

# The Lobby

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*A newsletter for the students, faculty, and staff of the Mechanical Engineering Department at the University of Wisconsin-Madison*

## ASME and Sustainability

By Mark Trader

*Vice Chair*

World leaders and environmental specialists will be gathering December 7th- 18th in Denmark for the United Nations' Intergovernmental Panel on Climate Control. The agreements made during this meeting will have political, social, financial, and environmental impacts throughout the entire world. Conservationists hope that this meeting will produce one agreement with two purposes: to stress the need for immediate action to curb the high levels of carbon dioxide emissions being produced and to form a legally-binding agreement to ensure future discussions related to the environmental impacts of each nation's industrial processes.

President Obama, who will attend one day of the meetings, plans to set short-term U.S. emissions targets of around 17% of 2005 levels by 2020 and long-term emission targets of around 83% of 2005 levels by 2050. For current engineering students, these daunting goals should cause everyone to rustle in their seats and realize the tremendous opportunities and challenges at hand. ASME's long established commitment to efficiency and safety can help play a role in reaching our national and global emission targets.

Despite the international attention, many are still reluctant to believe that emissions have an impact on environmental conditions. We can agree that there is a significant amount of climate change occurring throughout the globe, but the reasons attributed to those changes vary based on two extremes: on one side it's natural cycles that have always played a role in earth's development, anthropogenic influence on the other side.

Whether one aligns his or her views one way or the other, all can benefit from recalling the words of the former Wisconsin Senator, Gaylord Nelson: "The economy is a wholly owned subsidiary of the environment, not the other way around." He stressed the importance of utilizing natural resources and realized that without appropriate management of these resources, the stability of the economy can be compromised. In the spirit of Senator Nelson and in anticipation of the IPCC meetings in Copenhagen, we must realize that in order to find a more sustainable strategy of resource use and energy production, innovative products and strategies must be developed and applied to all areas of life. Engineers will be on the forefront of this mission and play a critical role in addressing the most important issue of this generation.

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# Exam File, Advising, and Pizza with Professors

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By **Chris Goebbert**  
*Academic Chair*

This year started off with a successful career fair in September. Many employers came and were given resumes of members put together on a CD to help members get noticed for internships or full-time positions. A main goal this semester was to better organize the exam file. The exams were tallied up by course and listed on the website to make it easier for members to see what is offered academically. Many ASME members have both come in to use exams and helped out by

donating their old exams to the file. Throughout the semester, points have been given to members for participating in events, in a friendly competition to see who the most active members are. Donating exams is one way to get those points so make sure to turn in your old ones if you have any!

Another event was the advising session, sponsored by the ASME officers. Old and young alike showed up in preparation for next semester to get the dirt from fellow students on what classes

and professors were good to take, proving to be a successful night. In the works is a “pizza with professors” night, where members have the chance to come and get some free food and the opportunity to chat with professors outside of the classroom about anything, so look for more information about that to come. Well that’s the recap of the semester academically, but keep studying hard and do well on those final exams! If you have any suggestions for future events bring it up at the general meetings or write to [asme@cae.wisc.edu](mailto:asme@cae.wisc.edu).



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## Our Generation!

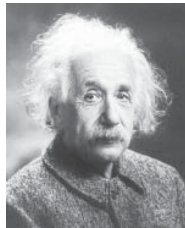
By **Ben Pfeilstifter (Sophomore)**  
& **Mike Kaupla (Freshman)**  
*Undergraduate Representatives*

What is the best thing about the upcoming generation of engineers?

- High academic preparation
- Awareness of context
- Goals to improve the quality of life
- Helpful
- Broader range of talent

What is the worst thing about the upcoming generation of engineers?

- Focus on detail and therefore missing the big picture
- Hard to keep curiosity up as they get a lot of facts thrown at them
- Natural curiosity to ask questions is lacking
- Not focused



What would Albert Einstein think?  
[www.labspace.net](http://www.labspace.net)

*This survey explores our generation of engineers in the eyes of a few random professors.*

What is the most important skill for us engineers?

- How to ask questions
- Ability to see the fundamental problem
- Communication

If you could give a word or two to describe our generation what would it be?

