

# The Dodecahedron



## AAIE PRESIDENT APPOINTED TO DEAN'S ADVISORY COUNSEL

Melinda Faubel, the current president of the Arkansas Academy of Industrial Engineering was recently appointed to the UAF College of Engineering Dean's Advisory Council. She is the first female UAF engineering graduate to be appointed to the council.

As Director for External Affairs at AT&T Arkansas, Melinda is responsible for the contributions budget, sponsorships, and local advertising for AT&T in Arkansas. She is also the AT&T Foundation liaison for Arkansas and works on education and economic development projects for AT&T in Arkansas. She has been with AT&T since 1981.

Melinda serves on a variety of boards, including the Little Rock Parks and Recreation Commission; Economics Arkansas; Arkansas Independent Colleges and Universities; Better Business Bureau of Arkansas, Community Development Institute Advisory Board; City Year; and Pulaski County Single Parent Scholarship Fund. She also serves on the corporate advisory board for the Arkansas Community Foundation and Mainstreet Arkansas. She is a member of the Arkansas Science, Technology, Engineering and Math (STEM) Coalition and sits on the University of Arkansas Cooperative Extension Service Breakthrough Solutions Advisory Panel. Melinda is also active with the Little Rock Regional Chamber of Commerce.

Melinda was inducted into the Arkansas Academy of Industrial Engineering in April 2004 and has served in similar capacities in other organizations.

- Graduate of the inaugural class of the Arkansas State Chamber Leadership Program
- Member of Class XVII of the Leadership Greater Little Rock and its alumni society
- In 2005, Melinda was highlighted in Active Years salute to Women Leaders in Business, Philanthropy and Service.

Melinda is well qualified to serve in this position and the AAIE and IE Department look forward to her representation of our interests.

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### ABOUT AAIE

The Arkansas Academy of Industrial Engineering (AAIE) was established in 1986 to recognize the achievements of University of Arkansas Industrial Engineering graduates and to provide continuing guidance and support to the Department of Industrial Engineering.

The Academy also provides its members with the opportunity to nurture and support the organization that played an important role in their professional growth and development.



## What is it?

(Answer on Page 14)

*Well, that explains*

Manholes, which interconnect underground sewerage pipes, and serve as a point of entry for cleaning the pipes, are located at every major sewer pipe junction, and are capped with round manhole covers. The reason for the circular construction of these covers is, quite simply, that covers of any other shape would fall through the manholes by virtue of their varying diameters. Circular manhole covers do not vary in width, or in diameter, as is the case with these other shapes, thus remaining in place despite the street traffic running roughshod over them. Manufacturers craft the manhole covers together with the smaller sized lip, upon which they rest, at the same time to ensure a tightly sealed fit. Additionally, the manufacture of circular manhole covers is easier and more accurate than the manufacture of covers of any other shape. Lastly, round manhole covers, once removed, require less lifting and less manpower, as their shape allows them to be rolled.



Why do we laugh? The reasons we laugh, including "contagious" laughter, may be products of evolution. Natural laughter is a two-part, spontaneous, response to humor, that has physiological, psychological, and physical benefits. Most agree that we laugh when we find something to be humorous, yet different reasons exist for what we find to be humorous. Additionally, different things are humorous to us at different stages of life. Laughter, a physiological response to humor, can be broken down into two parts. The first is a set of gestures, and the second is the production of sound. The brain forces to conduct both responses simultaneously. From a physiological standpoint, a "sensor" in the brain responds to laughter by triggering other neural circuits in the brain, which, in turn, generate more laughter. Oddly enough, laughter is an orderly response, and almost occurs "spontaneously" during pauses at the end of phrases, earning it the name the punctuation effect. Human beings are the only species capable of laughter, and the average adult does so approximately 17 times per day. Good health is one of the many benefits of laughter. Laughter reduces our stress levels by reducing the level of stress hormones, and also helps us cope with serious illnesses. Physiologically, laughter promotes healing, by lowering the blood pressure, and by increasing the vascular blood flow and the oxygenation of the blood. Physical fitness stemming from laughter is a benefit known to few. Scientists estimate that laughing 100 times is equivalent to a 10-minute workout on a rowing machine, or to 15 minutes on a stationary exercise bike. The mere act of laughing exercises the diaphragm, as well as the abdominal, respiratory, facial, leg, and back muscles. Another benefit of laughter is that it improves our over-all mental health. Pent up negative emotions, such as anger, fear, and sadness, can cause biochemical changes in our bodies that can produce a harmful effect. Laughter provides a harmless outlet for these negative emotions, and provides a coping mechanism for dealing with difficult or stressful situations.

