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PRESIDENT'S MESSAGE

By Devon E. Seal, P.E. / FCC President



I hope you all had a Happy Holiday season. We are kicking off the New Year with some new events. This month we will be participating in a joint event with the *Central Ohio Code Officials Association*. This will give us all an opportunity to learn more

about their organization and how the Ohio Code affects our practice as engineers. See the program information below for more details. I also welcome you to bring your families for our *Family Fun Bowling Event* on January 29, 2012. No previous experience is required!

The 2012 *Imagine Engineering* second grade coloring contest is in full swing. We have more schools signed up than ever this year and need volunteers to visit the

schools and talk to second graders about what engineers do (we don't just drive trains!). I participated last year and the experience was really rewarding. It was amazing how inquisitive the students were about engineering. This is really an easy way to "pay it forward" to the next generation of engineers. If you are interested in participating, please contact Nick McCullough, the Imagine Engineering Chairman at nick.mccullough@kleingers.com or 614-882-4311.

February brings Engineer's Week and our annual *Engineer for a Day* (EFAD). We are still looking for volunteer host companies for EFAD, so if you are interested in hosting some future engineers, contact Michael Akpan, the EFAD chairman at michakpan@yahoo.com for more information.

COCOA/FCC-OSPE Joint Meeting

DATE: Monday, January 23, 2012

PLACE: Ohio Department of Commerce
Board of Building Standards
6606 Tussing Road
Reynoldsburg, OH 43068

TIME: 11:00 am to 1:00 pm

SPEAKER: Robert Schutz, P.E., P.S.

A pizza and beverage lunch will follow the seminar while both COCOA and OSPE present information on their organizations followed by a question and answer session.

REGISTRATION: Register at www.cocoaonline.org

COST: \$5.00

PROGRAM: "Chapter 1 of the Ohio Building Code" - This is the administrative portion of the code that governs how building departments must be run.

What is COCOA? – Briefly, the Central Ohio Code Officials Association, COCOA, was established over 20 years ago to primarily educate its members. COCOA is a chapter of the International Code Council which publishes the nationally adopted international codes, adopted in Ohio. COCOA is also a chapter of the Ohio Building Officials Association. Many FCC/OSPE members already interact directly or indirectly with COCOA members. This joint meeting will allow individuals in our organization to get better acquainted with COCOA members.

A certificate for 1 hour of Professional Development for attending the program will be received.

HIGHLIGHT THE INTEREST GROUPS: PEHE

This month's highlighted interest group (previously known as Practice Division) is the Professional Engineers in Higher Education, PEHE. The mission of the PEHE interest group of the National Society of Professional Engineers (NSPE) is to advance public welfare and safety through service to faculty, students, and practicing professionals by promoting the teaching of engineering principles, knowledge and skills pertinent to engineering practice consistent with the highest quality of practice and ethical standards, professional licensing and the professional, social, and economic interests of students, faculty, and the NSPE membership. Visit nspe.org for additional information.

The PEHE Practice Division has a select group of universities and colleges that participate in the Sustaining University Program (SUP). The purpose of this program is to:

- * Track state-level legislative initiatives on behalf of engineering education and communicate actionable information to engineering societies, engineering colleges, and state and national policymakers.
- * Provide guidance to individual states on ways to organize their own education initiatives, to conduct statewide studies, compile and package the data, and contact state legislators.
- * Develop workshops aimed at exploring emerging areas of concern among engineering educators.
- * Prepare publications to address engineering education issues.
- * Encourage licensure of engineering faculty members.
- * Support programs of benefit to the entire engineering education community.
- * Overall, participants of the SUP program will be strengthening the PEHE interest group to maintain an active liaison, on the state and national level, between the larger engineering community—represented by the 45,000 members of NSPE—and engineering educators.