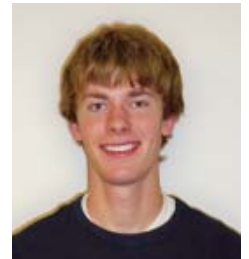
- Hard working
- Concerned
- Responsible
- And a good bunch of kids

Bonus Question: What is your favorite tool?

- Maple
- Oscilloscope
- SEM



Ben Pfeilstifter



Michael Kaupla





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# Fall Initiation Banquet

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**By Chapin Nault**  
*Banquet Chair*

Almost 30 new members, current members, and professors attended this year's Fall Initiation Banquet on Wednesday, October 7th. The night started out with some time for everyone to mingle and get to know the newest additions to ASME while sipping on some delicious punch.

The presentation started with a brief welcoming followed by our guest speaker, Professor Frank Fronczak. Professor Fronczak shared with us some of the history and meaning of the Code of Ethics and how it related to our future and responsibility as professional engineers. He also spoke of the importance of being a member of a professional organization both as a student and in the industry and related it to several experiences he has been involved with, especially relating to patent law.

After Professor Fronczak concluded his speech, Section Chair, Mike Behling, spoke about his per-

spective for the year. He outlined his goals for ASME this semester and in the foreseeable future. Mike also talked about upcoming opportunities for the new members and encouraged them to participate in outreach events, homecoming, conferences, tours, tailgates, and many more.

Mike was followed by the Industrial Relations Co-Chair, Nick Edwards, who led the reading of the ASME Code of Ethics to initiate the new members.

This was followed by the presentation of certificates and pins to new members by the Membership Chair, Adrienne Siu. Fourteen students were initiated into ASME this semester, some old and some new, all were proud to show that they were now official members of the UW-Madison chapter of ASME.

To lighten the mood, everyone participated in a survival game where teams were presented with the hypothetical situation that their plane crash landed in frigid northern Canada miles away from any civilization. Out of the wreckage

they were able to salvage ten items and had to rank the top five in order of importance. Their answers were compared to those given by a former survival training instructor for the Reconnaissance School of the 101st Division of the US Army, Mark Wanvig, and the winners indulged in some tasty treats.

Finally, Mark Trader, Section Vice Chair, ended with some closing remarks thanking everyone for attending and his positive outlook for the upcoming year. And in the highlight of the night everyone dug into two scrumptious cakes to finish things off.

If you missed this banquet, do not fear. There will be another banquet in late spring to celebrate the accomplishments and achievements from throughout the year. This will include the presenting of awards to active members including the infamous All-Star Award as well as the General Member of the Year and freshman through senior of the year. There are plenty of ways to get involved and I encourage everyone to do so...and you just might meet some great new friends while you're at it.

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## **SURVIVAL: A Simulation Game**

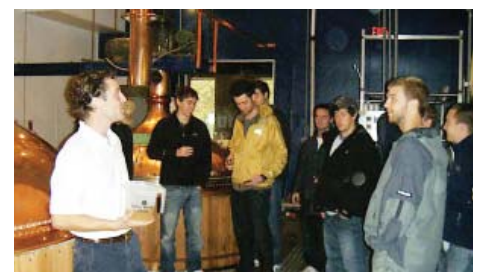
(What is this? Turn to page 3 for the question and source information.)

### **Rankings**

1. Cigarette lighter (without fluid)
2. Ball of steel wool
3. Extra shirt and pants for each survivor
4. Can of Crisco shortening
5. 20 x 20 foot piece of canvas
6. Small ax
7. Family size chocolate bars (one per person)
8. Newspapers (one per person)
9. Loaded .45-caliber pistol
10. Quart of 100 proof whiskey
11. Compass
12. Sectional air map made of plastic



**Left:** IIE Laser Tag Tournament  
**Below (left and right):** Touring Capital Brewery



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# Industrial Relations Updates

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By **Tim Stevens**

*Industrial Relations Co-Chair*

General meetings this fall semester once again were more successful than ever. We were able to fill the seven sponsor spots that we had decided on during the summer. Along with generous donations, each company gave helpful tips for those looking for internships, co-ops, or even full-time positions. Some companies even gave us advice on how to succeed once you do

obtain a full-time job.

