

So we can better serve our members, please contact our Professional Activities Committee for Engineers (PACE) Chairs, Scott Haynes at (813) 994-3011 or email wshaynes@ieee.org or Richard Martino at (727) 458-9427 or email richard@richardmartino.com.

GOLD Event Focuses Students on Professional Membership

by Dennis Trask, GOLD Chairperson

On Thursday, November 28, the GOLD Chapter hosted a "Graduation Pizza Party" for students in the College of Engineering at USF. The event, which took place in the "Hall of Flags" (A.K.A "The Fish Bowl") in building ENB, was designed to raise student awareness of the IEEE professional organization. The theme for the evening was "IEEE is not just for students."

I passed out IEEE literature, professional membership applications, and quite a lot of pizza. Also, I gave away a few door prizes. The response from students was very good. Many had questions about IEEE and its benefits, both before and after graduation, which I was happy to answer.

My thanks to Panera Bread for co-sponsoring this event by providing five gift certificates to use as door prizes as well as a stack of coupons for students to take. Thanks to Domino's Pizza, as well, for helping to provide the pizza. These two sponsors, as well as IEEE Headquarters, who provided funding, made this event a success. Hopefully, IEEE will be able to serve many more new professional members as a result.

If you are a student member and would like to know more about professional membership and its benefits, please feel free to contact me at d.trask@ieee.org.

Research Experience for Teachers (RET) - A Special Opportunity for Area Companies.

The USF College of Engineering is kicking off the second year of the Research Experience for Teachers summer program for middle school and high school. The RET program matches teachers with USF engineering faculty for five weeks in the summer to provide teachers with a better understanding of how science, technology, engineering, and math (STEM) are applied in engineering research. Each teacher also develops at least two lesson plans that are posted on the USF College of Engineering web page so the benefits of the program are available to teachers throughout the area. The RET program empowers teachers to tell their students about the opportunities and challenges available to engineers based on first hand experience.

The USF College of Engineering is seeking forward-looking companies to sponsor teachers for an additional week of hands-on experience with engineers in industry during the summer of 2003. Companies participate by matching teachers with practicing engineers for one week following the teacher's five-week RET assignment at USF and by funding the addition week at a cost of \$1,000 per teacher. Interested companies can contact Dr. Carlos Smith, Associate Dean of Academic Affairs, by telephone at (813) 974-5859 or by e-mail at Csmith@eng.usf.edu.



RET 2002 Teachers and USF Faculty Advisors

CELEBRATE ENGINEERS WEEK BANQUET

Date: Friday, February 7, 2003
Time: 5:30PM Social, 7:00PM Dinner, 8:15PM Program
Location: A La Carte Event Pavillion (813) 381-5390
4050 Dana Shores Dr., Tampa, FL 33634
Website: <http://www.event-pavilion.com/>

Speaker: NASA Representative – International Space Station

Emcee: Dick Crippen, TV Personality

Awards: Engineer of the Year
Engineering Student of the Year
Teachers of the Year

Entertainment: Caricaturist, Magician, Music through out the evening

Door Prize: Given through out the evening

Ticket Prices: IEEE Members \$10.00 for one - \$25.00 for two. Non-members \$25.00 each, \$40.00 for two.

Join us for the LARGEST GATHERING of engineering professionals, companions and guests! South from Naples, North to Inverness, East to Lakeland and Winter Haven!

If you attended one of the last two year's Celebrate Engineering Banquets, you already know what an uplifting experience it was! If you haven't attended one of our banquets yet, you don't know the opportunities you have missed out on. Don't let this happen again this year!

What is the Celebrate Engineering Banquet about? Five major engineering societies in the Tampa Bay area joined forces to promote engineering awareness within our own societies and the local community, in conjunction with the promotion of National Engineers Week, co-sponsored by IEEE Florida West Coast Section and many other engineering societies during early February.

Please join us for an unforgettable and festive evening planned specially for you and your companion/spouse.

Awards to Heros:

Each society will recognize outstanding officers and members for their contributions and accomplishments in the engineering community and profession, for engineering and technical achievement. Join us in congratulating them for their accomplishments!

Kim Lignell awards will be presented to 3 outstanding teachers. This award is given annually in memoriam to Mr. Lignell, an IEEE officer who dedicated his support to promoting engineering education in the schools, to a science/math/physics teacher from Hillsborough, Pinellas and Pasco Counties. These teachers are selected by vote from their peers, and are outstanding examples of the quality of education our future engineers and scientists are receiving in high school. Again, join us in congratulating them for a job well done, and offer your individual/corporate support to help them and their peers in their educational efforts!