## FROM THE PRESIDENT

Greetings Academy Members and Friends,

Thank you! Two words that sometimes don't get said enough. In fact, I have been told by professional development experts that you should thank donors at least seven times for their contributions. That means I have many people to thank many times for their contributions to AAIE. So let me hurry and get my first thank you in to our Dodecahedron editor, Bill Denton, for a job well done for many years!



The Internet will tell you almost anything and that's where I found how to say thank you in over 465 languages! So to this year's board of directors, Merci, Danke, Grazie, Gracias, Arigato, Shokran, Thank You for many hours of work. The board has worked hard to ensure that AAIE continues our mission to support the Industrial Engineering department and students. I also want to say thank you to all those in the past who have graciously served on the board of directors. Your hard work and dedication made it much easier for those who followed you.

Thank you can be defined as an expression of gratitude or politeness, in response to something done or given. Dr. Kim Needy has given her time and support to the Academy since her first day on the job. With great gratitude, we thank you Dr. Needy! And thank you to the IE faculty for the role you played in each current and future Academy member's educational and professional success. We are grateful for your support to us as individuals and to the Academy.

(See "President" - Page 6)

## FROM THE DEPARTMENT

Dear Academy Members,

Hello! Spring is just around the corner and that means we will be marking the end of another academic year including joining together at the upcoming AAIE Banquet and celebrating the graduation of so many talented students at our annual commencements. Many wonderful things continue to happen in the department since my last letter to you from the addition of new team members to the achievements of our faculty, staff and students. Let me share with you some highlights.



We started off the year with many new announcements. First we were delighted to name Dr. Heather Nachtmann as the John L. Imhoff Chair in Industrial Engineering for a two-year period beginning in January 2010. She is the third recipient to hold this title, which has previously been held by Dr. Ed Pohl (2008-2009) and Dr. Richard Cassady (2006-2007). She plans to make significant contributions in three key areas: service to students, teaching excellence, and faculty development. Please join me in congratulating Heather on this prestigious recognition and see the related article for more details.

The start of the new year also marked the retirement of long time Fiscal Support Specialist Mrs. Karen Hendrix. Many of you know Karen well as she has a close relationship to our alumni. She worked directly with the finances of the Academy and had a special role with the production of *The Dodecahedron* serving in the role as the unofficial "Proof Editor" for Editor Mr. Bill Denton. Thank you to all of you who sent well wishes to Karen on her departure as she greatly appreciated your kindness. The department was fortunate to promote Mrs. Sandy Sehon into Karen's position.

Finally in January, the department welcomed Dr. Ashlea Bennett who obtained her BSIE from the University of Arkansas in 2003 and completed her Ph.D. at Georgia Tech last fall. Her dissertation focused on developing automatic solution methodologies for home health nurse routing and scheduling problems. This brings the number of departmental tenured or tenure-stream faculty to a total of 17. Unfortunately, this number will be short-lived as I regret to inform you that Dr. Scott Mason will be leaving us. Our loss will be Clemson University's gain as Scott becomes the Fluor Corporation Endowed Chair in Supply Chain and Logistics in the Department of Industrial Engineering beginning on July 1. Many of you know Scott in his capacity as Associate Department Head and have worked with him to help secure senior design projects for our students. Please join me in congratulating Scott and wishing him and his family the best. Also, please refer to the related article with more details.

