



SWE Outlook

September 2004

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We will gladly include news items and activities from SWE Student Sections and nearby SWE Sections in *SWE Outlook*. Announcements for other organizations will be included as time and space permit. Please send inputs to Barbara.Faust@swe.org

SWE Outlook is published on our website and is available for direct mail to Section Members and other interested parties in electronic and/or paper formats. Please forward your preferred e-mail address and option for electronic copy only or for both electronic and paper copies to Carole.N.Stowell@lmco.com or Barbara.Faust@swe.com.

President's Corner

As the summer has quickly come to an end, I would like to welcome everyone back to a new year at SWE. The board has been busy over the summer planning an exciting year for the section. The goal for the year is to increase member participation. Our section has almost 100 members, yet we have had difficulty filling board vacancies and getting members to attend the monthly meetings. The board has taken steps to address these issues.

First, we are going to make every effort to set the monthly meeting as the 2nd Monday of each month. On those occasions when the date will differ, we will provide as much notice as possible to the membership. Second, we have finally filled the Programs Chair position, which will help us better plan meetings. Megan Kline has taken the position and is working on confirming speakers and meeting locations for the first half of the year. Next, we plan on having a brief board meeting at the beginning of each monthly meeting. This will allow the board to keep the plan for the year moving. All members are welcome to attend the board meetings and provide input. Finally, the board is also addressing several outstanding items. Rachel King, our webmaster, has found new web hosting for our website and updated the site. Please check out the new website at www.swephila.org. The meeting schedules are on the site. Lisa Colosimo is working to create an updated membership booklet and Jen Garner is working to create a new section brochure.

While the board has tried to work to improve the section over the summer, we also need your help. We need you to tell us what the section is doing well and where we need improvement. In the next few weeks I will be sending out a survey to the members. Please take the time to fill it out or feel free to send me your opinion at anytime throughout the year.

Heather Bernardin

Kick-Off Party for FY 04 Welcome Happy Hour Social Event

All Section Members, especially those who are new to the Section, and others who are interested in learning more about SWE-Philadelphia are invited to join us in celebrating the upcoming year. This welcome meeting will help us get to know more each other. Please bring your business card. Take advantage of this great opportunity to network and meet new people.

Date: Monday, September 8, 2003
Time: 6:00 PM - ?
Place: Champps Americana
330 Goddard Boulevard
King of Prussia, PA 19406
610-491-8001

Cost: \$10.00 per person
RSVP: to Megan Kline: mkline13@comcast.net or 215-674-8363
by September 5, 2003

SWE Calendar - FY04

Date	Event	Location
Sept 8	Section Kick-Off Party : Getting to Know You	King of Prussia
Oct 4 9-11 12 13	Girl Scout Junior Jamboree SWE National Conference Walk for Breast Cancer Awareness Financial Planning	Camp Tohikanee Birmingham, AL Philadelphia TBD
Nov	Professional Development Seminar: Written Communications	TBD
Dec	Sub-Section Meetings/Holiday Social	Various
Jan 24	Technical Tour Philadelphia Regional Future City Competition	
Feb	Engineering Mini-Camp for High School Girls Engineers' Week Activities	
Mar	Professional Development Seminar: Verbal Communications Science Fair Judging AAUW Touch the Future Program	
Apr	Awards Banquet	
May	Section Meeting Certificate of Merit Presentations	
June	Section Meeting Certificate of Merit Presentations	

Announcements

- **2003 National Conference: Supporting the World through Engineering**

Section Representative, Susan Best, will be our voting delegate at the 2003 SWE National Conference that will be held on October 9-11 in Birmingham, AL. In addition to the technical and professional development programs, this year's conference will consider adoption of a new SWE organizational structure and bylaws. Susan serves on both the Region E and national Bylaws Committees. Please contact her directly at 215-922-8081, x1810 or Susan.Best@swe.org with your questions or comments about your position on SWE business issues to be considered. General conference registration and scheduling information is available at www.swe2003.org.

- Access to the national **SWE on-line directory** requires your member ID and password. Last year, all members were issued a randomly-generated new ID. Your new ID number is on the dues bill and member update form sent to you from headquarters. If you've misplaced or forgotten your password (or don't know your new member ID), please e-mail the member services center at hq@swe.org.
- **SWE membership application form.** Download the form to be used for new member application or for requesting a membership upgrade from the national SWE website www.swe.org.
- **Five Easy Pieces:** Learn how to create a perfect wardrobe with five easy piece. Georgia Donovan, *the Clothes Doctor*, helps women look and feel better from the inside out. She not only addresses career dress and style, but also helps in choosing lingerie and underwear for a less than perfect body. This program, which is provided by Grand View Hospital as part of Breast Cancer Awareness month, will be held at the Sellersville Theater in Sellersville, PA on Tuesday, October 7th. Cost of the program is \$15; cost of combined program and dinner at the Washington House restaurant is \$40. For program registration and to make a dinner reservation, call the Sellersville Theater at 215-257-5803. Dinner reservations are available at 5:00 or 8:30 pm.

