

VALLEY FORGE CHAPTER PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS P.O. BOX 585 WORCESTER, PA 19490-0585

THE COMPASS

Volume 42, Number 8 – April 2008

(Read the COMPASS on-line at www.pspe-vfc.org)

PRESIDENT'S MESSAGE

By Tony Dougherty, P.E., VFC President

Whew! I can't believe this administrative year is almost over. At our last board meeting we voted to approve the slate of officers for next year. After a few contingencies get worked out, we will present the slate to you in next month's



issue. One thing I can tell you now is, at the request of the board, I am happy and honored to serve one more year as President of this fine chapter and look forward to continuing to build on some of the great things we have accomplished this year. I am excited about the about the incoming board and hope some of the new blood will infuse the chapter with some energy and new points of view. I will also give you a preview of some things we will be working on in the coming year in the next issue.

Switching gears; please make sure you mark your calendars for this year's PSPE State Conference in Gettysburg. The event really appears to be shaping up into something special and will be held June 5-7, 2008 at the Wyndham Gettysburg. If you have the opportunity to attend, you should do so. It is always a lot of fun and very informative. Check the website at http://www.pspe.org/conference.shtml for more details.

Well, enough of my ranting. As promised last month, you will find some great articles in this issue regarding the Chapter's MATHCOUNTS Competition and Delaware Valley Science Fair. Also, Chapter Secretary, Lindsay Musselman, has written a great piece about her recent trip to Deutschland!

Thanks and see you next month!

EVENTS SCHEDULE

April 22, 2008	Monthly Membership Meeting and Past Presidents Dinner, Nor East Mapping will provide an interesting presentation about aerial mapping. The event will be held at Taylor's at the Olde Mill. Since the meeting will be sponsored by our speakers, the cost will only be \$10.00 per person! RSVP to Gwen Himes at GHimes@TrafficPD.com or 610-326-3100.
May 6, 2008	Board of Directors Meeting, Location: BCM, 6:00 PM.
May 21, 2008	MONTHLY MEMBERSHIP MEETING AND FINAL MEETING OF THE ADMINISTRATIVE YEAR!! The meeting will include the

installation of next year's board members and an interesting technical presentation about commercial electric heat tracing by Eric B. Hoath of

Tyco Thermal Controls. The meeting will be at La Bella Cucina, 2655 Skippack Pike, Center Square. The cost will be \$25.00 per person. RSVP to Gwen Himes at GHimes@TrafficPD.com or 610-326-3100.

June 5-7, 2008

PSPE State Conference – Wyndham Gettysburg

Visit the VFC PSPE website (www.pspe-vfc.org) often for updates on upcoming events.

PICTURE OF THE MONTH



Cycling for Food

Engineering students at Rowan University are working to develop a pedal-powered grain crusher that people in developing countries could use to process anything from corn to barley.

Photo from: <u>ScienceDaily</u> (Mar. 21, 2008)

2007-08 Chapter Officers and Board of Directors

President	Anthony Dougherty, PE	2500 E. High St., Ste 650, Pottstown, PA 19464	610-326-3100	Adougherty@trafficpd.com		
President-Elect	Keith Bergman, PE	1600 Manor Dr., Ste 200, Chalfont, PA 18914	215-996-9100	kbergman@bohlereng.com		
Vice President	Jim Thompson, PE	3174 Mayflower Road, Plymouth Meeting, PA	610-639-8990	Jthomp9121@aol.com		
Treasurer	Kurt Leininger, PE	920 Germantown Pike, Plymouth Meeting, PA	610-313-3100	Kurt.leininger@atcassociates.com		
Secretary	Lindsay Musselman, EI7	TPO Box 4, WP20-206, West Point, PA 19401	215-652-6649	lindsay_musselman@merck.com		
State Director	Paul Dugan, PE	303 Valley Hunt Dr., Phoenixville, PA 19460	610-220-3820	pauldugan@comcast.net		
Past-President	Paul Dugan, PE	303 Valley Hunt Dr., Phoenixville, PA 19460	610-220-3820	pauldugan@comcast.net		
Chapter Director	Karen O'Connell, PE	425 Commerce Dr, Ft Washington, PA 19034	215-283-9444	karen.oconnell@mcmtrans.com		
Chapter Director	Mike Fischer, EIT	303 Valley Hunt Dr., Phoenixville, PA 19460	215-205-2130	michaelfischer@comcast.net		
Chapter Director	Anthony Handley, EIT	303 Valley Hunt Dr., Phoenixville, PA 19460	610-585-5889	anthonyhandley@comcast.net		
Chapter Director Vacant						
Chapter Director	Kristin Norwood, PE	2500 E. High St., Ste 650, Pottstown, PA 19464	610-326-3100	Knorwood@trafficpd.com		
Chapter Director	Anthony Aievoli, PE	318 Winding Way, King of Prussia, PA 19406	610-272-0165	Anthony.J.Aievoli@Boeing.com		
SE Region PSPE Vice President	E Frank Stanton, PE	50 Fir Drive, Richboro PA 18954	215-497-1231	fjstanton@cs.com		