At the departmental level, we recently celebrated the 35<sup>th</sup> Anniversary of the Operations Management Program. This program is under the capable hands of Dr. Ed Pohl. More than thirty-five years ago, in 1974, the program had three sites, an enrollment of 1090 students, graduated 68 students and generated revenue of \$212,500. Today, the program has grown to six sites, an enrollment of 2570 students, and graduated 200 students (in 2009) with a cumulative total of 4153 graduates. Revenue now totals over \$2.0M per year! We eagerly look forward to the continued growth and success of this program.

In my last letter to you, I mentioned the exciting news about the department's selection to host the *2010 American Society for Engineering Management (ASEM) Annual Conference*. This event will be held at the Embassy Suites in Rogers, Arkansas on October 13-16, 2010. The Planning Team consists of Dr. Ed Pohl, Conference Chair; Drs. Heather Nachtmann and Kim Needy, Program Chairs; Dr. Ernie Fant, Director of Tours; and Mrs. Karen Standley, Director of Facilities & Logistics. The

(See "Department" - Page 13)

## ***DID YOU KNOW?***

Alfred Hitchcock didn't have a belly button. It was eliminated when he was sewn up after surgery \* Everyone in the Middle Ages believed – as Aristotle had – that the heart was the seat of intelligence.\* From its completion in 125 A.D. until 1958, the Pantheon's domed ceiling was the largest unsupported concrete span in the world. It was surpassed only with the construction of the CNIT building in Paris \* New Orleans' first Mardi Gras celebration was held in February, 1826 \* A rat can last longer without water than a camel can \* President George Washington created the Order of the Purple Heart in 1782 \* Seven of the eight US Presidents who have died in office - either through illness or assassination - were elected at precisely 20-year intervals \* In 1894, there were only 4 automobiles in the US \* Offered a new pen to write with, 97% of all people will write their own name \* Kemo Sabe" means "soggy shrub" in Navajo. \*

## Saxena Reappointed Dean of College of Engineering

After an extensive review, involving stakeholders from inside and outside of the College of Engineering, Provost Sharon Gaber announced that Dean Ashok Saxena has been reappointed for a five-year term through June 30, 2015.

Stakeholders noted that Dean Saxena has been very successful in increasing sponsored research within the college; increasing student retention in Engineering – particularly by developing a Freshman Engineering program; increasing diversity among students through the Engineering Career Awareness Program and encouraging online/distance education opportunities.



Provost Gaber indicated that she values Saxena's entrepreneurial interests and looks forward to the college's continued growth in students, retention, research and opportunities. Chancellor G. David Gearhart congratulated Saxena on his successes and said he looks forward to Saxena's continued leadership in moving the University of Arkansas College of Engineering to the next level.

Saxena was appointed dean of the College of Engineering in 2003, coming to the university from the Georgia Institute of Technology, where he had been the Regents' Professor and a former chair of the School of Materials Science and Engineering. Coming to the university, Saxena was the first faculty member to hold an endowed chair funded by the \$300 million gift from the Walton Family Charitable Support Foundation.

Saxena received his Bachelor of Science in Mechanical Engineering from the Indian Institute of Technology and his Master of Science and Doctor of Philosophy in materials science and metallurgical engineering from the University of Cincinnati.

"Not everything that can be counted counts, and not everything that counts can be counted." - Albert Einstein (1879-1955)

How fast do water molecules move?

This experiment is great for testing if hot water molecules really move faster than cold ones. Pour some water, drop in some food coloring and compare results

What you'll need:

- A clear glass filled with hot water
- A clear glass filled with cold water
- Food coloring

An eye dropper

Instructions:

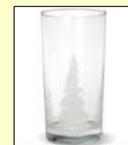
Fill the glasses with the same amount of water, one cold and one hot.

Put one drop of food coloring into both glasses as quickly as possible.

Watch what happens to the food coloring.

What's happening?