The SWE MISSION is to:

- *stimulate women to achieve full potential in careers as engineers and leaders;*
- *expand the image of the engineering profession as a positive force in improving the quality of life; and*
- *demonstrate the value of diversity*

Section News

Planning Meeting

Section officers and committee heads held a planning meeting on July 21, 2003 at Bertucci's in the Plymouth Meeting Mall to map out activities and timing for events throughout the year. The President's Letter described our overall plan for the year, more details are given here.

The section meetings will include social/networking events, dinner meetings with speaker, and a technical tour. Two professional development seminars, one in the fall and one in the spring, are planned as joint meetings with SWE student members. On-going student outreach activities will include: participation in the Philadelphia Regional Future City Competition and other Engineers' week events; staffing hands-on workshops for Girl Scout programs, our Engineering Mini-Camp for High School Girls, and the AAUW Touch the Future Program; judging at county and region science fairs; section scholarship and Certificate of Merit awards; and serving as SWE counselors to local SWE student sections. In addition, Section members plan to provide a SWE presence in community events such as the Walk for the Cure breast cancer awareness program.

New Section Officers

Philadelphia Section Officers elected for FY04 are:

President	Heather Bernardin
Vice President	Lisa Colosimo
Section Representative	Susan Best
Treasurer	Barbara Faust
Secretary	Carole Stowell

New Website

Thanks to Philadelphia Section Web Master Rachel King, we now have a new website and our own registered domain name - www.swephila.org. Details of meeting and other sections events will be posted as the information becomes available. Please check the website for current updates.

Workshop Presenters Needed for Girl Scout Junior Jamboree

Junior Jamboree 2003 for the Freedom Valley Girl Scout Council will be held on October 3-5 at Camp Tohikanee (near Quakertown, PA). This year's theme is *The Early American Girl*. We have been requested to present our *Chocolate Asphalt* workshop on Saturday, **October 4th**; other SWE workshops are also welcome. There are four 30-minute workshop sessions, with the first starting around 9:00 am. If you are available to help with *Chocolate Asphalt* or wish to present another SWE workshop, please contact Barbara Faust at 215-257-6463 or Barbara.Faust@swe.org.

Join the SWE-Philadelphia Team for a Five-Mile Walk to Fight Breast Cancer

by Nicole Johnson

Sunday, **October 12**, 2003 is the date for the fourth annual Making Strides Against Breast Cancer Walk in Philadelphia, and a team from SWE will again "fun raise" for this important cause. This five-mile walk to benefit the American Cancer Society starts at the Philadelphia Museum of Art, proceeds down West River Drive, and returns to the Art Museum.

By giving just a few hours to collect pledges and walk on October 12, each of us can make a difference! Our goal is to have 15 walkers to raise \$1,500.00 for this cause. You can support our effort by walking and raising pledges, OR with a financial contribution to someone who is walking.

For more information, or to make a donation, contact Nicole Johnson at 215-966-5378, njohnson@psit.org or nmjworld@yahoo.com. To register to walk with our team or to make a donation, you can also visit www.cancer.org/stridesonline, select Pennsylvania, Philadelphia, and look for the SWE-PHILA Team website. **TOGETHER WE CAN MAKE A DIFFERENCE!**

The **SWE OBJECTIVES** are:

- *to inform young women, their parents, counselors, and the general public of the qualifications and achievements of women engineers and opportunities open to them;*
- *to assist women engineers in readying themselves for a return to active work after temporary retirement;*
- *to serve as a center of information on women in engineering; and*
- *to encourage women engineers to attain high levels of educational and professional achievement.*

I can remember with amusement the shock it was to the ladies of my mother's generation when I said that I hoped to live to see the day when every domestic servant would live in her own home, and be able to ask and get adequate wages, good working hours, and a choice of other occupations if she had the capacity and the wish for it.

Lillian Moller Gilbreth (1878-1972), Management Consultant and Mother of the household described in *Cheaper by the Dozen*

Philadelphia Section Highlights for FY 03

Overview

SWE-Philadelphia had a busy year, with at least 20% of our Section members participating in one or more local SWE activities. In addition, several members were active on SWE regional and/or national committees. We provided \$7000 in scholarship awards to outstanding female students enrolled in engineering, computer science, or engineering technology programs at schools located within the Philadelphia Section boundaries. We awarded Certificates of Merit to 245 girls from 82 high schools in our section. We also served as judges and provided awards for the Philadelphia Regional Future City Competition, the Bucks County Science Fair, and the

Delaware Valley Science Fairs. In spite of the bad February weather, 65 high school girls, 50 parents, and 35 volunteers turned out for our Fourth Annual Engineering Mini-Camp. More than 70 girls participated in our engineering workshops at the Freedom Valley Girl Scout Junior Jamboree and about 35 middle school girls at the AAUW Touch the Future Program. Although bad weather and scheduling problems interfered with our planned business communications seminars in FY03, we anticipate success for the FY04 seminars. Program highlights and information about our student award winners are summarized in this newsletter.