The following colleges and universities are part of SUP in Ohio: Air Force Institute of Technology at Wright Patterson Air Force Base, Case Western Reserve University, Cedarville College, Miami University, Ohio Northern University, The Ohio State University, Ohio University, University of Akron, University of Cincinnati, University of Dayton, University of Toledo, and Wright State University.

For additional information on SUP, please e-mail the NSPE Practice Division Manager, Marcia Prichard at mprichard@nspe.org.

The current PEHE Trustee for the Franklin County Chapter is OSU Professor Halil Sezen, P.E. Please contact Halil (sezen.1@osu.edu) if you desire any additional information about this interest group.

Awards Nominations Needed

Nominations are being accepted for five OSPE awards. Contact your local Chapter Awards chairperson, Tina Sutermeister, at 614-718-3795 or email: tina.sutermeister@alcatel-lucent.com. The deadline for submitting nominations to OSPE is February 1st so, don't hesitate, contact Tina immediately.

OSPE Citation – This is the highest honor that OSPE bestows upon an engineer. This award is presented annually to an Ohio Engineer with distinguished leadership in the engineering profession and in appreciation of selfless devotion to the highest ideals of service to society and to fellow man; and for sustained contributions to the technical and professional aspects of the engineering professions.

Meritorious Service Award – This award is presented on the basis of service to OSPE at both the Chapter and the state levels and for outstanding contributions to the goals and objectives of OSPE. The award recipient shall be an active member in his/her Chapter and the emphasis is placed on service over a period of time.

Outstanding Engineering Student Award – This award is presented to an engineering student from an ABET-accredited Ohio engineering school based on scholastic achievement, participation in professional, technical, and other activities.

Outstanding Engineering Educator Award – This award is presented to a member of the engineering faculty of an ABET-accredited engineering program in an Ohio school and the educator shall have at least 5 years of experience subsequent to graduation from an accredited Engineering school and must be teaching an engineering course during the current term.

Outstanding Engineering Achievement Award – This award is presented in recognition for outstanding engineering accomplishments in manufacturing, construction or design, or combinations thereof. The nominated project must have been completed during the calendar year preceding the award presentation; project may be located outside the chapter geographical area.

Back to the The Future Engineer

by Leon Winget

Two years ago, I started a series on the Future Engineer. As professional engineers, we must help mentor the young engineer and even the future young engineer. The items I would like to concentrate at this time are the gadgets that will be available as auxiliary tools in the immediate future. Now for you old timers, you remember the "slide rule" which we engineering nerds wore on our belts dangling down a good 14 inches. (Or maybe not.) Thus with this background, it does not take an engineering nerd to realize that many of the gadgets of today will become obsolete in the near future. How about the end of this decade? At the turn of the last decade (2000-09), the fad at the nerd stores, was the MP3 players and netbooks. You mean you have not purchase one as of yet?! Oops, they are already passé as they have been replaced by the smartphones and tablets.

Some of the gadgets you may rely on most now (or not) will have gone by the way of the dinosaur. Like all, you may be able to find them in niche stores of artifacts, but they will not be produced in large quantities. For instance, the standalone GPS device may not last much longer, analysts say. The TomTom or the Garmin may not be sold in stores as the mobile phones probably will have that capability.

Although the e-reader is rather new, it has undergone significant changes. (Have you used one?) The attached keyboard has been replaced by the touch screen. At the present time, it is being integrated into a hybrid tablet, and some are predicting the market for e-readers will go by the way of the dodo bird by the end of this decade. The tablet may supplant the e-reader similar to the way the smartphone is replacing the iPod. (I guess I have waited too long to buy my iPod.) In addition the tablet should take on the e-reader function of handling magazine, newspaper and books.

The smartphone will likely displace the phones of the day, feature phones, cell phones, etc. One columnist predicts that the smartphone will have 80% of the market by 2015 and almost the entire market by 2018. Of course this depends on how in-expensive the smartphones can be manufactured, although, the major source of income is from the "service" and not the price of the phone.