For those of you who really want to get involved in ASME, I highly suggest running for Industrial Representative this next spring semester. While filling this position, I was able to network with many UW-Alumni who are currently professionals in their respective engineering fields. Along with building a list of contacts, I was also able to improve the way I meet and greet with the people who basically decide who is or is not going to be

hired by their company. Therefore, if you want the chance to build your networking skills, I highly suggest running for Industrial Representative.

Once again, I would like to thank Flint Hills, Proctor & Gamble, Integry's Group, Nestle, Marathon Petroleum, Rockwell Automation, and Cargill for providing us with generous donations and the advice they gave to our job-seeking students.

Fall  
2009  
Sponsors:



By **Nick Edwards**

*Industrial Relations Co-Chair*

One of the responsibilities of the ASME Industrial Relations chair is to organize ways for the other officers and general members to see how their engineering skills can be put to use in the real world. We try to do this by organizing a few tours each semester of construction sites, manufacturing plants, breweries and other industry sites. During the fall '09 semester, ASME went on tours of Capital Brewery and the construction site for the Wisconsin Institute for Discovery and Morgridge Institute for Research.

The Capital Brewery tour has become somewhat of a tradition for ASME. On Friday, October 23rd twenty-nine ASME members, Pi Tau Sigma mem-



bers and their friends went to Capital Brewery in Middleton to get a better understanding of how the brewing process works and how some of the mechanical equipment functions in the process. Another obvious draw of the tour is the opportunity to sample delicious Capital Brewery originals such as Maibock, Octoberfest, Supper Club, and U.S. Pale Ale. We are very thankful to Capital Brewery and look forward to taking their tour again next spring.

Touring the construction site for the Wisconsin Institute for Discovery and Morgridge Institute for Research (WID/MIR) may not have the immediate draw of a brewery tour, but it turned out to be extremely interesting and allowed the participants to get a better understanding of an industry that mechanical engineers don't see too of-

ten. The tour of WID/MIR focused largely on the enormous, state-of-the-art air and water handling systems for the building. Findorff and Mortenson Construction have made sustainability and energy-efficiency their main priorities in the construction of this amazing building. This facility is sure to be one of the top laboratory facilities in the nation upon its completion in 2010.

The fall '09 semester gave ASME members two great opportunities to see how mechanical engineering fits into industry. Some of the tours that we are looking at doing next semester are Rockwell Automation, Capital Brewery, Ale Asylum Brewery, Union South construction site, and GE Healthcare's Madison facility.



# Outreach Events

**By Adriana Scheiner**  
*Outreach Chair*

This semester ASME members have had the opportunity to volunteer with groups all around the Madison area through many different events hosted by ASME as well as other engineering organizations. ASME worked with high school students and girl scouts alike to show them the importance of science and engineering, and even spent a night trick-or-treating for canned food. With the holiday season right around the corner, ASME will be helping out a family in need and looking into planning for the beginning of next semester. Future events include a construction date set to work with Habitat for Humanity and later, the Polar Plunge to benefit the Special Olympics.

ASME started early in October by bringing 50 high school students from surrounding Madison schools to the engineering campus. Students spent the day speaking with current engineering students, faculty, and getting a feel for what the engineering program at Madison has to offer. The purpose of the day was to give students a brief, yet exciting overview of what engineering is. Many high schools do not have an engineering program, and so this was the first opportunity the students had to learn about the opportunities they could have if they choose to take on an engineering career. While on campus, the students were able to tour the polymers lab, Camp Randall, hear about ASME, Formula SAE, Baja, and speak with Professor Michael Zinn, and Don Woolston. ASME received a lot of

positive feedback from this event with many students expressing a new found interest in studying engineering as they look ahead to college. ASME hopes to continue to make this a bi-semester event as it becomes more successful each year.

Other classic events that ASME is involved with each semester include SWE's Girl Scout Badge Days and Trick-or-Treating for Canned food through Chi Epsilon. Each semester SWE brings between 50 and 100 girl scouts to Engineering Hall to partake in a "Badge Day" where they can earn three math and science badges over the course of the day. This semester ASME hosted the "Math Whiz" Badge. During their time with ASME, the Girl Scouts learned how velocity, distance, and time relate, how to scale large objects in a room into a manageable size on a sheet of paper, and were given the opportunity to guess how many objects were in a jar full of nails, q-tips, and even tootsie rolls.