If you watch closely you will notice that the food coloring spreads faster throughout the hot water than in the cold. The molecules in the hot water move at a faster rate, spreading the food coloring faster than the cold water molecules which move slower.



## **THE HISTORY OF INDUSTRIAL ENGINEERING AT ARKANSAS**

### **Foundation Building, Early Roots, 1949-1960**

**Based on the Condensed Narrative by Dr. John L. Imhoff, Ph.D.**  
**University Professor Emeritus, Founding Head**

Newly appointed Dean Branigan announced plans to offer the Bachelor of Science degree in Industrial Engineering in 1949. Working with Business Administration Dean Milam, advanced BA students in Industrial Management were given the opportunity to take additional engineering courses to qualify for the new degree. Several received the degree in 1950 and in 1951, including Charles Kittrell, later a Phillips Petroleum company vice president and prominent supporter of the University of Arkansas development office.

The program was embryonic. Mechanical Engineering Professor Harold Risteen, a naval reserve captain, was appointed to head the new program, which had no lab facilities, few courses, and no instructors with I.E. training. The unit was initially an amalgam of service activities in the college, including courses in drafting, engineering law, and engineering problems. Soon thereafter, however, Professor Risteen accepted a permanent captain's commission and returned to full-time duty in 1951. Two young IE instructors hired by Professor Risteen, John Biegel and James Seabock left for other opportunities in 1952.

John Imhoff was hired as head of the program in 1951, coming from the I.E. option in the M.E. Department at the University of Minnesota where he had coordinated the program. While a degree program had been announced at Arkansas, little implementation had occurred. Laboratory space was still non-existent, faculty was urgently needed, support funding was minimal, and no overall curriculum design had been developed. The first laboratory space was obtained in 1953 by improved class scheduling of drafting rooms which were operated by the new department. Two important student organizations were also formed during the first years of operations. A student chapter of the American Institute of Industrial Engineers was established in 1952 as the professional group, and a chapter of Alpha Pi Mu, the profession's new honor society, was chartered in 1955.

Several new faculty replacements then followed, including professors Gatchell, Dennett, Karnath, Harmon, and Good. Oliver Gatchell, George Karnath, Neil Harmon, and Hugh Dennett had considerable engineering and business experience, and Merrill Good had excellent I.E. teaching experience at Montana State. In 1954, the first IE faculty PhD, Wray Wilkes joined the staff, adding knowledge of the newly emerging areas of computers and operations research.

Two important student organizations were also formed during the first years of operations. A student chapter of the American Institute of Industrial Engineers was established in 1952 as the professional group, and a chapter of Alpha Pi Mu, the profession's new honor society, was chartered in 1955.

While early startup challenges remained, the new department made great progress during its first decade. It received full accreditation on its first attempt, campus and national recognition for its outstanding student professional and honor society chapters, started an effective M.S. program, played a leadership role in national Industrial Engineering developments through faculty offices at the national level in the AIIE and Alpha Pi Mu, developed a campus reputation for close faculty-student relationships (which helped both BS and MS recruiting and nurtured close ties between the department and its graduates), and graduated a large number of outstanding people, most of whom entered industry and greatly enhanced our reputation through their performance and progress (and increased the demand for our graduates developments).

## SHUR LIAISON REPORT

At the 2006 Spring Arkansas Academy of Industrial Engineering Annual Meeting, a few students, lead by the IIE Student Chapter President, Elizabeth Edwards, requested that the Academy help the IE students to prepare for job interviews that we scheduled for mid- September 2006. They wanted to learn how to interview successfully, how to prepare a job winning resume, how to dress appropriately, and several other “workshops” how to obtain the best jobs. We decided to conduct “Mock Interviews” for the students conducted and critiqued by real interviewers. The Academy Board approved the student’s request and provided resources for this.



The first year of the “Mock Interviews,” 26 students participated in the “Mock Interviews”, and there were 37 students who participated in September 2009. Some students who were not IE majors wanted to participate in the “Mock Interviews”, and were told they could, but only if they changed their major to IE. Our mission is to help the IE students gain an upper hand on the real interviews that come at the Engineering Exposition.

