

The Pittsburgh Professional Engineer  
<http://www.PittsburghPE.Org>  
 E-mail [PSPE@PittsburghPE.Org](mailto:PSPE@PittsburghPE.Org)

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 337 Fourth Avenue, Pittsburgh, PA 15222  
 P. 412-391-0615 F. 412-261-1606

April 2012

## Engineers' Week Banquet

The Engineers' Week Banquet took place at the Sheraton Station Square with a great view and wonderful food. The 140+ attendees enjoyed an eventful evening with recognition of the outstanding awardees for this year. Traditionally seven awards are made. The awardees are highlighted below for those of you who missed a wonderful event.



The **Silvio Lorenzi President's Gold Star Award** is presented at the request of the Pittsburgh Chapter's current President in recognition of outstanding support extended to the President in fulfilling his/her duties to the Pittsburgh Chapter. This award is named in memory of Silvio "Sax" Lorenzi who served as Chapter President in 1974-75 and PSPE President in 1978-79. "Sax" Lorenzi is recalled in making this award for his enthusiastic work and support of this Chapter and the Society. This year's award recipient is **Joeseoph L. Garlicki, P.E.** Joe was last year's Chapter President.

The **Young Engineer of The Year** recognize an outstanding engineer no following the Award year. The achievements, professional and experience, publications/patents, major additional activities such as civic, This year's recipient is **Jason R. Esser**, Board of Direction.



**Award** is intended to identify and older than 35 as of Jan. 1 in the year evaluation criteria include collegiate technical society activities, engineering engineering project achievements, and fraternal, or humanitarian endeavors. **P.E.** Jason is our newest Director on the

Nominee, **PSPE State Engineer of The Year**. The Pittsburgh Chapter nominates an engineer for the PSPE Engineer of the Year Award. This annual award recognizes continuous years of active participation in, service to, and support of the Pittsburgh Chapter, PSPE, NSPE, and the engineering profession. The Award also recognizes an outstanding, distinguished engineer not necessarily only for his/her work for, or in, PSPE, but for his/her overall activities and achievements. Occupational and professional achievements, civic, political, and engineering affairs, and education represent the primary selection criteria for the Engineer of the Year Awardee. The Chapter's nominee for this award is **Michel Sadaka, P.E.** Michel has been an active member of the Chapter and is presently State President Elect for PSPE.

The **Dedicated Service Award** recognizes continuous years of active participation in, service to, and support of the Pittsburgh Chapter, PSPE, NSPE and the engineering profession. This year's award recipient is **Madeline J. Bauer**. Mady presently works for M\*Modal as a QA Engineer.



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## More Award Recipients



The presented yearly to the Chapter member who is the Chapter during the preceding year. This memorial died while serving as Chapter President in 1963. The is presented. The Pittsburgh Chapter is honored to Award to **Kirk L. Thompson, P.E.** Kirk presently

**Lawrence W. Hornfeck Award** is considered to have done the most for award named for Larry Hornfeck who recipient is not revealed until the award award the 2011 Lawrence W. Hornfeck works for Equitable Gas.

The **Distinguished Service Award** is presented each year to recognize an individual for outstanding contributions toward the improvement of the social, economic and professional status of the Professional Engineer. It is not necessary that the recipient be an engineer. This year's award recipient is **Frank J. Kempf, Jr. P.E.** Mr. Kempf is the Chief Engineer for Pennsylvania Turnpike Commission.



Congratulations to all winners and thank you to everyone who took the time to honor the Awardees with their presence. Everyone in attendance enjoyed great food and even better company!!

### 2010-2011 Chapter Officers

- |  |  |
|--|--|
| President – Brian Schull, P.E.         | Executive Secretary – Jon Drosendahl, P.E.     |
| President Elect – Kirk Thompson, P.E.  | Treasurer - John Broschious, P.E.              |
| Vice President – Gary Chodkowski, P.E. | Financial Secretary - Reyman Branting, P.E.    |
| State Director - David Briskey, P.E.   | Immediate Past President – Joe Garlicki , P.E. |

### 2010-2011 Chapter Directors

- |                                |                                |
|--------------------------------|--------------------------------|
| Doug Beitko, P.E., 2010 – 2012 | Jason Esser, P.E.. 2012 - 2014 |
| Tom Weber, P.E. 2011 - 2013    |                                |



**PITTSBURGH CHAPTER  
PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS**

Invites all current and prospective members to the  
**Thursday, April 19, 2012 Meeting**  
**CSXT Gateway Initiative**  
*(Seminar attendance qualifies as 1.0 PDH)*  
**At the Engineers Society of Western Pennsylvania Building**  
**337 Fourth Ave., Pittsburgh, PA 15222**

On Thursday, April 19, 2012, the Pittsburgh Chapter PSPE will proudly sponsor a seminar on the topic of the CSX Gateway Initiative, a collection of more than 40 projects from Baltimore to Ohio to create sufficient railroad track clearance to allow CSX Transportation to run double decker trains for greater efficiency. The presenter will be Mr. Steve Hrvoich, P.E. of Hill International. Several of the projects are in the local Pittsburgh area, including the lowering of the tracks under the Smithfield Street Bridge and the removal and replacement of the roof of a 1,600 foot railroad tunnel paralleling East Carson Street starting at the Hot Metal Bridge. Come learn about these exciting projects currently under construction.

