The American Society of Mechanical Engineers

Philadelphia Section Newsletter

www.sections.asme.org/philadelphia January 2005

Dear Members,

We had a very interesting session on October 19 on Introduction to Intellectual Property Law by Mr. Anthony Colesanti. Intellectual property plays an important role in technology and its development. It was interesting to know how the law plays a significant role in an inventor's life.

We also enjoyed the joint meeting with Instrument Society of America, Cherry Hill, NJ.

We, at ASME Philadelphia Section work towards creating awareness amongst the school students to carve their future towards Engineering. We also organize tours to various plants/facilities, work with the school students to promote engineering, work with the ASME student sections, and organize lectures of interest. The Section is always interested in hearing from the membership about new ideas, suggestions for previously unexplored activities, and for volunteers willing to contribute to running the section as part of the executive committee. The ASME can offer professional development courses. The executive committee is interested in your interests and choices. I strongly encourage you to contact one of our members to find out how you can help.

Come join our executive committee and help promote Engineering!

I read this interesting quote and thought I would share it with you:

To the optimist, the glass is half full. To the pessimist, the glass is half empty. To the engineer, the glass is twice as big as it needs to be.
Source: http://www.tallrite.com/LightRelief/engineers.htm

Did you know:

The Marvelous Copy Machine...
Ever been an intern? If so, you know a lot about making copies. You can thank mechanical engineers for the technology that enables you to do so. The dry-copying process was invented in 1937. This process, according to the American Society of Mechanical Engineers, involved "applying an electrostatic charge on a plate coated with a photoconductive material." Chester Carlson, a patent attorney, created the process, and in the next year he managed to transfer that image to paper. With the foundations laid, mechanical engineers from the Battelle Memorial Institute and the Haloid Company stepped in and improved the process. The first Xerox machine, the Model A, appeared in 1949. (From American Society of Mechanical Engineers)

...and the Marvelous Player Piano
Mechanical engineers have their musical side—they were responsible for much of the technology that gave us the music rolls for player pianos. The master rolls used in player pianos were often recordings of performances by famous musicians—Stravinsky, Gershwin, and Ellington, for example. Recording their playing was the job of the Q-R-S Marking Piano, which was developed in 1912. This piano recorded actual piano playing by using a stylus, a carbon cylinder, and a roll of paper to record the notes; the carbon marks were later punched out. The machine was created by Melville Clark, from Chicago, and the Q-R-S piano's popularity lasted from 1912-1931, with a brief resurgence in 1972. (From American Society of Mechanical Engineers)

The section would like to reduce mailing costs in order to provide more member services. One way that members can help is to receive the newsletter electronically (email) instead of by mail. If you would prefer to receive the newsletter by email please contact John J. Wolf at John.J.Wolf@villanova.edu

I would like to hear from you. Please feel free to call me at 215-740-2819 or email me at plal@ltk.com.

Thank you,
Pallavi Lal

Upcoming Section Meetings

Saturday, January 29
ASME/AIAA Symposium
Plymouth Meeting, PA

Thursday, February 17
Tour of the American Helicopter Museum
West Chester, PA

See page 3 and 4 for directions and information

FIRST Robotics Competition

You may have seen the competition on ESPN or 60 Minutes or even read about it in a countless number of national newspapers. Each year tens of thousands of high school students get a hands-on, inside look at the engineering profession by teaming up with engineers from businesses and universities to brainstorm, design, construct and test their "champion robot". The teams then have the opportunity to compete at regional competitions and the national event held at Walt Disney World's EPCOT Center in April. The competitions are spirited, no-holds-barred tournaments complete with referees, cheerleaders and time clocks.

The Foundation for the Inspiration and Recognition of Science and Technology (FIRST) organization generates

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interest in science and engineering among today's youth through many different measures. A major vehicle for accomplishing this is the FIRST Robotics Competition. ASME International and the FIRST organization signed an agreement of affiliation whereby the two would work together to achieve this goal.

The FIRST organization in Philadelphia is looking for mentors to assist with this year's competition which is held in the Spring. Mentors are needed beginning in September to assist students with their projects. If you would like to help and for more information about ASME's role, contact Edie Ervin, via phone: 212-591-7448, or e-mail: ervine@asme.org. Visit the web site, http://www.usfirst.org for more information.