The purpose of the SHUR (Students Helping Undergraduate Retention) Liaison Committee is to provide support to the IE students and faculty to mentor underclass students to improve retention. The IE students asked the Academy to help them in areas such as conducting workshops not only in the interview process, but also in the participation in the Senior Design course to critique the student’s presentations. They are also interested in hearing from recent IE graduates about their real world experiences. The target group for the workshop and interviews are Junior, Senior, and Graduate students. Some new interviewers have asked to participate this fall, and we are allowing more time for each interview and critique. We will have some of the previous companies interview also.

We need help from a local AAIE member(s) to help with publicity within the IE Department to have more students sign up for both events. We also need help with the pre-workshop and mock interviews. We want to improve our attendance and the number of students to interview.

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Other forms of thank you include thanks, cheers, thank you very much, thanks a lot, thanks a bunch, and thanks a million. All of these ways of thanking someone are appropriate for the IE Department staff especially those who help the Academy. We could not function without Karen Standley and Sandy Sehon and those who came before them – Karen Hendrix and Bonnie Swayze. Thanks a million for all you do for AAIE!

The origin of thank you is from the word thought or thoughtfulness. Thank you to the many thoughtful Academy members who have contributed to our scholarship endowment funds including our most recent campaign. Have you pledged a contribution to our 2011 Scholarship Campaign? If so, thank you very much for supporting our IE students. If not, thank you for considering a contribution of any amount and I hope you will consider being one of 100 members to pledge and give \$1,000 by the 2011 annual meeting. The scholarships support our outstanding students. Thank you to our students for representing our University and Department so well.

The most important thank you of all is to YOU. Thank you for all you do for the Academy, IE Department, and for the IE students. I hope to see you at our annual meeting April 9-10, so that I can personally say , “Thank You.”

Melinda Faubel, President  
AAIE, BSIE 1980

## Scholarship News



### “100 for 100” Scholarship Campaign on Track

2010-11 AAIE scholarship campaign to increase the AAIE Academic Scholarship endowment by \$100,000 from at least 100 AAIE members is making progress. As of this writing, a total of \$35,300 has been added to the endowment as gifts from members, company matches, and a Board transfer of funds. Sources of funds are:

Direct Contributions	\$26,650
Company Match	\$ 3,650
Board transfer from General Fund	\$ 5,000
Total Campaign	\$35,300

The campaign, dubbed “100 for 100,” kicked off last September with secondary goals of encouraging broad participation from AAIE members and adding 50 new “John Imhoff Fellow” recognitions for cumulative gifts of \$1,000 to scholarships. So far, 37 contributors have given \$26,650 to the campaign. Once all pledges are paid, there will be ten new “John Imhoff Fellow” recognitions as part of the campaign as of this writing.

Gifts of any amount are needed and encouraged to support AAIE scholarships. Pledges are also accepted for this campaign. The response from members has been gratifying, and it is a tribute to the commitment and generosity of AAIE members and friends. As part of this campaign, the Board is encouraging ALL members of AAIE to contribute in any amount.

Thank you to these members and friends of AAIE contributing through March 12:

Frank Broadstreet  
Michael Limbird  
Bill & Mary Lou Cravens  
Glenn Palmer  
John English  
John A. Riggs III  
Melinda & Steve Faubel  
Ralph Sandage  
William Harrison  
Gene Staggs  
G. Lowrance Hodge  
John White  
Bruno Kirsch

Lee Lane  
Ronald Classen  
Ron & Betty Morris  
Grant & Trisha Ducote  
Jimmy Reed  
Richard Farr  
Andrea Sandage  
Bryan Grimsley  
Michael Shupe  
Karen Hendrix  
Daniel Paul Thompson  
Russell Jackson

G. Kent Burnett  
Bob McKuin  
Bill Denton  
William F. Pazdera  
Bob & Ellen Etien  
Thomas M. Riggs  
Dewey & Catherine Freeman  
John Selig  
Jim & Annette Hawkins  
Tarek Taha  
Alan Hope  
Donna & Dwayne Young

“Egotism is the anesthetic that dulls the pain of stupidity.”