2007-08 VFC Committees

Committee	Primary Contact	Secondary Contact
Audit	Frank Stanton, PE	Jim Thompson, PE
Awards	Lindsay Musselman, EIT	Kristin Norwood, PE
By-Laws	Kurt Leininger, PE	Lindsay Musselman, EIT
Engineers Week	Anthony Aievoli, PE	Vacant
Ethics	Paul Dugan, PE	Mike Fischer, EIT
Legislative/Gov't	Paul Dugan, PE	Tony Dougherty, PE
Mathcounts	Karen O'Connell, PE	Keith Bergman, PE
Membership	Lindsay Musselman, EIT	Mike Fischer, EIT
Nominating	Paul Dugan, PE	Keith Bergman, PE
Programs	Tony Dougherty, PE	Jim Thompson, PE
Publications	Kristin Norwood, PE	Anthony Handley, EIT
Scholarship	Lindsay Musselman, EIT	Karen O'Connell, PE
Science Fair	Tony Dougherty, PE	Jim Thompson, PE
VFC Website	Mike Fischer, EIT	Anthony Handley, EIT

Practice Division

Professional Engineers in Private Practice (PEPP) Professional Engineers in Construction (PEC) Professional Engineers in Government (PEG) Professional Engineers in Industry (PEI) Professional Engineers in Education (PEE)

Contact

Paul Dugan, PE Keith Bergman, PE Paul Dugan, PE Lindsay Musselman, EIT Kurt Leininger, PE

 $(Note-The\ above\ committee\ positions\ were\ determined\ by\ those\ who\ attended\ the\ Board\ of\ Director's\ Summer\ Planning\ Meeting.)$

"GETTING TO KNOW YOU"

By Tony Dougherty, P.E., VFC President

This month, Anthony Handley! Without further ado, here are the results:

The Compass (TC): So, who are you?

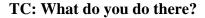
Anthony Handley, E.I.T.

TC: Where do you or did you work?

I work for Millennium Engineering, P.C. out of Phoenixville, PA

TC: How long of have you worked there or been in business?

I will have been with Millennium for 4 years in May.



I am a wireless consultant performing engineering services for the wireless industry including a variety of design and regulatory work.

TC: Are there other notable employers in your career?

I worked my summers in college for Verizon Pennsylvania, Inc.

TC: What is your educational background?

I have a Bachelor of Science in Electrical Engineering from Widener University in Chester, PA.

TC: What licenses do you have?

I have earned E.I.T. status.

TC: How long have you been in PSPE?

3 years or so.

TC: Tell us about your family.

My fiancée's name is Brittany and we have set a wedding date in October of 2009. My parents are Allen and Maria. I have two younger brothers, Timothy and Peter, and one younger sister, Anjelica. Brittany and I have two dogs named Beef and Avery...yes, Beef.

TC: What are your hobbies?

I play rugby and I am addicted to poker (no limit Texas Hold 'em) and play every chance I get. I watch a lot of sports...GO BIRDS!!!! I also have a fairly large DVD collection.



Anthony Handley, EIT

TC: What is your favorite quote?