Future Cities Competition

The Philadelphia Future Cities Competition is held every year in January and every year the section has members who help judge the local event.

Future Cities is a competition among 7th and 8th graders, in which teams design their "city of the future." The competition consists of several steps, including designing the city using computer simulation, building a model of the city, and presenting their city to the judges.

Each school in the competition presents their unique view of their city. Real problems are considered, including power generation and storage, transportation, and environmental concerns. Some cities are situated in the desert, some under or on the ocean, and some in space. There is certainly no shortage of imagination! Energy sources for the cities range from solar, to wind, to anti-matter.

The next contest is on January 29, 2005. If you can't make the ASME/AIAA symposium in Plymouth Meeting, plan on helping as a judge at the Future City Competition. It will be held at Villanova University.

If you would are interested in judging or participating as a consultant to a team, contact one of the section officers for more information. More information is available at www.futurecityphilly.org. You can also sign up to volunteer at this web site.

Proposed Section Officers 2005-2006

The following list is the proposed officer slate for the year 2005-20065.

Chair	Kevin Keenanl
Vice Chair	Lou Fendo
Secretary	Vacant
Treasurer	Dean Cave
Senior Director	George Silvestri
Junior Director	Vacant

You can nominate someone for one of the offices or fill one of the vacant positions. We are looking for members to become active in the section management. If you would like to participate in section administration, contact one of the officers listed at the top of this page.

Newsletter by Internet

One of the major expenses for the section is cost of preparing this newsletter. In the past we have asked members if they would be willing to read the newsletter on the Internet. A PDF file with this newsletter is currently on our web site and can be read if you have the Adobe Reader on your computer. If you would be willing to read the newsletter on the web, let the editor know and you will be added to the Internet group.

With each issue, you will receive an email letting you know that the latest issue is on the web for you to read. If you do not currently have the Adobe reader, instructions and a link are available to download the reader.

If you have been reading the newsletter on the web in the past and received this copy in the mail, let the editor know so that the web list can be corrected.

Section Fund Raising

The section is about to finish our fund-raising for the Franklin Institute Wright Brothers Collection.

In the last few years our section has had the opportunity to see and touch an extraordinary collection at the Franklin Institute. Just this past year John Alviti, Senior Curator at the Institute, spoke to a section meeting on this collection.

The Institute has a large collection of items and documents which the Wright Estate gave the Institute in

1948. The Wright Brothers used these items during their early work in the invention and development of the airplane. The collection includes the original wind tunnell balances, wind tunnel models, data log books and drawings of the early gliders and the 1903 Wright Flyer. The Institute's web site contains descriptions and images of many of the items (www.fi.edu/wright/collection/index.html).

The collection is generally in very good condition but it needs to be properly preserved for display and study. The Franklin Institute has recently received a grant from the Save America's Treasures Fund to preserve the collection. The grant is a matching funds grant and the Institute must raise $62,000 to match the funds award.

The ASME Philadelphia section is contacting members and aviation companies in the area to ask for help in raising this money. You may have already received a letter or an email about our efforts. If you or your company thinks that you are able to help with this project, please contact the newsletter editor so we can make arrangements for your contribution to save this very important engineering collection.

You can also send contributions directly to the Franklin Institute at the following address.

The Wright Brothers Collection
The Franklin Institute
222 North 20th Street
Philadelphia, PA 19103
Attention: Philip Hammer

Add a note to you check, "ASME Philadelphia Section" to ensure the section's efforts are credited.

Future Section Meetings

In addition to the up coming meetings described on page 4, on March 17, we will hear an update on the Northeast electricity black out of August 2003. Our speaker will be Frank Koza from PJM Interconnection. He will discuss the changes which have been made to the electricity distribution system over the past two years to improve system reliability. The presentation will be held at Villanova University.

