

FOUNDED 1916



Florida  
Engineering  
Society

# BLACKLINES

*A Monthly Newsletter for Members of the  
Treasure Coast Chapter of the Florida Engineering Society*

**Volume 30, Issue 01**

**January 2015**

## 2015 Professional Engineer Legislative Days February 3-4

Hosted by the Florida Engineering Society and the Florida Institute of Consulting Engineers.

Professional Engineer Legislative Days is the foremost legislative conference for Florida's engineering industry. It offers professional engineers the opportunity to promote and defend key issues at the Capitol. During this event, you will have a chance to visit the Capitol and meet with your Florida Representatives and Senators. You will gain political allies who will produce legislative results for engineers statewide.

For a schedule of events, please click [here](#)

**Keynote Speaker Steve Crisafulli (R-51)**



Speaker Steve Crisafulli has been invited to kick off the event with a keynote presentation during the opening luncheon on Wednesday, February 4th. The agenda is still being finalized and will be made available in the next several weeks; however, the following speakers have been confirmed: [Brochure >>](#)

Eight PDHs Area of Practice credit is pending approval. Discounts are available for FES and FAPG members, students and government employees.

**Registration Fee:**

\$130 - FES/FICE Members

\$170 - Non-Member

\$50 – Legislative Reception Only

\$40 – Student

For a registration form, please click [here](#)

**Registration Deadline:**

All registrations must be received at FES/FICE headquarters by close of business (5 p.m.) on January 29.

## Calendar of Events for Upcoming Months



Jan 21-22	FICE/FDOT Mutual Gains Negotiations (Tampa)
Jan 23 or 24	TC FES Chapter Event (Event TBD)
Jan 24-28	34th Annual Water Management Conference
Feb 4-5	FES Inaugural Winter Water Seminar
Feb 6	MATHCOUNTS Competition Series

### - INSIDE THIS ISSUE -

<b>2</b>	<b>November Meeting Details &amp; Committees</b>
<b>3</b>	<b>Engineering Joke &amp; MATHCOUNTS POTM</b>
<b>4</b>	<b><u>BIG CHANGES TO CONT. ED. REQUIREMENTS</u></b>
<b>5</b>	<b><u>PDHs, Contact Info &amp; POTM Answer</u></b>



## January Meeting at a Glance...

- Who:** Treasure Coast FES
- What:** FES Bowling Night—Family Welcome
- Where:** St. Lucie West Superplay USA  
1600 NW Courtyard Circle  
Port St. Lucie, FL 34986
- When:** 1-29-2015 at 6:00 pm
- Cost:** \$10.00 per person for 2 hours, includes shoes
- RSVP:** Pat Helms [vicepresident@tcfes.org](mailto:vicepresident@tcfes.org)

### 2014-2015 Florida Engineering Society High School Graduate Scholarship Applications

Both Applications are due by February 13, 2015

It is once again time to start considering the Florida Engineering Society (FES) scholarship application process. There are two (2) scholarship applications to be filled out; 1) The 2014-2015 FES State High School Scholarship Application (found here <http://www.fleng.org/scholarships.cfm>) and 2) The Treasure Coast Chapter FES Scholarship Application (contact [secretary@tcfes.org](mailto:secretary@tcfes.org)).

FES through the State Application will grant (6) \$2,500.00 scholarships (one-time lump sum distribution) to graduating high school seniors who have a genuine interest in engineering and might need financial assistance. The deadline for submission is 2/13/2015. Please note that the FES State High School Application is in Excel format and has multiple pages shown as “tabs” in the spreadsheet. It is required that the scholarship applicants fill out the application in the Excel program format and submit the application in electronic format as per the instructions. A hard copy and a copy on a flash drive is required. Please go to <http://www.fleng.org/scholarships.cfm> for additional information.

