



The Pittsburgh Professional Engineer
<http://www.PittsburghPE.Org>
E-mail PSPE@PittsburghPE.Org

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October 2008

PRESIDENT'S MESSAGE

by Thomas P. Weber, P.E.

Although the members of the Pittsburgh Chapter of PSPE cover a multitude of engineering disciplines, many of our members are involved in the design and/or construction of our transportation infrastructure. Even if your expertise has nothing to do with roads and bridges, you use them to get to work. At the recent Construction Legislative Council meeting, the funding crisis for our nation's and our state's infrastructure budget was discussed. This is important to all of us if we do not want a Minnesota Bridge disaster to happen in our back yard due to lack of proper design, construction and maintenance. You need to understand these issues when you are talking to your families, friends and legislators.

When President Eisenhower created the Highway Trust Fund, it was for the **construction** of the interstate highway system (**not** for the **maintenance** and life-cycle **replacement** costs). The interstate highway system is approximately 50 years old now, and much of the system must be rebuilt. Pennsylvania has something like 2,000 bridges that must be replaced or improved in the next two years. The question is where does the money come from to do all of this work. With the high cost of gasoline, Americans are not driving as much, and therefore are not paying as much hidden taxes at the gas pump to fund the Highway Trust Fund. This situation has become so acute that instead of the Feds transferring those tax payments to the States twice daily to fund the highway construction in each state, the payments are now made once per week. If the tax revenues remain lower than the budget, the Feds are going to start making payments in proportion to revenues, say 85% this week instead of 100%. This will have a negative impact on the transportation infrastructure work at the local level.

No one likes higher gas taxes or highway tolls, but no one likes driving on potholed roads or unsafe bridges either. The governor has presented the idea of selling or leasing the Pennsylvania Turnpike to raise money for other highway work, but that idea does not seem very popular. The idea of tolling Interstate 80 was recently rejected by the Federal government. Many Pennsylvanians have long enjoyed the "free" use of the I-80 east/west corridor. Think of Pennsylvania as a football field with the sidelines being the tolled I-90 on the north, and the tolled PA Turnpike I-76 on the south. We Pennsylvanians leave the middle of the field open to every western trucker heading to or from New York or New Jersey for free, and those truckers usually don't even buy gas in Pennsylvania because it is cheaper out of state. And we pay for the maintenance and replacement of the bridges and pavement on I-80. Maybe the only answer is higher gas taxes at the pump.

You may have the opportunity to hear comments on these and other important topics at our October 9th Dinner Meeting when we will be honored to have the State Secretary of Transportation Allen Biehler as our guest speaker. Please see the enclosed Reservation Form for more information. I hope to see all of you at that meeting.

Tom Weber, President

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Upcoming Pittsburgh Chapter Activities

Christmas Celebration

The Annual Chapter Christmas Celebration will be held on December 6, 2008 at the Engineer's Society on 4th Avenue. The Celebration will take on a new tone and some new activities this year. Mark your calendar ahead of time to see what the season has in store and enjoy good food, drink and friendship during this wonderful season.



Celebrate - National Engineers' Week Banquet

This year, our celebration of National Engineers' Week will take place at the Club at Nevillewood, on **Saturday, February 28, 2009**. Some of you may ask, "why then?" In order to be able to hold our Mathcounts competition at RMU, the competition needs to take place on February 21, 2009. As one of our special recognitions during our banquet is of the wonderful Mathletes who are the top team and individuals at our Chapter competition, we needed to be flexible and make our banquet on February 28th.

Mark your calendar for that Saturday evening. It is always a wonderful event and one of the times when we can recognize those within our profession who have excelled.

2007-2008 Chapter Officers

President – Tom Weber, P.E.	Executive Secretary – Jon Drosendahl, P.E.
President Elect – Dave Samek, P.E.	Treasurer - John A. Broschious, P.E.
Vice President – Joe Garlicki, P.E.	Financial Secretary - Reyman Branting, P.E.
State Director - David Briskey, P.E. 2005-2008	Immediate Past President – Virginia Dailey, P.E.

2007-2008 Chapter Directors

Jeff Mazza, P.E. 2005-2008	Brian Schull, P.E. 2006 - 2009
Vacant Position 2005-2008	Kirk Thompson, P.E. 2007 – 2010
Vacant Position 2006 - 2009	Joe Garlicki, P.E. 2007 - 2010

**PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS
PITTSBURGH CHAPTER**



Invites all current and prospective members to the

OCTOBER 9, 2008 Meeting

***Presentation by Allen D. Biehler, P.E.,
Secretary of Transportation***



On Thursday, October 9, 2008, the Pittsburgh Chapter is proudly sponsoring a meeting at the Engineer's Society of Western Pennsylvania featuring Pennsylvania's Secretary of Transportation, Allen D. Biehler, P.E. Mr. Biehler will be presenting information on the state of the transportation infrastructure in Pennsylvania. Pennsylvania has the nation's fifth largest state-maintained highway system and third largest state-maintained bridge network. Strategies for addressing transportation maintenance and preservation needs, and other current topics will be discussed by Secretary Biehler.