On Halloween, seven ASME members and a few out of town visitors set out to Trick-or-Treat for Canned Food to benefit the 2nd Harvest Food Shelf of Madison. Members posted flyers all around a pre-designated neighborhood in Madison a week before Halloween letting them know of the event. In a matter of a couple hours on Halloween evening, ASME was able to collect 375 lbs of food and reminisce on Trick-or-Treating of years past by collecting extra candy along the way. Overall, the event was very successful as the engineering orgs were able to collect over 5,000 lbs of food in their joint effort.

As the semester begins to wind down, ASME is excited to sponsor a family for the first time during this year's holiday time. Through the AmeriCorps group, ASME will have the opportunity to purchase gifts for a family in need and will have the opportunity to pass out gifts that have been donated to the program to other families as well.

The semester has been busy this year with Outreach events and ASME hopes to continue this into next semester with events that have already been planned and many events that will be planned as the school year moves on. With the help of many generous ASME members, the group hopes to continually give back to organizations all around the Madison area.



Members participate in the annual pie-eating contest at a General Meeting in November. The winner: Sam Schwaller!



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# Campus and Alumni News

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**By Dan Homstad**  
*Regional Liaison*

The UW- Madison offers one of the top-ranked college educations in the United States, and leaders are constantly making improvements to the university. With all the UW – Madison headlines, it can be difficult to keep up to date with campus and alumni news. Here are a few key updates on construction near the engineering campus and some of our alumni achievements.

Eyes don't have to stray too far to see some form of construction on campus, two such buildings near Engineering are going up now. One of buildings, the Wisconsin Institute for Discovery Building (WID), is located on N. Randall Ave between University Ave and Campus Dr. The WID building will hold research teams focused on themes (for the public portion of the building) including epigenetics, systems biology, optimization in biology and medicine, tissue engineering scaffold research, and health technology

design. Construction is scheduled to be completed in December 2010. Construction on the new Union South building is still rerouting traffic into the main entrance of Wendt Library. This site is mostly a giant gap in the ground filled with foundation work, construction equipment, and large cranes rising into the sky. The new Union South will open as early as Spring 2011.

Two Madison alumni were recently lauded in a Popular Science article titled "Ten Young Geniuses Shaking up Science Today." The first, Dennis Hong, is a 38-year-old who leads the Robotics and Mechanisms Laboratory at Virginia Tech. Dennis, who grew up in Seoul, South Korea, and transferred to UW-Madison where he completed his undergraduate studies in Mechanical Engineering. He finished up graduate school at Purdue and currently heads robotics research at Virginia Tech which includes the areas of locomotion, mechanisms, and analysis. The second alumnus, Adam Wilson, received his Ph.D in Biomedical Engineering at UW-

Madison and is applying his knowledge in the development of brain-computer interfaces. Adam made history earlier in April 2009 when he used the electrical signals of his brain in combination with an electroencephalograph (eeg) to change his twitter status to "using EEG to send tweet."

However, not all UW engineering alumni are restricted to success directly in engineering. Matson Contardo, ASME Vice Chair at Madison, Fall - Spring '08, will be making a difference across the globe in South Africa. Matson recently accepted a position in a rural village with the mission of enhancing computer education and promoting development within the community. For those interested in congratulating Matson in his new assignment or tracking down former ASME Madison members, visit ASME website's Alumni page.



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## Contest Update: Autonomous Material Sorter

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**By Jarrett Wiesolek**  
*Contest Chair*

The contest this year is off to a GREAT start. The team of eight is designing and building an autonomous material sorter. This design must autonomously sort glass, plastic, tin and aluminum. This year I am pushing us to follow the process format of a real design team. So far we have completed brainstorming and idea evaluation. We are current-

ly working on combining all of the parts into an integrated design. The next tasks we are going to tackle involve: completing a professional drawing, submitting a proposal to various companies to obtain donations to build our device, and finally building and competing in the event at the ASME Spring Conference.

If you have any questions, would like to donate, or are interested in joining the team, it is never too late, just shoot Jarrett an e-mail at

wiesolek@wisc.edu for more information, or visit [http://www.asme.org/Events/Contests/DesignContest/2010\\_Student\\_Design\\_2.cfm](http://www.asme.org/Events/Contests/DesignContest/2010_Student_Design_2.cfm)



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