Cocktails: 6:15 PM Social (Cash Bar)  
Dinner: 6:30 PM  
Presentation by Mr. Steve Hrvoich, P.E.: 7:30 PM

Dinner Choice: Choose one of the following (if more than one attendee, indicate the number of each choice):

- Grilled NY Strip Steak Carbonara**, sausage, bacon, mushrooms, Romano cream  
 **Chicken Mediterranean**, artichoke hearts, peppers, capers, tomato, olives and feta  
 **Virginia Spots**, broiled English style with lemon butter cream sauce

You may make your reservation by filling in the form below and mailing or faxing it to Dave Teorsky, ESWP. You may also phone in all of this information to ESWP. If you choose to make your reservation via e-mail, do not e-mail your credit card information. Payment may be made by calling in your credit card information, faxing this filled in form, or mailing this form with credit card information or enclosing a check.

**Phone: (412) 391-0615 Fax (412) 261-1606 E-mail: [d.teorsky@eswp.com](mailto:d.teorsky@eswp.com)**

U.S. Mail: Pittsburgh Chapter PSPE, 337 Fourth Ave., Pittsburgh, PA 15222

**Name:** \_\_\_\_\_ **Phone/Email:** \_\_\_\_\_

**Name:** \_\_\_\_\_ **Phone/Email:** \_\_\_\_\_

**Reservations including payment must be received by April 16, 2012. Cost per attendee is: \$30.00 for PSPE Members, \$35.00 for Non-Members.**

Payment Options:

Credit Card:  MASTERCARD  VISA  AMEX

Card Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_ CVV Code \_\_\_\_\_

Name (as it appears on the credit card): \_\_\_\_\_

Billing Address: \_\_\_\_\_

Check enclosed payable to Pittsburgh Chapter PSPE & mailed to 337 Fourth Ave.,  
*Cancellations must be received three (3) days prior to the event.*

## PRESIDENT'S MESSAGE

The road to becoming a Professional Engineer is long and arduous. To become a licensed professional engineer, one must earn a four-year degree in engineering from an accredited engineering program, work under a Professional Engineer for at least four years, and pass two intensive competency exams, both the Fundamentals of Engineering (FE) and the Principles and Practice of Engineering (PE) exams. Then, after obtaining a license, the Professional Engineer must demonstrate their competency and maintain and improve their skills by fulfilling continuing education requirements. But even this detailed demonstration of an individual's technical expertise is not truly enough to be considered an accomplished Professional Engineer.

It has been a month since the Chapter held the annual Engineers Week Banquet, and the acceptance speech of this year's Distinguished Service award winner, Mr. Frank Kempf, P.E. of the Pennsylvania Turnpike Commission, still resonates with me. Mr. Kempf made a strong argument that technical expertise alone is not enough. Mr. Kempf argued that the engineer must be intuitive and understanding of the bigger picture. The engineer has a duty to the project owner, but also to society in general. With any task, the engineer must determine not only what works well technically but how the solution impacts the public.

One of today's buzzwords is "stakeholder." In addition to a demonstrated mastery of technical issues and a concerted effort to hone and improve their technical skills, to truly be a successful Professional Engineer, it is critical to understand who all of the stakeholders in a project are and how they will be impacted. The big picture includes end users and others impacted by a project, not just owners and regulatory agencies. That's why it's so important to as Mr. Kempf said, "think beyond the project" and consider all of the impacts of engineering decisions.

The Professional Engineer has a duty to society, and that means more than just being technically competent. It means being able to recognize the impacts of engineering decisions and making sure those decisions are in the best interest of society at large.