Membership and Other Networking Events

- Dinner meeting on October 22 at Chumley's, King of Prussia: Intelligent Search. Pamela J. Ciccantelli, Recruiting Specialist, provided advice on "Finding the best talent for your company and the best company for your talent."
- Dinner meeting on November 14 Williamson's, Horsham: Nutritional Eating for the Holidays. Alice N. Johnson, Nutritionist, shared tips for maintaining good eating habits while enjoying holiday gatherings.
- SWE Interest Group meeting at Lockheed Martin NESS in Moorestown, NJ: organized by Doreen Nixon, Director of Mechanical System Design, with addresses by Carl Banner, VP of Technical Operations in Moorestown; Maggie Schwartz, SWE-Philadelphia; and Rosalie Phelan, SWE-NJ Section. Over 90 women signed up for the kick-off meeting on September 17, 2002 to introduce SWE to the technical women at that location. Other SWE-Philadelphia participants included Barb Faust, Rachel King, and Susan Hougendoubler. At least two subsequent meetings were held and several of the women participated in the workshops held to acquaint students with engineering during Engineers' Week.
- Joint SWE-Widener Student Section, SWE-Philadelphia, and SWE DelMar Section Meeting on March 26 at Widener University: Power Tools for Women: Plugging into the Essential Skills for Work and Life. Author Joni Daniels provided advice on finding the interpersonal tools and strategies to access the power you already possess and how to transfer that power from the kitchen to the boardroom and back.
- Joint Dinner Meeting with ASCE, Women's Transportation Seminar, American Concrete Institute, Institute of Transportation Engineers, and Swarthmore ASCE and SWE Student Sections on March 20, 2003 at the Union League in Philadelphia: SEPTA's Vision, Faye Moore, General Manager of SEPTA was the featured speaker.
- Awards Banquet on April 24 at Williamson's, Horsham to honor our FY03 scholarship recipients and to recognize our corporate sponsors.
- Sub-section meetings: Montco sub-section at Bertucci's in December and June
- Participation in the Making Strides Against Breast Cancer Walk on October 13; SWE raised \$462; the team included Nicole Johnson, Lisa Colosimo, Lisa's dog, and a prospective new section member
- Participation in Region and National Events
 - ▶ Maggie Schwartz represented our section in SWE business meetings at the National Conference in Detroit on October 9-11, 2002 and at the Region E Conference in Hampton VA on March 30, 2003
 - ▶ Susan Best served on the Region E and National Bylaws Committees
 - ▶ Barbara Faust served on the national Scholarship and Career Guidance Committees
- Jen Wetzel was a finalist for the Engineers' Club of Philadelphia Young Engineer of the Year award

More Philadelphia Section Highlights for FY 03

Student Outreach and Award Programs

Freedom Valley Girl Scout Council Junior Jamboree 2002

By special request, we presented our Chocolate Asphalt workshop on October 5, 2002 at Camp Towihanee near Quakertown, PA. Over 70 girls and SWE-Phila members Carole Stowell, Maggie Schwartz, and Barb Faust participated in the workshops.

Philadelphia Regional Future City Competition

Teams of 7th and 8th graders from 41 schools signed up for this competition that included designing a city of the future, building a working model of a portion of their city, writing an essay about city planning and design issues, and verbally presenting their city design to a panel of judges from the engineering, planning, and architectural communities. Judging took place at Widener U on January 25, 2003. SWE-Phila members served as Volunteer Coordinator (Jen Wetzel), Judging Coordinator, (Susan Best), Preliminary Judge (Laura King), Essay Judge (Maggie Schwartz), and SWE Special Award Judge (Nicole Johnson). SWE-NJ member Margaret Lyons served as a School Mentor, and SWE student members from Drexel University served as general volunteers.

The **SWE-Philadelphia Section Award** of \$200 for the project that best incorporates “**Quality of Life**” considerations (i.e., ergonomic features) in the city design was awarded to the Carl Sandburg Middle School.

11th Annual AAUW Touch the Future Program

For the third year, SWE-Philadelphia participated in the Touch the Future (TTF) program sponsored by the American Association of University Women (AAUW) for middle school students. At this event, which was held on March 29, 2003 at the Pennfield Middle School in Hatfield, PA, each student could participate in up to five 30-minute workshops that represent a wide range of scientific and engineering activities. Keynote speaker Dr. Dolores C. Oreskovich, Sensory Research Scientist at the Hershey Foods Technical Center, set the tone for a fun-filled day with her talk on “A Sweet Career in the Sciences” that described what is involved in sensory testing of Hershey Chocolates (-yes, a lot of taste testing is involved, but somebody has to do it!). In addition to workshops in the classrooms, the cafeteria is turned into a large lab with hands-on activities for all in areas such as math, pasta physics, geology, the senses, optical illusions, and a Van de Graff generator. About 36 middle school girls and several high school “helpers” took part in the three Roller Coaster Workshop conducted by SWE-Phila member Barb Faust.