Cocktails: 6:00 PM Social (Cash Bar)
Dinner: 6:30 PM
Presentation by Secretary Biehler: 7:30pm

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

- Virginia Spots**, English Style, with Lemon Butter Cream Sauce
 Chicken Baradi, Tomato Basil Vinaigrette, Peppered Bacon and Boursin Cheese Sauce
 Tornadoes of Filet Mignon, with Boursin Cheese and Port Wine Reduction

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 info. Payment may be made by calling in your credit card info, faxing this filled in form, or mailing this form with credit card info or enclosing a check.

Phone: (412) 391-0615 **Fax (412-261-1606)** e-mail: ddengr@city-net.com
U.S. Mail; PSPE Pittsburgh Chapter, 337 Fourth Ave., Pittsburgh, PA 15222

Name : _____ Contact Info: _____

Name : _____ Contact Info: _____

Reservations including payment must be received by October 3, 2008. Cost per attendee \$35.00

Payment Options:

Credit Card: MASTERCARD VISA, Card Number: _____

Name (as it appears on the credit card): _____

Billing Zip Code : _____ Expiration Date: _____

Check enclosed payable to PSPE Pittsburgh Chapter & mailed to 337 Fourth Ave., Pittsburgh, PA 15222



An Unnecessary Obstacle to Licensure

From the July 2008 Issue of *NSPE*

"Those who have earned an engineering doctorate should not have to take the FE exam."

By Al Reisz, P.E.

The Model Law of the National Council of Examiners for Engineering and Surveying now recommends allowing individuals with engineering doctorates to take the PE exam without having to pass the FE exam. Recently, the Alabama legislature killed a bill that would have allowed this. While the bill had considerable support, some opposed the FE "waiver," as it was erroneously called.

When the bill was being considered, I learned that many licensed engineers had believed that if they took the FE exam, then everyone should have to take it. These engineers didn't see the good this legislation would do for the engineering profession. And they didn't see that this is not a waiver; rather, it is recognizing that earning an engineering doctorate is an achievement recognized by the Model Law in lieu of passing the FE exam. It will not weaken licensing standards nor allow incompetent engineers to become licensed.

Because most degreed engineers are not licensed and work in engineering positions that don't require licensing, state licensing boards do not regulate most engineers. They regulate only a small portion of the degreed engineering workforce. A few incompetent engineers are practicing today, but the Alabama Board of Licensure for Professional Engineers and Land Surveyors has no control over them. Generally, engineering licensing is required only for the engineering of infrastructure. To protect the public from incompetent practice, all professions except engineering regulate practice through their professional boards. To practice land surveying, you must be licensed. To practice architecture, you must be licensed. But the engineering profession is a quirk, an anomaly in the regulation of professions by professional boards.

State engineering licensing procedures are the biggest obstacle to bringing more competent engineers into the licensing process. Very capable, unlicensed engineers practice today and produce great engineering achievements. At NASA's Marshall Space Flight Center in Huntsville, Alabama, thousands of highly competent NASA and contractor engineers are engineering space exploration missions. A great many have engineering doctorates. These engineers are among the best and most capable engineers anywhere, but hardly any are licensed.

Over the years I've encouraged licensing. The main response, however, is that it is not possible for unlicensed engineers to become licensed or it is nearly impossible at the present stage in their career and certainly not necessary. We engineers need to take steps toward making engineering a true profession by ensuring that those who practice engineering have a certain degree of competency and are licensed. We can start by making it practical for competent engineers to become licensed. The Model Law change that recognizes that earning an engineering doctorate suffices for passing the FE exam is a step in that direction.

A root reason engineering graduates are not entering the licensing process is that few engineering faculty are licensed. Those who became engineering professors often stayed in school after earning their baccalaureate and studied graduate engineering while their fellow classmates began engineering careers. While pursuing their doctorates, most students don't take the FE exam.

A professionally licensed faculty member will more effectively influence engineering students to enter into the licensing process as they begin their careers. We must break this cycle of engineering graduates beginning their careers with indifference toward licensing. A big step is allowing those with engineering doctorates to take the PE exam and become licensed so that engineering schools will have a professionally licensed faculty as other professional schools do.

As it is, our engineering profession is so fragmented that engineers have no voice in our society. Some of us belong to an engineering society, such as NSPE, but our nation sorely needs to hear from the engineering profession. Other professions have a voice in society and in influencing and shaping our nation's policies. The American Medical Association's voice is effective in matters of our nation's health care policies and regulations and in related matters such as Medicare. The American Bar Association heavily influences our nation's laws and legal procedures.