In addition to the FES State level scholarships, the local Treasure Coast Chapter of FES will also be awarding scholarships to eligible students from Martin, St. Lucie, Okeechobee and Highlands Counties. Please contact [secretary@tcfes.org](mailto:secretary@tcfes.org) for the application. A paper copy along with the required transcript is required. The deadline for submission is 2/13/2015.

It is strongly recommended that all students/applicants fill out and submit both the FES State Scholarship Application and the Treasure Coast Chapter Scholarship Application.

## COMMITTEE CHAIRS

FES is a member driven organization. Our volunteers steer the Society in the best direction. Ideas and programs are created at the committee level and impact the organization at each level. Becoming part of a FES committee is very simple and rewarding.

We have several new volunteers, however, we still need a few more. For further details on a specific committee, or if you are interested in volunteering for any of these committees, please contact Patrick Helms, PE at [vicepresident@tcfes.org](mailto:vicepresident@tcfes.org).

In addition, please thank your fellow members who are volunteering their time to make a difference.

### COMMITTEE CHAIRPERSONS

- Annual Meeting Steering – Kelly Cranford, PE
- Awards – Craig Dunkelberger, PE
- Charter & Bylaws – Adam Schildmeier, PE
- Communications Advisory – Kelly Cranford, PE & Adam Schildmeier, PE
- Conservation & Env. Quality – Richard Creech, PE.
- Constructed Environment – Richard Creech, PE
- Energy – Jo-Ann Clynch
- Ethical Practices – Will Cornelius, PE & Allen Bottorff, PE
- Golf Tournament – Pat Ferland, PE
- K-12 Education – Adam Schildmeier, PE & Jennifer Gent, PE
- Leadership Advisory – Steve Gaydosh Jr., PE
- MathCOUNTS – Kathleen Edgemon, PE
- MathCOUNTS – Chad Rucks, PE
- Membership Development – Pat Ferland, PE
- Philanthropy – Will Cornelius, PE
- Prof. Concerns – Steve Gaydosh Jr., PE
- Prof. Development – Marcos Montes De Oca, PE
- Project LTW Co-Chair— Adam Schildmeier, PE
- Scholarship Co-Chair – Paul Bangs, PE
- Scholarship Co-Chair - Sue Zheng, PE, PhD
- Student Prof. Development – **VACANT**
- Webmaster - Adam Schildmeier, PE

### CHAPTER LIAISON REPRESENTATIVES

- Engineers in Government - Heath Stocton, PE
- Engineers in Construction - Paul Bangs, PE
- Engineers in Education - **VACANT**
- Engineers in Industry - Marcos Montes De Oca, PE
- Engineers Retired - **VACANT**

## MATHCOUNTS PROBLEM OF THE MONTH: O, CHRISTMAS TREE

Although, Franklin Pierce, the 14th U.S. President, originally brought the Christmas tree tradition to the White House, it was Calvin Coolidge, the 30th U.S. President, who, in 1923, started the National Christmas Tree Lighting Ceremony now held every year on the White House lawn. This past week, President Obama and his family continued that tradition by lighting a tree on the White House lawn. And speaking of trees, try to solve the following Christmas tree-themed problem.

In the U.S., there are about 450,000 acres in production for growing Christmas trees. If each acre provides the daily oxygen requirements of 18 people, how many acres of Christmas trees would need to be in production to provide enough oxygen for all 316 million Americans? Express your answer to the nearest whole number.

**Can't figure it out?** Find the Answer on Page 5!

## Engineering Joke of the Month

### Engineer's Diet

We all know that it takes 1 calorie to heat 1 gram of water 1 degree Celsius. Translated into meaningful terms, this means that if you eat a very cold dessert (generally consisting of water in large part), the natural processes which raise the consumed dessert to body temperature during the digestive cycle literally sucks the calories out of the only available source, your body fat. For example, a dessert served and eaten near 0 degrees C (32.2 deg.F) will in a short time be raised to the normal body temperature of 37 degrees C (98.6 deg. F). For each gram of dessert eaten, that process takes approximately 37 calories as stated above. The average dessert portion is 6 oz, or 168 grams. Therefore, by operation of thermodynamic law, 6,216 calories ( $1 \text{ cal./gm/deg.} \times 37 \text{ deg.} \times 168 \text{ gms}$ ) are extracted from body fat as the dessert's temperature is normalized. Allowing for the 1,200 latent calories in the dessert, the net calorie loss is approximately 5,000 calories. Obviously, the more cold dessert you eat, the better off you are and the faster you will lose weight, if that is your goal.