SWE-Widener Engineering Mini-Camp

Each high school girl could experience 4 of 9 different workshops in our Fourth Annual SWE-Widener University Engineering Mini-Camp for High School Girls that was held at the Widener campus on February 15, 2003. Snowy weather notwithstanding, participants in this event included 65 high school girls, 50 parents, and 35 volunteers representing undergraduate and graduate engineering students, engineers, and engineering professors from a range of engineering disciplines. The SWE member volunteers from the Philadelphia and DelMar Peninsula Sections included Vicki Brown (Widener CE Dept Chair, organizing & coordinating), MaryAnn Skeehan, Carole Stowell, Christine El-Beyrouy, Maggie Schwartz, Antoinette MacIntyre, Barb Faust, Lesley Aulick, Susan Gianntonio, Ayana Wood, Amy Koser, Cathy Swanson, Yun Gong, Jerry Maffia, Renee Nussbaumer, Johanna Rovira, Kelly Reese, Diane Ess, Tracey O’Keefe, and Veronica Graver. Undergrad and graduate student volunteers included Sabrina Chowdhury, Michelle Marolda, Monica Sweeney, Lindsey Smith, Shiny Mather, Colleen Colarik, Jackie Shea, Denise Day, Jen Hayes, Melissa Devlin, Renee Robert, and Nancy Wong.

Container Design Project

Sister Alice Hess, IHM, a secondary mathematics teacher at Archbishop Ryan High School in Philadelphia conducts a five-week project to teach her calculus students methods of problem solving through an industrial engineering environment. Students work in teams to develop a proposal for the design of a practical container suitable for a specific product (e.g., pop corn, hot coffee, soda, cereal, to transport something). The designs must include consideration of at least three different shapes, surface area, and at least three other criteria such as cost, usability, aesthetics, liability, or environmental impact. The proposal must also include a justification (decision matrix) for each of the design options considered. This project was developed to provide calculus students an experience in using the derivative in a real-life application of a min-max situation and to awaken students to the importance of sharing responsibility, group dynamics, effective use of resources, meeting deadlines, and articulating mathematics in oral and written form. Sister Alice has been honored with a national educator award for this project. For more information, contact Sr. Alice at Ahess@juno.com.

For the past few years, SWE members have served on the Review Board to evaluate the proposal presentations, question the team members, and critique the design. Barb Faust and Doreen Nixon served on the Review Board held on May 27, 2003.

More Philadelphia Section Highlights for FY 03

Student Outreach and Award Programs Continued

Outreach to Local College Students

As a general practice, students are invited to Philadelphia Section events and student meal costs are subsidized by the section. SWE-Phila members also serve as SWE Counselors to local SWE Student Sections to provide a liaison between the students and the Section. SWE Counselors for FY 03 included: Louise Melchor - University of Pennsylvania, Heather Bernardin at Villanova University, Susan Hougendobler at Drexel University, and MaryAnn Skeehan at Widener University.

Certificate of Merit Program

SWE-Philadelphia participates in the national Certificate of Merit program to recognize high school girls who have achieved three years of excellence in their math and science courses and who are active in their school or community. This year we awarded personalized certificates to 245 girls from 82 schools within our area. Section members who participated in the school award ceremonies included Ayana Wood, Frann Shore, Jen Garner, Jen Wetzels, Barb Faust, Alice Lenthe, and Maggie Schwartz.

Science Fair Awards

SWE-Philadelphia provides Special Awards for the best engineering or engineering-related projects by girls in science fair competitions within our area. We have learned that of the 14 science fair categories, eligible projects may have been entered by the student in the in the categories of Engineering, Physics, Computer Science, Earth and Space Science, Mathematics, or Chemistry. In FY03, we provided special judges and awards for the Bucks County and Delaware Valley competitions. SWE-Philadelphia members also served on the SWE-Lehigh Valley Special Awards team for the Lehigh Valley competition. We are pleased that several of the our SWE award winners were also selected as "Category" winners who advanced to the next level of competition. Each SWE award recipient receives a personalized SWE Science Fair Award Certificate. The SWE First and Second Place awards also include a book (e.g., *The Way Things Work*, *How Stuff Works*, *Science Encyclopedia*, *Scientific Inventions*) or a book gift certificate to Waldenbooks for \$50 or \$35.