Brian Schull, P.E., Chapter President

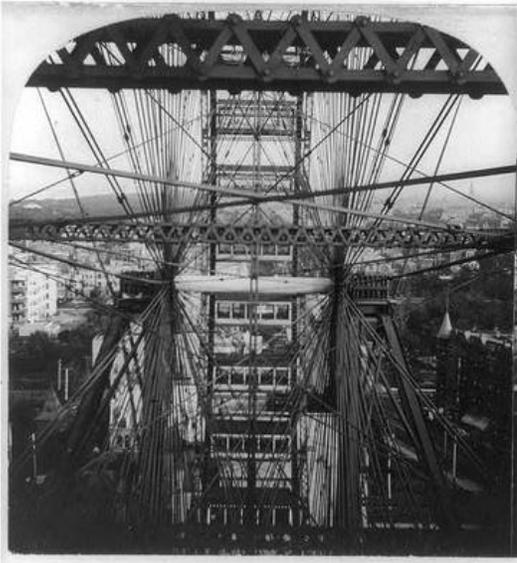


## Infrastructure Day Tuesday, May 2012 REGISTER NOW

The Pennsylvania Society of Professional Engineers (PSPE), in cooperation with the Pennsylvania Sections of the American Society of Civil Engineers (ASCE), the American Council of Engineering Companies of Pennsylvania (ACEC), and other allied organizations, will be visiting our elected officials in Harrisburg on **Tuesday May 8**. Meetings with elected officials will be scheduled for you with a view toward maximum efficiency and effectiveness.

**REGISTER NOW AT:** [http://www.surveymonkey.com/s/infrastructure\\_day\\_2012](http://www.surveymonkey.com/s/infrastructure_day_2012)

## Who Invented the Ferris Wheel?



The first ferris wheel was designed by George W. Ferris, a bridge-builder from Pittsburgh, Pennsylvania. Ferris began his career in the railroad industry and then pursued an interest in bridge building. He understood the growing need for structural steel, Ferris founded G.W.G. Ferris & Co. in Pittsburgh, a firm that tested and inspected metals for railroads and bridge builders.

He built the Ferris Wheel for the 1893 World's Fair, which was held in Chicago to commemorate the 400th anniversary of Columbus's landing in America. The Chicago Fair's organizers wanted something that would rival the [Eiffel Tower](#). Gustave Eiffel had built the tower for the Paris World's Fair of 1889, which honored the 100th anniversary of the French Revolution.

Finding a suitable design proved difficult: Architect Daniel H. Burnham, who was in charge of selecting the project for the Chicago

World's Fair, complained at an engineer's banquet in 1891 about having found nothing that "met the expectations of the people". Among the audience was George Washington Gale Ferris Jr., owner of a firm that tested iron and steel. He had an inspiration and scribbled the design for the Ferris Wheel on a napkin during the dinner.

It was considered an engineering wonder: two 140-foot steel towers supported the wheel; they were connected by a 45-foot axle, the largest single piece of forged steel ever made up until that time. The wheel section had a diameter of 250 feet and a circumference of 825 feet. Two 1000-horsepower reversible engines powered the ride. Thirty-six wooden cars held up to sixty riders each. The ride cost fifty cents and made \$726,805.50 during the World's Fair. The original Ferris Wheel was destroyed in 1906, but there are other ferris wheels at theme parks and carnivals everywhere.

A contemporary newspaper article describing the Ferris Wheel at the Chicago fair. "To the health of my husband and the success of the Ferris wheel."

When George Gale Ferris built his first wheel he dreamed of the trend he was starting. However, and certainly not very portable. It took The Eli develop a practical, portable wheel.