Low-end digital cameras may soon be displaced by the iPhone 4S, with 8-megapixel. DVD players are being phased out by Blu-ray, except for us diehards. The concept of viewing a movie on a disk in a DVD player will eventually seem old-hat as us old timers playing music on the 78 RPM record players (I still have mine.) For you youngsters, the

78 preceded the 45 RPM which preceded the 33 RPM players.

And, using CDs as a medium for distribution of content will soon go, as the streaming options for music, movies and our engineering data will overwhelm. Of course, a lot will depend on the development of secured systems.

In other words, the world is changing at a very fast pace. The tools of the engineer at the office or the field will also be changing at a very rapid rate. As mentors to upcoming engineers, we PE's must keep up with the "new".

My thanks go to the Wall Street Journal for their article on the changing technology.

OSPE Family Event

Bring the family and join us at the Columbus Square Bowling Palace for Bowling on January 29, 2012 at 1:00 pm for some bowling fun.



Bowling is \$4.00 per game per person. (Cost includes bowling shoes.) Call the chapter at 470-4170 or email registration information to OSPEFCC@aol.com by Jan 25, 2012. Please include your name and phone number, and the number of people attending so that we reserve enough lanes for everyone.

The Columbus Square Bowling Palace is located at 5747 Forest Hills Blvd., Columbus Ohio 43231



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Engineer for a Day, 2012

The “Engineer for a Day” program is organized for high school students who have an interest in learning about careers in engineering. The program takes place during National Engineers Week in February. The students get to spend a day as a guest of an engineering company to gain first-hand knowledge of the role of an engineer. This gives the students (high school juniors and seniors) a real world exposure to a possible future career as an engineer. The activities for the day of the program are to help the student learn – what do engineers do, what are the engineering activities of the company (engineering business and products), what field of engineering discipline is involved, and what are the challenges the engineer faces on a daily basis? Though these students are first discovered by their high school math and science teachers, a first-hand interaction with an engineer in the field could be the primary factor determining the career path of these kids.

The program has enjoyed tremendous support from many companies and organizations including, City of Columbus, Ohio Department of Transportation, American Electric Power, Franklin County Engineer’s Office, MS Consultants, Emerson Network Power. These companies have been very supportive of the program for the past five years and we appreciate and value their continued support at molding the future engineer. We have also had support from other companies which we cannot list here for lack of space, but we pray they continue to support us in our effort to shape the future engineer – we are sure the kids will not forget

these host companies’ efforts to give back to the engineering community. The program has also changed over the years, as we now prefer that students have a means of transportation to and from their host companies. Host companies can pick up their guest students at school and drop off after the event but many companies prefer the student to be dropped off, or have a means of transportation to their premises by the school or guardian.

Schools have been very supportive, too! They know and identify the students with special math and science skill first, then shape them along a career path. The students follow up and choose an engineering discipline of their choice. Our special thanks to Hilliard Darby HS, Westerville South HS, Bishop Ready HS, Bishop Watterson HS, Dublin Coffman HS, Columbus Downtown HS, Grove City HS, New Albany HS and others too many to mention . They have continued to provide guest students for the program and their unflinching support is appreciated.

The past few years have not been very easy for the program, but past experiences have shown that with support from parents, schools, and the host companies we will produce the engineers of our dream – able to compete with other professional in the larger society, but we need to discover the talent in them early before other professional paths grab them. This is what will make the founding fathers of the engineering profession proud. And the more quality engineers we can produce the better will be our society.

VOLUNTEERS NEEDED FOR MATHCOUNTS

It is again that time of year when we need volunteers for our MATHCOUNTS programs. MATHCOUNTS is now in its 29th year. With the cooperation of the National Society of Professional Engineers and the MATHCOUNTS Organization, MATHCOUNTS inspires excellence, confidence and curiosity in middle school students through fun and challenging math programs. MATHCOUNTS is active in all 50 states, Washington DC, the U.S. territories and U.S. citizens in Europe and Asia, through the State Department and the Department of Defense.