"Rugby is a good occasion for keeping thirty bullies far from the center of the city." - Oscar Wilde

TC: What is your favorite equation?

 $E=mc^2$

TC: What is your favorite book?

I would have to say any Dr. Seuss book. I don't read many books.

TC: What or who inspired you to get into engineering?

A combination of my father and being good in math in high school.

Thanks Anthony for participating!!!

MATHCOUNTS 2008

By Karen O'Connell, P.E.

Amid a flurry of concerns over inclement weather, the Valley Forge and Bucks County MATHCOUNTS Chapter Competition was held as scheduled on February 23, 2008. Thanks to all the wonderful volunteers who took time out of their busy lives to participate, the competition was a success!

The competition this year was fierce! Out of the twenty-one schools that competed, Wissahickon Middle School was declared the top team. Troy Deckebach coached Pranav Kunapuli, Dan Park, Allison Peng and Anderson Wang to victory in just his second year of competition at the Valley Forge Chapter Competition. The second place team was Sandy Run Middle School (Kevin Li, Josh Wan, Diana Wu and Andrew Zeng coached by Sandra Van Horn) and the third place title was awarded to Arcola Intermediate School (Sarah Kim, Yumeng Liao, Shashi Masireddy and Kelley Zhang coached by Cindy Bean). The most improved team was undoubtedly Abington Friends School, who moved up nine places since last year. The team consisted of Zachary Atkins, Daniel Fienberg, Elizabeth Gurin and Timothy Israel. Abington Friends School coach, Wayne Kurtz was pleased with his teams improvement from last year.

The top individuals were Andrew Wang (Wissahickon Middle School), Andrew Zeng (Sandy Run Middle School), Jeremy Bierema (Philadelphia-Montgomery Christian Academy) and William Byrne (Arcola Intermediate School). These individuals as well as the first place team all traveled to the Pennsylvania State Competition in Harrisburg in late March. All students did extremely well, and we are pleased to say that Andrew Wang and Jeremy Bierema will be representing Pennsylvania at the National MATHCOUNTS Competition! We wish them luck and hope to hear more from them soon!

Thanks to all the volunteers who make it possible for these students to participate in such a wonderful program. It is great to have so many engineers interested in promoting math education!

The Deutsches Museum: The Largest Science Museum in the World!

By Lindsay A. Musselman, E.I.T., VFC Secretary

In March, I had the opportunity to take a vacation with my dad to Munich. Long thought of as a scientific fatherland, Germany is the home of the Deutsches Museum, the largest science, engineering, and technology museum in the world.



The outside of the Deutsches Museum in Munich.



The underground mining exhibit.

The museum was built in 1906 on a separate island in the Isar River and from the beginning it did not only show "dead" technical things, but explained as well, how everything is working. You could watch physical and chemical experiments, electricity; you could walk inside a submarine or a Faraday cage. There are cars, airplanes, marine boats, space-ships, a windmill, tractors, and even a mine, a planetarium, and finally an IMAX-cinema. This museum is unique in its concentration on the history and development of technology and natural science. Numerous objects and interactive models are used to demonstrate mankind's progress over the centuries.

They say the permanent exhibits alone cover a floor area of 55.000 square meters, so don't go there expecting to see it all. We had to try to pick some of the areas that interested us the most. We made sure to see the Pharmaceutical and Chemistry exhibits (for me) and the Agriculture and Welding (for my dad). The museum is very well laid out, making it very easy to navigate through the many floors and exhibits. The most fascinating was probably the many fume hoods they had (about 40), where you got to press a button and see two chemicals mix and react. I only wish my German was a little better so that I could know what was going on!



The Pharmaceutical exhibit.



The aeronautics exhibit.

The collection overall is very impressive and contains items such as the first Benz automobile from 1886 and the laboratory bench at which the atom was first split in 1938. I would highly recommend stopping by to the Deutsches Museum in Munich if you get the chance!

Future Engineers Are Everywhere! A 2008 Science Fair Recap.

By Tony Dougherty, P.E.

This year, the Delaware Valley Science Fair was held on April 2, 2008 at the Valley Forge Convention Center.