This process works equally well when drinking very cold beer in frosted glasses. Each ounce of beer contains 16 latent calories, but extracts 1,036 calories (6,216 cal. per 6 oz. portion) in the temperature normalizing process. Thus the net calorie loss per ounce of beer is 1,020 calories. It doesn't take a rocket scientist to calculate that 12,240 calories ( $12\text{oz.} \times 1,020 \text{ cal./oz.}$ ) are extracted from the body in the process of drinking a can of beer. Frozen desserts, e.g., ice cream, are even more beneficial, since it takes 83 cal./gm to melt them (i.e., raise them to 0 deg. C) and an additional 37 cal./gm to further raise them to body temperature. The results here are really remarkable, and it beats running hands down.

Unfortunately, for those who eat pizza as an excuse to drink beer, pizza (loaded with latent calories and served above body temperature) induces an opposite effect. But, thankfully, as the astute reader should have already reasoned, the obvious solution is to drink a lot of beer with pizza, and follow up immediately with large bowls of ice cream.

We should all be thin very soon if we adhere religiously to this cold pizza, cold beer and ice cream diet.

House Bill 713 was signed into law by Governor Scott in June 2014. Among other rather minor changes, a huge change has been made to our continuing education requirements. The changes are summarized as follows:

Licensed professional engineers are currently required to obtain eight continuing education course hours every two years in order to renew their licenses. Of the eight hours, four hours are required to be on the laws and rules of professional engineers. The bill requires 18 continuing education course hours in order for licensed professional engineers to renew their licenses. Of the 18 hours, one must relate to the laws and rules of professional engineers, one must relate to professional ethics, and four must relate to the licensee's area of practice. The remaining hours may relate to any topic pertinent to the practice of engineering. Four hours of the continuing education course hours may be obtained by being an officer for a professional or technical engineering society, or serving as a member of the Legislature or as an elected state or local official. This portion of the bill becomes effective March 1, 2015.

These continuing education requirements will not become effective until our next renewal cycle. A full copy of HB 713 can be found [here](#).

## **JOB OPENINGS**

**Indian River County—Sr. Engineering Inspector** <http://www.ircgov.com/Departments/Human Resources/Jobs/4172.pdf>

**Description:** Performs technical work in engineering analysis and design, oversees roadway construction projects, and supervises support staff. This is a professional position, working under the general direction of the Roadway Production Manager. **Minimum requirements:** Bachelor's degree in civil engineering or equivalent plus progressively responsible experience in professional engineering work. Must be a registered FL Professional Engineer (PE) or obtain PE registration within 1 year from hire date. Most possess thorough knowledge of the principals and practices of civil engineering as applied to the design, construction and maintenance of public works facilities.

If you would like to have a job posted here please provide necessary information to Colt Schwerdt at [secretary@tcfes.org](mailto:secretary@tcfes.org)

## **MEMBERSHIP NEWS**

### **Just for YOU**

FES is always working to increase benefits offered to members, and to make sure members are aware of their benefits. Below are just three of the benefits available to FES/NSPE members, and we encourage you to visit [www.fleng.org/membership.cfm](http://www.fleng.org/membership.cfm) for more information.

As an FES/NSPE member you are eligible for a \$20,000 scholarship to pursue a Corporate MBA degree with the Florida International University. That is almost half the cost of tuition, and available to you as an FES member.