With the generous support of the many MATHCOUNTS sponsors and volunteers, and the leadership of the National Society of Professional Engineers at the local and state levels, MATHCOUNTS is providing today’s students with the foundation for success in science, technology, engineering and mathematics careers.

MATHCOUNTS is one of the country’s largest and most successful education partnerships involving volunteers,

educators, industry sponsors and students. President Barack Obama and former Presidents George W. Bush, William J. Clinton, George H.W. Bush and Ronald W. Reagan have all recognized MATHCOUNTS in White House ceremonies. The MATHCOUNTS program has also received two White House citations as an outstanding private sector initiative. Particularly exciting for our Mathletes® were the hour-long ESPN programs on each of the National Competitions from 2003-2005. In 2011 the National Competition returned to ESPN with a live broadcast on ESPN3.

The local regional competition will be held at Columbus State Community College on February 18th and the State competition at the same location on March 10th. You can contact Joe Bolzenius at (joseph.bolzenius@hotmail.com) for the local regional competition and Tina Sutermeister at (Sutermeister@alcatel-lucent.com) for the State competition. Your volunteer help is needed and is greatly appreciated.

Engineers Week Luncheon

Save the Date!

2012 Central Ohio Engineers Week Luncheon

Thursday, February 23rd

The Bridgewater Conference Center 10561 Sawmill Parkway Powell, Ohio 43065

11:30 AM Registration 12:00 Noon Luncheon

\$25 Early Bird Registration* \$35 Late Registration (depending on availability, walk-ins may not be accepted) Students FREE - Bring Your Resume! *Registration begins January 9. Register by February 9 to get your early-bird discount! Register online at <http://ohio.apwa.net/events/8509/>. Payment in advance via credit or debit cards strongly encouraged.

The keynote speaker will be Bryan Palaszewski NASA John H. Glenn Research Center. Come hear Mr. Palaszewski highlight the impacts NASA has made on to the average US citizen.

Bryan has worked at the NASA Glenn Research Center at Lewis Field since 1989 and is currently directing research on high performance propellants and atmospheric entry. He currently leads work related to human Mars entry, descent, and landing (EDL) where rocket deceleration is planned for the final descent to the planet's surface. He is also investigating outer planet atmospheres and the challenges and benefits of mining them for future space missions.

A recent focus of his research is in nanoparticle metal additives for gelled liquid fuels, and solid hydrogen for atomic propellants. For six years, Bryan led many studies of advanced space systems for orbital and interplanetary travel at the Jet Propulsion Laboratory, Pasadena, CA.

He was also the lead propulsion subsystem engineer on the Ocean Topography Experiment (TOPEX) for three years, as well as being involved in other flight projects such as the Galileo Mission to Jupiter and the Cassini Mission to Saturn.

Bryan holds a Master of Science Degree in Mechanical Engineering from the Massachusetts Institute of Technology and a Bachelors Degree in Mechanical Engineering from the City College of New York.



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2012 CALENDAR

Jan. 10	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
Jan. 15	9:00 p.m.	<u>Deadline for Feb. Columbus Engineer</u> (articles to Tim McCarthy)
Jan. 23	11:00 a.m.	Joint COCOA/FCC-OSPE Meeting- Ohio Dept. of Commerce (see page 1)
Jan 29	1:00 p.m.	OSPE Family Event - Bowling (see page 3)
Feb. 7	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
Feb. 15	9:00 p.m.	<u>Deadline for Mar. Columbus Engineer</u> (articles to Tim McCarthy)
Feb. 18		MathCounts at Columbus State Community College (see page 4)
Feb. 22		Engineer for a Day program (see page 4)
Feb. 23	11:30 a.m.	Engineers Week Luncheon - The Bridgewater Conference Center



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