–Frank Leahy

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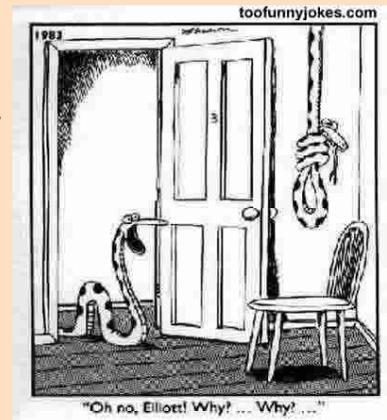
\*\*\*\*\*“What the world needs is more geniuses with humility, there are so few of us left.” –Oscar Levant

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“Last week, the temperature was in the 20s and yesterday it got up to 59 degrees. It’s crazy, I keep having to change my outfit and my position on global warming.” -Jimmy Fallon

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There are women whose thoughtful husbands buy them flowers for no reason. And then there’s me. One day I couldn’t stand it any longer. “Why don’t you ever bring me flowers?” I asked. “What’s the point?” my husband said. “They die after about a week.” “So could you,” I shot back, “but I still like having you around.”





**You might be an engineer if . . .** you have "Dilbert" comics displayed anywhere in your work area . . . If you are convinced you can build a phazer out of your garage door opener and your camera's flash attachment . . . If you have ever purchased an electronic appliance "as-is" . . . If you still own a slide rule and you know how to work it . . . If you think that when people around you yawn, it's because they didn't get enough sleep . . . If you've ever tried to repair a \$5.00 radio.



\*Uranus spins lying on its side (like a barrel), this is perhaps due to a large collision early in its formation.

\*Uranus was the first planet discovered by telescope.

\*Since Uranus takes 84 Earth years to go around the sun, this means that each of its poles is in daylight for 42 years and in darkness for the next 42.

\*Uranus hides its interior but scientists guess that under the hydrogen-methane atmosphere is a hot, slushy ocean of water, ammonia and methane thousands of miles deep wrapped around a rocky core.

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The goals for the SHUR Committee are to continue to improve the preparation and conduct of the mock interviews and other worthy areas of interest that may help our IE students. Some of the IE graduates have served as guest lecturers in the classroom, and students welcome the chance to talk to IE's who are in the "real world".

This will be my farewell note to all of you as I am stepping down as the Chairman of the SHUR Liaison Committee and turning everything over to my extremely capable Vice Chairman, Tarek Taha to take the SHUR Committee to a higher level. This has been a fun ride and I have enjoyed every minute of it, but it is time to turn it over and I assure you, it is in Tarek's very capable hands. I will take "Of Council" status, and will continue to support the AAIE. Thanks to all of you who have supported our efforts to help our IE students and future leaders.

If you are interested in helping or would like to be on the SHUR Liaison Committee, please contact Tarek at [Tarek\\_Taha@jbhunt.com](mailto:Tarek_Taha@jbhunt.com).

Jim Hawkins, '65



## Dr. SCOTT MASON LEAVES



Dr. Scott Mason has accepted the prestigious Fluor Corporation Endowed Chair in Supply Chain and Logistics in the Department of Industrial Engineering at Clemson University effective July 1, 2010. We are sorry to say goodbye to such an excellent teacher and treasured friend. Dr. Mason joined the Department of Industrial Engineering in 2000. Since that time he and his wife Andrea have had three children; Matthew (age 9), Rebecca (age 8) and Jessica (age 6).