Your FES/NSPE membership entitles you to a number of discounts on a wide variety of publications, standard contract documents, and other services. Make sure to visit NSPE's Benefits pages at [www.nspe.org/MemberBenefits/benefitpartners.html](http://www.nspe.org/MemberBenefits/benefitpartners.html) for more information and a complete listing of member benefit partners.

As an FES member you can connect with over 470 FES members throughout the state in the 'Members of FES' group on LinkedIn.

Have an idea? If you think of a benefit or service that you would like to see available to FES members, please don't hesitate to contact your Member Services Department at 850-224-7121 or email Anne Wilson, Member Services Coordinator at [awilson@fleng.org](mailto:awilson@fleng.org).

**Forward the online FES Membership application or FES Brochure to a friend or colleague today:**

[www.fleng.org/membership-app.cfm](http://www.fleng.org/membership-app.cfm)

[http://www.fleng.org/images/aboutFES/FES\\_Membership\\_Brochure.pdf](http://www.fleng.org/images/aboutFES/FES_Membership_Brochure.pdf)

***BIG CHANGES TO CONTINUING EDUCATION REQUIREMENTS***

## Professional Development Hours (PDHs)

Date	Event	Location	PDHs	Cost
At Your Leisure	The Project Management Professional	Online/DVD	4 PDHs	\$75 FES/FICE Members, \$99 All Others <i>For more information visit <a href="http://www.fleng.org/distancelearning.cfm">http://www.fleng.org/distancelearning.cfm</a></i>
February 2, 2015	One Stop PDH Shop—Tallahassee	Four Points by Sheraton Tallahassee Downtown	4 PDHs Laws & Rules, and 4 PDHs AOP	Varies depending upon participation & registration date. <i>For more information visit <a href="http://www.fleng.org/seminars.cfm?event_id=632">http://www.fleng.org/seminars.cfm?event_id=632</a></i>

Please visit [www.fleng.org](http://www.fleng.org) for the latest listing of continuing education programs.

<http://www.fleng.org/seminars.cfm>



**Please visit our website!**  
<http://www.tcfes.org>

**Send your comments and suggestions about our website or Facebook page to**



### Questions or Comments?

If you have any questions/comments, or if you would like something included in the monthly publication, please contact Colt Schwerdt at (772) 380-3635 or [secretary@tcfes.org](mailto:secretary@tcfes.org)

#### 2014 — 2015 Treasure Coast Chapter Board Members

Dan Zrallack, P.E., President (772) 878-0072 [president@tcfes.org](mailto:president@tcfes.org)  
 Patrick Helms, P.E., Vice President (561) 718-0899 [vicepresident@tcfes.org](mailto:vicepresident@tcfes.org)  
 Heath Stocton, P.E., Treasurer (772) 370-8203 [treasurer@tcfes.org](mailto:treasurer@tcfes.org)  
 Colt Schwerdt, P.E., Secretary (772) 380-3635 [secretary@tcfes.org](mailto:secretary@tcfes.org)  
 Marcos Montes De Oca, P.E., Regional Vice President (863) 634-2131 [regionalvp@tcfes.org](mailto:regionalvp@tcfes.org)  
 Sue Zheng, PhD, P.E., Past-President (772) 343-9787 [pastpresident@tcfes.org](mailto:pastpresident@tcfes.org)  
 Adam Schildmeier, P.E. State Director (561) 398-6090 [statedirector@tcfes.org](mailto:statedirector@tcfes.org)

**TREASURE COAST CHAPTER**  
 Chartered 1987  
**FLORIDA ENGINEERING SOCIETY**  
 Affiliated with  
**NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS**  
**P.O. BOX 8764, PORT ST. LUCIE, FL 34985**



At 18 people per acre, the number of acres of Christmas trees needed to provide enough oxygen for 316 million Americans is 316,000,000 ÷ 18 ≈ 17,555,556 acres.