The **Bucks County Science Research Competition** was held on March 11, 2003 at Delaware Valley College: Barb Faust and Maggie Schwartz served as Special Awards judges. In addition to a book or a book gift certificate for First and Second Place, each of the SWE First Place, Second Place, and Honorable Mention winners received a personalized SWE award certificate. Recipients of the SWE Awards for the Bucks County competition are:

C Fair for 10th, 11th, 12th grade students

First Place: Maria Rozploch, 10th grade, Villa Joseph Marie High School, *Correcting the Errors - A Quantitative Analysis of Forward Error Correction*

Second Place: Elena Glassman, 11th grade, Central Bucks High School West, *Brain-Computer Interface for the Muscularly Disabled*

Honorable Mention: Maria-Teresa Grinneby, 10th grade, Villa Joseph Marie High School, *Go with the Flow: Determining the Difference in Air Restriction in Various Vehicles*

D Fair for 9th grade students

First Place: Erin Coonelly, Villa Joseph Marie High School, *To Percolate or Not to Percolate*

Second Place: Molly MacMillan, Unami Middle School, *The Need for Speed*

Honorable Mention: Nicole Perkins, Unami Middle School, *Titanium vs. Stainless Steel, Which is Stronger?*

Erin and Molly advanced to the next level of competition at DVSF.

E Fair for 6th, 7th, and 8th grade students

First Place: Caroline Lang, Independence Home School, *Factors Affecting Fragmentation in a Model of Cooling Lava*

Second Place: Stefanie Graefe, Log College Middle School, *Hydrodynamic Hull Designs*

Honorable Mention: Alyson Pierce, Unami Middle School, *Mixing and Mingling*

Caroline and Alyson advanced to the next level of competition at DVSF.

The **Lehigh Valley Science Competition** was held on March 22, 2003 at Lehigh University. SWE-Phila members Barb Faust and Lindsay Mussleman served on the SWE Lehigh Valley Special Awards judging team.

More Philadelphia Section Highlights for FY 03

Science Fair Awards, continued

The **55th Annual Delaware Valley Science Fairs** (DVSF) was held on April 2, 2003 at the Fort Washington Expo Center. Student competitors in this event are medal winners from the 12 regional fairs in Delaware, Southern New Jersey, and Southeastern Pennsylvania. DVSF awards First Place, Second Place, Third Place, and Honorable Mention for each of the 14 judging categories in each of the five fairs in the competition. The overall DVSF medal winners in the upper four fairs (high school students) and teacher/advisor for the Gold and Silver Medal winners earned an all-expense-paid trip to the 54th International Science and Engineering Fair (ISEF) that was held this year on Cleveland, Ohio on May 11 through 17. The eight DVSF gold and silver medalists also won the right to compete against medal winners from other regional fairs throughout the U.S. and the world. SWE-Phila Special Awards judges included Maggie Schwartz, Carole Stowell, Catherine Jeffries, Betty Jacob, and Laura King. Each of the SWE First Place, and Honorable Mention winners received a personalized SWE award certificate and a book or a book gift certificate. (Note: because of a recording glitch, this year we had only two categories - First Place and Honorable Mention). Recipients of the SWE Special Awards at DVSF are:

Delaware Valley Science Fair (12th Grade)

First Place: **Lisa De Obaldia**, Moorestown High School, *Examining the Role of Multi-Drug Resistance (MDR) Pumps in Resistance to the Immunosuppressive Drug FK506 in Saccharomyces Cerevisiae*. Lisa also won First Place in Microbiology and was named a Gold Medalist, which advanced her to the ISEF competition

First Place: **Emily Williams**, Souderton Area High School, *Liquid-Solid Phase Transitions of Crystals III Liquid Crystal Alignment*. Emily also won First Place in Chemistry.

Marie Curie Science Fair (11th Grade)

First Place: **Elena Glassman**, Central Bucks High School West, *Brain-Computer Interface for the Muscularly Disabled*. Elena also won First Place in Computer and was named a Gold Medalist, which advanced her to the ISEF competition where she received a highest award and was named one of three recipients of the ISEF Young Scientist Award.

First Place: **Deborah Wlodarczyk**, Northeast High School, *Pyrite Give Off*

Ben Franklin Science Fair (10th Grade)

First Place: **Monjir Bakshi**, North Penn High School, *Smallpox! A Search for the Ideal Mathematical Model of Epidemiology*. Monjir also won First Place in Mathematics

First Place: **Ashley Hinkle**, Lehigh Valley Christian High School, *Static Electricity and How It Can Be Used*

Honorable Mention: **Katherine Barteau**, Charter School of Wilmington, *Can UV-Visible Spectra Measure Redox Properties of HPA Catalysts?*

Honorable Mention: **Daina Andries**, Academy of Notre Dame de Namur, Villanova, *Where in the World Is Here?*

Benjamin Banneker Science Fair (9th Grade)

First Place: **Jen Kesilman**, Pennbrook Middle School, Twisted Windmill Blades. Jen was also awarded Second Place in Engineering.