Our next meeting on April 19 will be our dinner recognizing our 25 and 50 year members. Our speaker will be J. Allan Tice. Mr. Tice is an Assistant Vice-President and Senior Principal Geotechnical Engineer with MACTEC's Raleigh, North Carolina office. He will talk about the relocation of the Cape Hatteras lighthouse in 2000. The lighthouse was in danger of collapse and the park service decided to move the lighthouse 2900 feet to its new location. Mr. Tice served as the lead geotechnical engineer and was responsible for designing the ground preparation of the move route. The dinner location has not been decided. Watch for further information.

Last Issue's Puzzler

A group of high school students have asked you for advice. They are looking for a course of study in college which will prepare them for a professional career which does not require an advanced degree, licensing or certification. They are seeking a recognized profession and need to start earning a salary to pay off student loans and other debts incurred during four years of college. What advice would you give them and what professions meet the students' requirements?

The answer, obviously, is engineering. We work in probably the only profession which does not require either an advanced degree, certification or a license to earn a living. How do we do this? The major reason is what is known as the industrial exemption. As long as we work for a company which does not advertise engineering services or products, we do not have to be licensed to practice engineering. The company accepts responsibility for our work. We are free to move to other employers and do not have to maintain certification for employment

There are down sides to this situation. The general public knows nothing about what we do. We are invisible. We get quizzical looks when we tell people what we do for a living. Since most people don't understand what we do, we don't get the respect given to other professions. We also have a tendency to become complacent with our knowledge. There is no incentive to continue learning other than our own desire to do so.

Many professional engineering societies encourage members to become licensed. It is not a difficult process but it is also not easy. There is a process which must be followed. Watch for an article in the newsletter which will present and discuss options of professional engineering licensing.

Directions to American Helicopter Museum

Driving south on Route 202 (West Chester bypass), exit at Boot Road. Turn left onto Boot Road and go to second traffic light at Wilson Drive. Turn right onto Wilson Drive (entrance to Brandywine Industrial Park). Take Wilson Drive to traffic light at Airport Road. Turn left onto Airport Road. Take first right turn onto American Boulevard to second building on the left.

Driving north on Route 202 (West Chester bypass), exit at Paoli Pike. At the bottom of the ramp, you will be facing Paoli Pike. Make a left onto Paoli Pike (away from West Chester) go under Route 202 and continue for about a mile to Airport Road. Turn left onto Airport Road and continue .9 mile to the third road on the left which is American Boulevard. Turn left onto American Boulevard to second building on the left.

Additional directions and a map are available at the museums web site, www.helicoptermuseum.org.

American Society of Mechanical Engineers
c/o 223 West Summit Avenue
Haddonfield, NJ 08033

Philadelphia Section September Meeting

Saturday, January 29

Joint ASME/AIAA Symposium, Double Tree Guest Quarters, Plymouth Meeting, PA

Registration: 8 AM – 9 AM
Keynote Speaker: 9 AM – 9:30, Keynote Address - Hon Curt Weldon (R-PA) U.S. Congressman, Pennsylvania
Morning Sessions: 9:30 – 12:15
Lunch : 12:15 – 13:15
Afternoon Sessions: 13:15 – 17:00

This symposium is a joint effort by the local sections of ASME and AIAA to highlight current technology in the Philadelphia area. Session topics include energy and propulsion systems, micro and macro materials, sensors and controls, and vibrations and dynamics For more sign-up and symposium information , see the section web site: www.sections.asme.org/philadelphia. Follow the links to the symposium information.

Fee for the symposium are as follows:

	Regular	Full-Time Student
AIAA/ASME Member	$65.00 (in advance)	Free (in advance)
	$80.00 (at door)	$20.00 (at door)
Non-member	$85.00 (in advance)	Free (in advance)
	$100.00 (at door)	$20.00 (at door)

Call Lana Vernati at Villanova University (610 519 4980) by January 21 to make reservations.

Tour of the American Helicopter Museum
Thursday, February, 17
West Chester, PA

Times: Registration, pizza and sodas 6PM. The tour will last until about 8:30
Cost: $10 for members and guests. No charge for students.

The museum has an interesting collection of pioneering helicopters which are well worth seeing. The section's previous visit was very enjoyable and we expect the same this time with well informed guides to show us the unique machines.
See page 3 for directions.

Call Lana Vernati at Villanova University (610 519 4980) by February 14 to make reservations.