Guest Speaker:

Our highlighted guest speaker will be provided as a featured event by NASA, talking on the status and future direction of the International Space Station! Don't miss this presentation!



ASME International



IEEE



CELEBRATE ENGINEERS WEEK BANQUET

Entertainment:

For your most memorable experience of the year we have lined up a complement of entertainment to enhance your enjoyment of the evening! Start out with a musical serenade by local musicians to put you in the mood throughout the evening. Wander over to the caricaturist, to have your face emblazoned on canvas in a silly pose! Watch out for the strolling magician, who will undoubtedly pull a few unexpected tricks on you!

Dick Crippen, locally renowned TV sportscaster and currently spokesman for the Tampa Bay Lightning, will be our Emcee for the evening! He will not only pace the meeting, but keep us all in stitches with his stories and anecdotes, plus hand out many door prizes!

Sponsors/Vendors:

A number of vendors and sponsors have again graciously agreed to support our Celebrate Engineering Banquet. Because of their generous support, the Committee is able to provide this elegant event to our members at a significant discount (50%) over what it actually costs us to provide it to our members.

Vendors will have tables set up at the banquet. We encourage all attendees to visit their exhibits and thank sponsors personally for helping to support your Celebrate Engineering Banquet. Without their dedicated support the Committee would not be able to provide you the elegance you will experience at such an affordable and reasonable cost!

New vendors/sponsors who would like to participate in our wonderful venue should contact P.J. Crespo at pj.crespo@mech-solutions.com or Cliff Powell @ clipowell@tycoint.com. All contributions are tax deductible!

Reservations:

Reservations must be made in advance for planning purposes – no reservations taken at the door! Contact your society representative for tickets or reserve online at: <http://weiquality.com/celebrate2003>. Tickets must be purchased in advance. Eight seat tables are available for corporate reservations. Please use the mail-in reservation form below, or call Quang Tang at (813) 739-1222 or email q.tang@ieee.org for more information.

Don't Delay – Reserve Now – We Want to See You There!

<i>Return this Reservation Form to John Conrad, 19824 Wyndham Lakes Drive, Odessa, FL 33556 CELEBRATE ENGINEERING 2003 BANQUET – Friday, February 7, 2003</i>			
Name		Email	
Company Name:			
Professional Society:			
Address			
City	State	Zip Code	
Work Phone ()		Home Phone ()	
No. Tickets @ \$25 each, \$40 per couple		Amount Enclosed \$ (Check payable to IEEE-FWCS)	
Dinner Choice	Vegetarian	Prime Rib	Chicken



Philanthropy and You

Providing for loved ones and fulfilling your philanthropic goals does not have to be an “either/or” proposition. Careful planning will ensure that your loved ones will be provided for when you are gone, that your property will be distributed as you wish, and that the charities that have a special meaning to you will be supported beyond your lifetime.

By including the IEEE or the IEEE Foundation in your plans, you push the Institute to work that much harder to expand and improve educational and technological opportunities for engineering, because legacy gifts provide the future financial energy needed to shape the engineering profession. In addition, you will become a member of the legacy giving donor recognition group the *Goldsmith League*, named for Alfred N. Goldsmith and his wife Gertrude (Maude) as a special tribute for their estate gift that seeded the IEEE Foundation’s ability to invest in worthy project that impact the profession. The *Goldsmith League* honors those who have left, or shared their intention to leave, a legacy gift to the IEEE or the IEEE Foundation.

Legacy gifts come in many different shapes and sizes depending upon your needs and the needs of your loved ones. James D. Wallace, an IEEE member for 73 years, chose to remember both the IEEE Florida West Coast Section and the IEEE Life Members Committee in his will. Perhaps you want to set up a Charitable Remainder Trust to provide income for yourself and/or another with one of the charitable beneficiaries being the IEEE Foundation to support IEEE educational activities that exist in your Section. Maybe to reduce your estate tax exposure, you would like to leave a bequest in your will to support local IEEE member outreach programs or name the IEEE History Center as the beneficiary to your life insurance policy or retirement plan. Whatever your goals, the IEEE Development Office is available to help you design a gift that will fulfill your personal philanthropic goals and make certain that your legacy will make an impact on the profession.

Please consider including the IEEE or the IEEE Foundation in your plans. To request additional information or to hold a confidential discussion of giving opportunities to the IEEE and the IEEE Foundation, please contact the IEEE Development by telephone at +1 732.562.3915 or by electronic mail at supportieee@ieee.org.