First Place: **Sarah Genter**, The Pilgrim Academy, *Which Algae with Protozoan Characteristics Recycles Fecal Material Most Efficiently: the Volvox or the Euglena?*

Honorable Mention: **Joy Zhu**, Unami Middle School, Chalfont, *How Much Calcium Are You Getting?* Joy was also awarded Third Place in Chemistry.

Honorable Mention: **Laura Marczuk**, Penndale Middle School, Lansdale, *Predicting Weather*

Albert Einstein Science Fair (6th-7th-8th Grades)

First Place: **Tiffany Powell**, 7th grade, Sacred Heart Grammar School, Vineland, NJ, *When Opposites Attract*

First Place: **Rebecca Lewis**, 7th grade, Orefield Middle School, *The Weight and Length of Music*

Honorable Mention: **Christie Welch**, 8th grade, St. Agnes-Sacred Heart-Hilltown, *Is Fresh Really the Best?* Christie was also awarded Third Place in Chemistry.

Honorable Mention: **Caroline Lang**, 8th grade, Independence Home School, Yardley, *Factors Affecting Fragmentation in a Model of Cooling Lava*. Caroline was also awarded First Place in Earth and Space Science.

The **SWE Vision** is to be the recognized authority on, and advocate for, women in engineering.

More Philadelphia Section Highlights for FY 03

Philadelphia Section Scholarship Award Program

The SWE-Philadelphia Scholarship Program provides awards for full-time undergraduate and graduate female students enrolled in an engineering, engineering technology, or computer science program at a school located within the Section's geographic boundaries (essentially all of southern Pennsylvania east of the Susquehanna River). The criteria for selection includes academic performance, science/math/engineering activities, teamwork, leadership, and an essay on the student's personal motivations for studying engineering. Thanks to the generosity of corporate and member sponsors, this was the ninth year that we were able to provide financial assistance to women students in our area. This year we provided seven scholarship awards of \$1000 each, with named awards to honor donors of \$1000 or more. We are pleased to announce the following FY03 Scholarship Award recipients.

Emily Rose Blem: Lockheed Martin-NESS Award

Emily is a junior in Electrical and Computer Engineering at Swarthmore College. She originally did not plan on a career in engineering, but was pointed in that direction by a high school math teacher. Today Emily is president of Swarthmore's SWE section where she has organized many section events. She runs a weekly homework clinic for sophomore engineering students and is working on a model solar car project with high school students from Chester. When Emily graduates from Swarthmore next year she will be the first four-year degree holder in her family.

Sabrina Chowdhury: Lockheed Martin-NESS Award

Sabrina is a junior in Mechanical Engineering at Widener University. Since she was young, she had an interest in how things worked as well as the math and science fields. Sabrina is currently the president of the American Helicopter Society, is active in the American Society of Mechanical Engineers, and is the student government representative for the SWE-Widener Student Section. She also tutors freshman engineering students. Her other activities include captain of the women's soccer team, participation in the music program and the school honors program.

Renee Robert: Merck Award

Renee is a sophomore in Civil Engineering at Widener University. She is the secretary for the American Society of Civil Engineers Chapter and treasurer of the SWE-Widener Student Section. She assisted with the SWE Engineering Mini-Camp for High School Girls held at Widener. She is also involved with the Delaware Valley American Concrete Institute Concrete Beam Competition and the Fiber Reinforced Polymer Composites Competition. Renee has been awarded a department laptop and the Bartholomew Scholarship; she has been on the dean's list each semester. Renee is also on the Civil Engineering Department Advisory Committee.

Marla K. Stump: PECO Award

Marla is a sophomore in Bioengineering and Mathematics at the University of Pennsylvania. She is active in SWE, the Biomedical Engineering Society, and the Society of Bioengineers. During the summer Marla

interned at the Barrow Neurological Institute in Phoenix, AZ where she was given a project to study a form of brain cancer. Other activities that she is involved with include the Campus Crusade for Christ, Church of the Savior, Alpha Phi Omega, running, reading, hiking, and swimming.

Susan Christensen: PECO Award

Susan is a senior in Engineering and Linguistics at Swarthmore College. She is the treasurer of the SWE-Swarthmore Student Section, president of Tau Beta Pi, and active in the American Society of Mechanical Engineers. Susan has been appointed to the College Judiciary Committee and the Housing Committee. She also mentors students in her dorm and oversaw a linguistics clinic. Her other activities include juggling, ice hockey, ultimate Frisbee, and Scottish and English country dancing. Susan plans to pursue a graduate degree.

Mercy Obi: Philadelphia Section Award

Mercy is a senior majoring in Electrical Engineering at Temple University. She is the Vice President of the SWE-Temple Student Section and President of IEEE Student Chapter. She has helped to revitalize both the SWE Student Section and the IEEE Chapter at Temple. Mercy was nominated for the IEEE "Outstanding Student Member of the Year" and was nominated by the Chair of the Engineering Department for Outstanding Services. Mercy has overcome many obstacles to get to where she is today. She dreams of returning to Nigeria to help build the country's communication system as well as encouraging young woman there to study engineering.