Again, representatives from the PSPE and the Valley Forge Chapter volunteered to be judges for a PSPE-Valley Forge Chapter (VFC) Award and a NSPE Award to students for outstanding engineering projects. This year's volunteers included Jim Thompson, Harve Hnatiuk, and Tony Dougherty but also included Zeyn Uzman from the Chester County Chapter to assist with the judging. I would like to thank these gentlemen for dedicating their morning to such a worthy cause amidst their busy schedules.

This year we evaluated the most engineering projects that I have ever seen since I have been involved with judging for the PSPE-VFC. The projects totaled over 70 from students in grades 6-12! As we have done the past few years, the winners from each fair (age range) for the VFC Award received a \$25 dollar VISA gift card and a Certificate, while the winners of the NSPE Award received a Certificate and a year subscription to *PE Magazine*. This year we tried something new to let each student (not just those who received awards) know their project was considered for an award from the society. We placed a calling card at each display noting who we were and gave them some encouragement. Hopefully, the encouragement they received will cause them all to consider a career in engineering.

This year's winning projects were:

Grade	PSPE-VFC Award	Student and School	NSPE Award	Student and School
6-8	Magnus Effect and Turbulent Boundary Layer	Julia Yearwood, Holy Family School	No Award for this Fair	
9	Proliferation of Cells on Bioactive Glass	Raina Saxena, Freedom High School	Triangle Troubles	Elizabeth Gross, Parkland High School
10	Wind Power: It's a Breeze	Brian Aldred, Cape Henlopen High School	Full of Hot Air	William Bryant, Charter School of Wilmington
11	The Application of Sharkskin Dermal Denticles to Viscous Drag Reduction in Aerodynamics	Aman Sinh, Council Rock North High School	Robotic Sensor Vision	Joseph Marlin, Our Lady of Mt. Carmel
12	Engineering a Superlens with Aberration Correction for Focused Ion Beam Microscopes.	Franz Sauer, High Technology High School	Nanoparticle Enhancement on PEM Fuel Cell Power Output	Kenny Kao, George School

These kids never cease to amaze us with their ingenuity and preparation. Just the names of these projects make my head spin! Judging the fair was great fun and kudos to all the students who participated in the Science Fairs. Next year, Zeyn and I hope to coordinate with the other chapters in the Southeast Region to combine our efforts and possibly increase the award.



VALLEY FORGE CHAPTER

PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS P.O. BOX 585 WORCESTER, PA 19490-0585

BOARD OF DIRECTORS' MEETING MINUTES

Meeting Date

April 1, 2008

Those in Attendance:

Tony Dougherty, P.E. Lindsay Musselman, E.I.T. Kurt Leininger, P.E. Kristin Norwood, P.E. Karen O'Connell, P.E. Paul Dugan, P.E. Mike Fischer, E.I.T. Anthony Handley

Jim Thompson, P.E. Chad Camburn, P.E. (guest)

Meeting Called to Order

► 6:15 PM

Minutes from Previous Meeting

T. Dougherty made a motion to accept previous month's meeting minutes. K. Norwood seconded the motion. Passed unanimously.

Reports of Officers

President's report:

Nothing to report.

President-Elect's report:

Not present.

Vice President's report:

Nothing to report.

Secretary's Report:

Nothing to report.

Treasurer's report:

- Paid \$863 to William Penn Inn for banquet, collected \$450 (difference of approx. \$400). J. Thompson made a motion to donate \$200 to Mathcounts and submit balance for reimbursement from the Valley Forge Chapter Mathcounts Budget. K. Norwood seconded the motion. Passed unanimously.
- ➤ Paid \$100 deposit to Taylor's Olde Mill for April's dinner meeting.
- Need an audit committee to help with this year's audit. P. Dugan and J. Thompson volunteered for the committee.
- ➤ Will pursue EIN Number and file appropriate tax return for Chapter

State Director's Report:

➤ Information will be forthcoming for State Engineer's Conference in Gettysburg. Activities include golf outing, seminars, and dinner meeting/installation & awards.