2003 Review Seminars For PE Electrical and EIT/FE April 11 and 12 Examinations

Review seminars for the PE (Electrical) and Engineer In Training / Fundamentals of Engineering (EIT/FE) exams will be held: Mondays, January 27 thru March 31 for the EIT/FE Exam & Thursdays, January 30 thru April 3 for the EE Exam. Seminars are conducted from 7-10 P.M. (Monday or Thursday) for ten weeks. The registration fee is \$325 and includes text. The seminars will be held on the main USF campus in Tampa and will also be available via Internet.

To register, contact: Alan M. Keith, P.E., PO Box 14042, (EC37), St Pete, FL 33733.

Alan.Keith@pgnmail.com

Phone (727) 384-7937, FAX (727) 384-7865

Pinellas Chapter, Fla. Engineering Society



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Brain Teaser Challenge Column

By Butch Shadwell

December BTC Solution

To my surprise and delight, there were actually a couple of correct answers submitted to last months BTC. If you recall, dancing Tony was interested in the response of a nuclear/ionization type smoke detector to the sudden decompression of a room in space. In order to answer this I must review the operation of the typical ionization smoke detector. First, the sensor in one of these units is composed of two chambers with a metal partition between them. This partition normally has a tiny piece of Americium 241, a radionuclide, mounted in the center such that the flux of alpha particles it emits will ionize the air both above and below the metal partition. Next, the sensor has upper and lower electrodes that are oppositely charged so inducing a current flow through the ionized air in the sensor. With the metal partition in the center of this current path, the voltage with respect to either of the end plates is approximately $v/2$ under normal circumstances. One last important feature of this sensor is that one side of this divided chamber allows for very free airflow while the other does not. So, when smoke gets into the open side of the chamber, the particles tend to adsorb or impede the flow of ions causing a higher resistance on that side of the chamber. This produces a voltage shift at the center partition that can be measured and thus an alarm is detected.

When our space craft is decompressed, it would have a similar result in that most of the ionized air in the open side of the chamber would quickly exit. Thus, resulting in the same sort of voltage change that the unit would detect for smoke. So, even though no one may be able to hear it, the alarm would go off.

January BTC

Long ago in a galaxy far, far away, there was a pizzeria. Creatures came for light years just get one of their ground beef, mushroom and pineapple pizzas. The sauce they used was tangy and the crust was cooked to perfection.

I don't know what I was thinking with all of that "galaxy far away" and pizza stuff. Sometimes I do a piece for "Fromage dans votre Face" magazine, and I must have been thinking of that. This column is really about ice skating.

Why am I talking about ice skating? I know I sat down to do the regular IEEE Brain Teaser Challenge that has been delighting readers all over the world for the last ten years and I find myself unable to get down to business. You know I have been having trouble sleeping for some time now. They say that sleep deprivation can disrupt one's ability to concentrate. Every month I go through the same thing - What should I write about this time? Is this funny enough? Is the problem too hard or too easy?

OK, this is it. If one was programming an artificial neural net to discriminate the numerals from 0 to 9 from an optical scanner, what would be the minimum number of neurons in the output layer? This is really a trivial question for someone knowledgeable in the field of neural nets, but I suspect some of my readers may not be so inclined. I promise the answer column will be a lot more interesting than the problem has been.

Questions or comments to the Brain Teaser Challenge, please contact Butch Shadwell at 904-223-4465 (voice), 904-223-4510 (fax), b.shadwell@ieee.org (email), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328. <http://www.se.mediaone.net/~butchs/>

Accessing IEEE Technical Information Free Web Conference Coming In February

The IEEE will host a live Web Conference, "Accessing IEEE Technical Information: The IEEE Member Digital Library" on 11 February 2003 at 7:30am PST/10:30am EST, from the International Solid-State Circuits Conference in San Francisco, CA, USA. As Internet attendance is limited, IEEE sections and chapters are encouraged to invite members to central locations to view the Web Conference to allow as many members to view the presentation as possible. IEEE members and others interested in viewing the free Web conference can register at <http://www.ieee.org/ieeemdl>. For more information on the Web Conference, please contact Barbara Soifer, IEEE Sales & Marketing, at b.soifer@ieee.org or IEEE Member Services at mdlhelp@ieee.org.

January 2003 Calendar of Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7 <i>IEEE FWCS EXCOM Meeting at 5:30pm TECO Plaza</i>	8	9	10	11
12	13	14	15	16	17	18
19	20	21 <i>PES/IAS Chapter Meeting "Tour of Pinellas County Waste to Energy Plant"</i>	22	23 <i>Joint Section & Life Member Chapter Meeting "Biomedical Engineering"</i>	24	25
26	27	28	29	30	31	

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