Melissa Simon: Philadelphia Section Award

Melissa is a sophomore in Bioengineering at the University of Pennsylvania. Her interest in bioengineering stemmed from personal experience with several heart abnormalities. She is an active member of the SWE student section and she is the Director of Scholarship for the Alpha Phi Sorority. Melissa was also involved in the Big Sisters of Philadelphia program. She is currently working as a student in one of her professor's labs studying the effects of brain injury on a cellular level.

Around the Region and Student News

DelMar Peninsula Section

The DelMar Peninsula Section will be hosting the **Region E Student Leadership Summit** at the University of Delaware on October 24-26. A very active core team is in place to confirm logistics and content for the conference as well as pursue fund raising and sponsorship to make this a banner event. With 50 schools in our region, as many as 100 students may participate. Tricia Bailey and Michele Sick are co-leaders for the conference. They are working closely with Region E student leaders to design the conference to meet the needs of the student sections. As a relatively small section, this is a big undertaking that will demand enthusiasm and commitment from our members. If you are not already involved and would like to play a role in developing the future leaders of SWE, please contact Tricia (tricia.a.bailey@usa.dupont.com) or Michele (michele.l.sick@jci.com).

Upcoming events include:

Chadds Ford Winery Tour on Saturday, September 20, 2-4 pm. Get your taste buds ready!

Luncheon, coordinated by Lupe Reynolds, Monday, September 29, 11:30-12:30. If you missed the kick-off meeting in August, why not come and catch up with friends about summer happenings?

For more information, contact any of the FY 04 Section Officers:

Kerry Riek President 302-738-1188 x359 riekka@ace-net.com

Amber Shook Vice President 856-540-2267 amber.m.shook@usa.dupont.com

Cindy Scott Secretary 410-506-8971 cscott@wlgore.com

Vicki Land Treasurer 302-429-3338 vicki.land@conectiv.com

Janet Anderson Section Rep 856-540-3651 janet.anderson@swe.org

A New Web Site Seeks to Increase Minority Students' Use of Federal Scholarships

By Brock Read

In an effort to increase the number of minority students who take advantage of federally funded scholarship and job opportunities, a government agency has created a Web site consolidating information on such programs.

The site, called e-Scholar (<http://studentjobs.gov/e-scholar.htm>) and designed by the U.S. Office of Personnel Management, lists government scholarships, fellowships, grants, and internships geared to high-school, undergraduate, and graduate students. At present, the site features about \$400-million in scholarships, according to Barry K. Williams, a special assistant in the personnel office who is head of the e-Scholar project. The site will expand as information on additional programs becomes available, he said on Friday at a news conference at American University here. The e-Scholar site contains details on internships for

minority students, opportunities to travel abroad, and specific programs, like the White House Fellows program. The site also offers advice on creating résumés that will appeal to government employers. Mr. Williams developed e-Scholar after conversations with officials at historically black colleges, who argued that an online compendium of federal programs would broaden the pool of applicants.

"I was frustrated by the extent to which applications for federal scholarships and fellowships were determined by students' access to the information about them," said Kay Coles James, director of the Office of Personnel Management. "This site is an invaluable resource for students of all backgrounds," said Leonard Spearman, executive director of the White House Initiative on Historically Black Colleges and Universities.

Applications for Astronaut Class

Application forms and additional information about the Astronaut Candidate Program are available from the Astronaut Selection Office in Houston by phone at 281-483-5907, by letter to the Johnson Space Center, Astronaut Selection Office, Mail Code AHX, Houston, Texas 77058-3696, or electronically through the Astronaut Selection Office website at: www.nasajobs.nasa.gov/astronauts/. Typically, successful applicants for the mission specialist astronaut positions have significant qualifications in engineering or science, while pilot candidates must have extensive experience flying high-performance jet aircraft.

The application deadline for the Class of 2004 was July 1,

2003. Applications received after July 1 will not be considered for the 2004 class but will remain on file for subsequent selection cycles. The Astronaut Candidate Class of 2004 also will include educator astronauts, teachers who will join NASA's astronaut corps and encourage students to pursue studies in math and science. The Educator Astronaut Program (EAP) was announced in January, and applications closed April 30. More than 1,100 EAP applications have been processed. Information about the Educator Astronaut Program is available on the Internet at: <http://edspace.nasa.gov>. For more information about NASA and the Human Space Flight Program on the Internet, visit: www.nasa.gov-end.

Professional Development

Educational Programs for Fall 2003

Courses offered by **The Engineers' Club of Philadelphia** for Fall 2003 are listed below. Two Continuing Education Units (CEUs) may be granted for each course. Upon request, the 2004 dues and application costs for initial membership in The Engineers' Club of Philadelphia will be waived for those taking an 8, 9, or 10 session Engineers' Club course. For registration and detailed course information, please call Tom Payne, Director of Education, at 215-985-5701 or e-mail: info@engrclub.org.