probably never his wheel was huge, Bridge Company to

## **Engineering Apprenticeship visit to the University of Pittsburgh on February 29, 2012**

Report by Kevin Van Horn

The Allegheny Intermediate Unit runs an Engineering Apprenticeship for high school students in Allegheny County. On Wednesday February 29<sup>th</sup> 2012 we visited the Swanson school of Engineering. At the school there were many different classes you could sit in on if you decided they were of any interest to you. We started the group part of the visit at 10 am in the Benedum Engineering Hall Room 102. After we all had time to catch up with each other since the last visit, we got started with a power point presentation about the Swanson School of Engineering which Lauren Byland gave to the group. In the presentation Lauren told us about how great the Swanson School of Engineering is and how the level of education the students receive is among the best in the country. The Engineering program was the first to offer Electrical, chemical and petroleum engineering programs in the United States. Most students that graduate from the Swanson School of Engineering have a starting salary of \$50,000. After Lauren was done with the presentation about the Swanson School of Engineering some Engineering students came up and spoke to the group about Pitt. First Snehal Sawlani came up and talked to the group about her freshman year at the Swanson School of Engineering. Snehal said that her grade wasn't doing great in a few subjects so they got tutored and did a lot better for the next test. She also talked about how the teachers are really great to work with and they all are there to help out in the student's education. Then Jillian Gorski came up and talked about all the research opportunities at the Swanson School of Engineering. The labs at the school are not just for graduate students, there is lots of hands on for undergraduate and that is what sets Pitt apart from other schools. Ashley Smoots came and talked to us about Pitt students being involved in lots of programs. There are over 400 clubs and activities to do at Pitt. Finally Jana DuMond came forward and talked about the many opportunities to study abroad while attending Pitt. Afterwards two students involved with Engineers Without Borders came up and talked about their program. Engineers Without Borders is a nonprofit organization that helps out 3rd world countries. There are over 12000 members from all over the country. The Pittsburgh chapter's project was to go to West Africa to build a fish pound to help malnourished children. After everyone had given their presentations we went on a tour of Swanson School of Engineering. On the tour we got to see many different labs inside the school. Many different clubs like the automobile club where they build a racecar and get to compete against other colleges,. There were many classrooms which were all state of the art to insure a great learning environment. Then at the end of the tour Pitt was nice enough to give us lunch. I also had the chance to sit in two classes when I was at Pitt on February 29<sup>th</sup>. The first class I sat through was Physics for Science & Engineers 2 where the class was learning about magnetic force on a moving point charge. Even though I was completely lost in the class it was nice to see how a lecture class worded and how to take notes in college. The next class I sat in on was a materials structure & properties class. In the class the students were learning about fatigue, corrosion and wear on metal hips as the person is wearing them. Then later in the class they learned how to estimate the number of cycles an item can go through. I found this class very interesting and increased my interest in Engineering. I'm very glad the Swanson School of Engineering put this event on because I learned a lot about Pitt and College schooling, I feel it was a good intro to college.

The Pittsburgh Chapter of PSPE would like to recognize and thank all of the Apprenticeship sponsors for this year. They are:

<b>HDR</b>	<b>University Of Pittsburgh</b>	<b>Corps of Engineers</b>
<b>AECOM</b>	<b>Michael Baker/PA Turnpike Commission</b>	<b>Medrad, Inc.</b>
<b>URS Corporation</b>	<b>Maglev</b>	<b>Pittsburgh Materials Technology</b>
<b>Allegheny County Airport Authority</b>		

## Mathcounts - 2012



This was the fifth year that our Mathcounts competition was held at the Moon Campus of Robert Morris University. Through the volunteer help and financial help of this school of higher learning, our program has continued to be successful and continued to grow. This year, our 29<sup>th</sup> year of hosting the Mathcounts competition, there were 24 schools each with a team of 4 students, 2 schools with individual participants, and an additional 62 individual students from these schools. This is a grand total of 160 students participating this year at our Mathcounts competition.

This year, the winning team, for the second year in a row, is Thomas Jefferson Middle School coached by Cecelia Toohey. The team members are: Captain Amanda Zu, and team members Jerry Meng, Nancy Lu and James Wang. This was the “third time” for Thomas Jefferson Middle School as Chapter Champions. They won the coveted Kedell Cup last year and again approximately 10 years ago.

The team went on to compete at the State Competition in Harrisburg, on March 23<sup>rd</sup>. They did themselves and the Chapter proud. The team finished second in the state, for a second year. There were a total of 25 schools participating.

In addition, team member Nancy Lu finished as the highest ranking female in the State competition and the second ranked individual overall. Quite an accomplishment for a eighth grade student.

One of our other Chapter schools also went to the state competition as the “wild card” team. That was the team representing Sewickley Academy, coached by Tom Perdziola. This team level is chosen based on the scores of all schools that participate across the state. The top two scoring second place teams are invited to also participate at the state competition. This was a rebuilding year for coach Tom Perdziola from Winchester Thurston. They finished eighth in the state, a very respectable showing.

Only with the help of the Pittsburgh Chapter Mathcounts Committee and the wonderful support of the Dr. Maria Kalevitch and the professors and staff of the SEMS college at Robert Morris University, could the Chapter competition be so successful.



Pictured here is the Mathcounts Committee left to right: Joe Garlicki, Michel Sadaka, Joe Boward, Dave Briskey, Chair Virginia Dailey, Tom Schwartzmier, Mady Bauer, Dick Bauer. Behind the camera – Reyman Branting.

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## 2011-2012 CALENDAR

### MEMBERSHIP EVENTS & MEETINGS

Date	Time	Description	Location
April 19, 2012	5:30pm	Board of Directors Meeting	ESWP
<b>April 19, 2012</b>	<b>6:15pm</b>	<b>CSXT Gateway Initiative</b>	<b>ESWP</b>
May 17, 2011	5:30pm	Board of Directors Meeting	ESWP
Sept 12-15, 2012		PSPE State Conference	Sheraton Four Points, Cranberry

All BOD meetings are to be held @ 5:30PM @ the ESWP Building pending further notice.