Our nation needs to hear from the engineering profession in planning matters of energy policy, the environment, infrastructure, building codes, and other issues. Yet we engineers speak only with fragmented voices. Licensing more
(cont'd on page 5)

competent practicing engineers will give strength to NSPE. NSPE will have more influence to better steer national policies where engineering is involved. Of course other traditional engineering societies will still voice opinions on matters of their respective branches, but by working together under the umbrella of NSPE, we will have a voice that effectively influences national policy on matters where engineering is involved, and that will be to our nation's betterment. Passing such legislation to better enable competent engineers to become licensed is good for our engineering profession, for our states, and for our nation.

Al Reisz, P.E., is vice chair of the Alabama Board of Licensure for Professional Engineers and Land Surveyors. He is also a member of the Uniform Procedures and Legislative Guidance Committee of the National Council of Examiners for Engineering and Surveying.

This article is reprinted from NSPE magazine, July, 2008

SEMS Program Receives 5-Year Grant

The School of Engineering, Mathematics, and Science (SEMS) at Robert Morris University has recently received a five-year, \$562,220 grant from the National Science Foundation (NSF) under the S-STEM (Scholarships in Science, Technology, Engineering, and Mathematics) program.



The S-STEM program provides institutions with funds for student scholarships to encourage and enable academically talented but financially needy students to enter the workforce following completion of an associate, baccalaureate, or graduate degree in fields of the science, technology, engineering, or mathematics. Participating institutions are expected to support the goals of the S-STEM program including:

- Improved educational opportunities for students
- Increased retention of students to degree achievement
- Improved student support programs at institutions of higher education
- Increased numbers of well educated and skilled employees in technical areas of national need.

So what does this mean for your school and its students? We are looking for a few good men and women! Specifically, we are interested in recruiting 21 academically talented but financially needy new students to the University and supporting these worthy scholars for each of their four years at the university. Each student will receive \$6,000 per year for the four years over and beyond (or in addition to) the financial aid package normally provided by the University.

Each scholar will undergo a mathematics and science "boot camp" before the start of their freshman year in Fall 2009. This event is designed to help the student's transition from high school to university life and prepares them to handle challenging classes and course loads. Students in the program will benefit from real world experiences through internships, participating in research projects with our faculty, solving real world problems, taking tours as appropriate to their majors, and being specially coached for job opportunities. The scholars will benefit from a dedicated living-learning community that emphasizes effective study habits, time management skills, and involvement in campus life. Finally, the program promotes student success through seminars, field trips, internships, research, cultural, outreach and social events that emphasize all facets of the students' development as a professional and a citizen of the community.

We would be remiss if we did not tell you about the School of Engineering, Mathematics, and Science (SEMS). Founded in 1999, SEMS offers a range of undergraduate and graduate degree programs developed to meet the needs of the region and the nation. Our approach to education is highlighted by small class sizes with personalized attention, dedicated and experienced faculty, outstanding laboratory facilities, the infusion of real world experiences in the curriculum, internships and research experiences, and strong mentoring relationships with our faculty. SEMS enrolls 275 undergraduate and 60 graduate students through its programs in software, mechanical, manufacturing and industrial engineering; engineering management; applied mathematics; actuarial science; pre-medicine; and environmental science.

Please pass this wonderful opportunity along to any and all students/counselors/etc. that might be interested. Students may learn more about this unique program and our school by visiting www.rmu.edu/sems.

Scholarship winners will be announced in the Spring 2009 at the RMU Scholarship Luncheon that is typically attended by students and their parents.

For additional information on this scholarship opportunity, please contact:

Dr. Maria Kalevitch
6001 University Boulevard
Moon Township, PA 15108
Phone: (412) 397-2446
Email: kalevitch@rmu.edu

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2008-2009 CALENDAR

MEMBERSHIP EVENTS & MEETINGS

Date	Time	Description	Location
Oct. 9, 2008	6:00pm	October Chapter Mtg. – Al Biehler	ESWP
Nov., 2008	6:30pm	Monthly Meeting	TBD
Dec.6, 2008	6:30pm	Christmas Celebration	ESWP
Jan., 2009	6:30pm	Monthly Meeting	ESWP
Feb.28, 2009	6:30pm	Engineers' Week Banquet	The Club at Nevillewood
Mar., 2009	6:30pm	Monthly Meeting	ESWP
April, 2009	6:30pm	Monthly Meeting	ESWP
May, 2009	6:30pm	Monthly Meeting	ESWP
June 2008	TBD	Installation of Chapter Officers, & Recognition of Apprenticeship Participants	TBD

BOARD OF DIRECTORS MEETINGS WILL BE HELD ON: Oct. 9, 2008, Nov. 13, 2008, Dec. 11, 2008, Jan. 8, 2009, Feb. 12, 2009, Mar. 12, 2009, April 9, 2009, May 14, 2009 and June 11, 2009

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