Construction

- C-1 The 2003 International Building Code - 10 weeks starting Mon 9/15/03, 6-8:30 pm, \$600
- C-2 Home and Building Inspection - 10 weeks starting Mon 9/22/03, 6-8 pm, \$500
- C-3 Construction Project Management - 8 weeks starting Wed 9/24/03, 6-8:30 pm, \$500; Option to take 4 sessions of Planning & Scheduling for \$275 or 4 sessions of Estimates & Financial Control for \$275
- C-4 Owners Representative for Construction - 9 weeks starting Thurs 9/35/03, 6:30-8:30 pm, \$500
- C-5 Contracts, Specifications, and Law for Contractors and Engineers - 10 weeks starting Mon 9/22/03, 7-9 pm, \$500

Electrical

- E-1 Basic Protective Relaying - 10 weeks starting Wed 9/17/03, 7-9 pm, \$500
- E-2 Fiber Optics & Network Wiring - 12 weeks starting Tues 9/16/03, 6:30-8:30 pm, \$650

Fire Protection Engineering

- F-1 Fire Alarm & Detection Systems - 10 weeks starting Mon 9/22/03, 7-9 pm, \$500
- F-2 Advanced Sprinkler Systems Design - 10 weeks starting Wed 9/17/03, 6-8 pm, \$500

Mechanical

- M-1 Heating & Ventilation - 10 weeks starting Thurs 9/18/03, 7-9 pm, \$600
- M-2 Basic Piping Design - 10 weeks starting Tues 9/16/03, 6:30-8:30 pm, \$500
- M-3 Air Conditioning - 10 weeks starting Wed 9/17/03, 7-9 pm, \$500

Fall 2003 Engineering Tours of the Delaware Valley

The Engineers' Club of Philadelphia sponsors a series of tours geared to the technical professional. Participants may be awarded 2.5 Professional Development Hours (PDHs) per tour for P.E. license renewal requirements. Anyone can participate in these tours; Club membership is not required. The cost is \$10 per person per tour; Engineers' Club members and one guest may attend at no charge. Tour group size is limited to 40 persons and participants must be at least 12 years old. Tour reservations are on a "first come, first served" basis. For more information, please contact The Engineers' Club directly by phone at 215-985-5701, e-mail to info@engrclub.org, or Fax to 215-985-5704.

STARS Radar Traffic Control System at the Philadelphia International Airport on Saturday, October 18, 2003 at 10 am - Philadelphia International Airport is the first to employ the STARS (Standard Terminal Automation Replacement System) developed by the Raytheon.Co.

Dockside Residence at Pier 30, Philadelphia, PA on Saturday, October 25, 2003 at 10 am - See this magnificent structure that is built atop old Pier 30 on the Delaware River waterfront and was named the Notable Engineering Achievement of 2003.

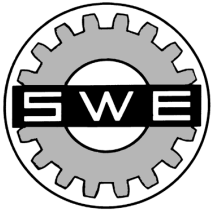
Eastern State Penitentiary, Philadelphia, PA on Saturday, November 15, 2003 at 10 am - Visit the central rotunda, restored cells, the solitary confinement yards, the baseball diamond, death row, and Al Capone's cell - all part of this historic prison.

Academy of Music Restoration, Philadelphia, PA on Wednesday, November 19*, 2003 at 10 am - See the recent renovations and structural improvements to "The Grand Old Lady of Locust Street."

*Date may change because of rehearsal schedule.

SWE-Philadelphia Professional Development Seminars

This year SWE-Philadelphia plans to offer two professional development seminars - one in the fall and one in the spring - for developing your business communication skills. Section members Barbara Faust and Susan Best will share some up-dated best practices learned from many years of personal experience. Andrea Martinez, a VP with the Society of Hispanic Engineers - Greater Philadelphia Chapter, is interested in partnering with us on a professional development series that will feature monthly seminars. For more information about the Society of Hispanic Engineers and their activities, please contact Andrea at a_r_martinez@yahoo.com. We will publish information on upcoming events as the schedule is firmed up.



SWE Philadelphia Section
The Engineers' Club of Philadelphia
215 South 16th Street, Suite 36
Philadelphia, PA 19102

Address Correction Requested

Visit our new Web Site at <http://www.swephila.org>
Contact Us by E-mail: phila_info@swe.org

SWE Philadelphia Section Newsletter September 2003

2003-2004 Kick-Off Party Welcome Happy Hour Social Event

Welcome meeting for new section members and an opportunity to network and meet new people

Monday, September 8, 2003

6:00 to ? pm

Champps Americana, King of Prussia, PA

RSVP to Megan Kline by September 5, 2003

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Thank you!