SE Regional VP:

Not present.

Committee Reports:

- Communications
 - Compass: Distribution by the middle of the month. Member spotlight: Handley. T. Dougherty will do an article on the Delaware Valley Science Fair.
 - Reminder notification for April dinner meeting will be sent out next week.
 - Webmaster: Will make link to bylaws bolder.

Board of Director's Meeting Minutes April 1, 2008

➤ MathCounts

- K. O'Connell will do article for Compass.
- Goal for next year will be to distribute tasks for the competition/banquet so that Karen is not doing all the work.
 This will be discussed at the summer planning meeting.

Membership:

Update will be provided by Compass Publication.

Programs:

- March 18: Mathcounts Banquet went well. Had difficulty finding speaker.
- > April 22: Nor-East Mapping. Past-Presidents' meeting. \$500 set cost, charge \$10 per person for dinner. Taylor's at the Olde Mill. Musselman reserved room.
- May: T. Dougherty to check on availability of speaker on Electrical Heat Tracing for May 20 or 21 at LaBella. Installation of officers to occur at this meeting.
- > Other suggestions:

o Political Speaker o Helicopters

o Rt 202 or Turnpike Projects o "Millionaire Next Door" Financial

Non-technical Fun Gathering
 Cayuga Pipe Tour
 Lockheed Martin

o PennDOT o MontCo Infrastructure

Unfinished Business:

- ~10 gift mugs remaining which will last into next year. Crestline suggested as vendor for new speaker gifts. To be decided at a later date.
- Plaque for Immediate Past-President (Paul Dugan)
 - \$75 +tax (\$79.50); K. Norwood ordered plaque and will bring to April's Past President's dinner.
 - K. Leininger gave T. Dougherty blank check to pay for plaque.

New Business:

- ► Board of Director replacement nominees for vacant position.
 - Dan Humes, Robert Blue
 - Chad Camburn, Bursich
- > The nominating committee (T. Dougherty, P. Dugan, K. Leininger) submitted the following proposed slate of Directors/Officers:
 - Anthony Dougherty, P.E. President
 - Karen O'Connell, P.E. President-Elect
 - Kristin Norwood, P.E. Vice President
 - Mike Fischer, E.I.T. Treasurer
 - Lindsay Musselman, E.I.T. Secretary
 - Paul Dugan, P.E. State Director
 - Paul Dugan, P.E. Past-President
 - Kurt Leininger, P.E. Chapter Director
 - Anthony Handley, E.I.T. Chapter Director
 - Jim Thompson, P.E. Chapter Director
 - Keith Bergman, P.E. Chapter Director
 - Chad Camburn, P.E. Chapter Director
 - Dan Humes, E.I.T. Chapter Director
- ➤ K. Norwood made a motion to waive the requirements of the by-laws limiting the President's term to one year to allow T. Dougherty to be president for another term. K. Leininger seconded the motion.
- ➤ T. Dougherty made a motion to approve the slate of Directors and Officers for 2008-2009. J. Thompson seconded the motion. This is contingent on K. Bergman submitting his resignation from President-Elect, Dan Humes obtaining membership in PSPE.
- ➤ Delaware Valley Science Fair April 2, Valley Forge Convention Center.
 - Dougherty, Thompson, and Hnatiuk to judge.
 - Dougherty purchased six (5) award gift cards using check #625 (\$142.50)
- Scholarship Program with Drexel & Temple

Board of Director's Meeting Minutes April 1, 2008

- L. Musselman and K. O'Connell will contact Fred Plotnick to obtain more information about the scholarship program.
- This will be discussed in summer planning meeting.

Adjournment:

- ➤ K. Norwood made a motion to adjourn. J. Thompson seconded the motion.
- Adjourned at 7:09 PM.

Next meeting May 6, 2008 at 6pm, location BCM.



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Joseph F. Maida, PE President Harvey D. Hnatiuk, PE, FNSPE Vice President



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Rodney P. Plourde, Ph.D., P.E. is pleased to serve as 2006-2007 Past President of Valley Forge Chapter, PSPE!

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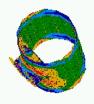




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