At the University of Arkansas Dr. Mason has been the recipient of numerous teaching and mentoring awards including AAIE Outstanding Faculty Member (2003-2004, 2007-2008) and Department of Industrial Engineering Outstanding Teacher (2005-06, 2006-07, 2008-09). In 2009 he was nominated for the University Faculty Advising Award and the 2009 College of Engineering John L. Imhoff Teaching Award. In addition, at the University level he was a finalist for the Dr. John and Mrs. Lois Imhoff Award for Outstanding Teaching and Student Mentoring. His nomination received an overwhelming expression of support from former students and colleagues. Dr. Mason received the Faculty Gold Medal from the Office of Post-Graduate Fellowships in 2009.

Dr. Mason is an accomplished researcher and is active in professional societies. He is Associate Editor for *IEEE Transactions on Electronics Manufacturing Packaging* and served as the Program Chair for the 2009 Modeling and Analysis of Semiconductor Manufacturing Conference held in Austin, Texas.

We wish Dr. Mason and his family the very best as they begin this new adventure!

## Women Inventors

Inventor Grace Murray Hopper was a curious child. At the age of seven, she dismantled her alarm clock to figure out how it worked, but was unable to reassemble it. By the time her mother figured out what she had been up to, the young Grace Hopper had gone through seven clocks in the house. This intellectual curiosity would later play an integral part in earning Hopper a place among the ranks of the most famous women inventors.



As she grew up, Grace's parents encouraged her to pursue her educational ambitions. At Vassar College, she obtained a B.A. in mathematics and physics. She continued her education at Yale University by completing a masters and Ph.D. in mathematics. She then returned to Vassar to teach.

During World War II, Hopper joined the Navy and was sworn into the U.S. Naval Reserve in 1943. After training, she was commissioned as a lieutenant and assigned to the Bureau of Ordinance Computation Project at Harvard University. She became the third person to program the Harvard Mark I computer. Much like her clocks, disassembling it and figuring out its operating processes was a challenge that she really enjoyed.

Hopper's naval duties ended a year after the war, and she became a senior programmer with Remington Rand, where she worked on the first large-scale commercial computer – UNIVAC. She became Director of Automatic programming in 1952 and subsequently oversaw the company's endeavor to produce specifications for a common business language. From 1959 to 1961, Hopper led the team that invented COBOL (Common Business-Oriented Language), the first user-friendly business computer software program.

Later, Hopper invested a great deal of time advocating validation procedures to bring about the international standardization of computer languages. She won numerous awards for her career as a famous woman inventor, including the National Medal of Technology, which was presented to her in 1991 by President George Bush. By the time she passed away on January 1, 1992, Dr. Hopper had received honorary degrees from thirty universities.



- Ants never sleep \* The tongue is the only body muscle that is attached from one end only \* There are about 540,000 words in the English language, and still growing \* Any free

moving liquid in outer space will form itself into a sphere, because of its surface tension \* Lima beans contain cyanide \* The word "Checkmate" in chess comes from the Persian phrase "Shah Mat," which means "the king (shah) is dead (mat)." 

\* The first product to have a bar code scanned was Wrigley's gum. \* You will weigh less if you weigh yourself when the moon is full. 



Susie's husband had been slipping in and out of a coma for several months. Things looked grim, but she was by his bedside every single day. One day as he slipped back into consciousness, he motioned for her to come close to him. She pulled the chair close to the bed and leaned her ear close to be able to hear him.



"You know" he whispered, his eyes filling with tears, "you have been with me through all the bad times. When I got fired, you stuck right beside me. When my business went under, there you were. When we lost the house, you were there. When I got shot, you stuck with me. When my health started failing, you were still by my side. "And you know what?"

"What, dear?" she asked gently, smiling to herself.

"I think you're bad luck."


 History in the Making

## MEMBERSHIP CHAIR BREAKS RECORD

*Bryan Grimsley, AAIE Membership Chair, recruited a record fourteen inductees for AAIE membership for 2010. This number of annual inductees has not been surpassed in the twenty-four year existence of the Arkansas Academy of Industrial Engineering.*

### 2010 AAIE MEMBERSHIP INDUCTEES

Russ Aikman (MSIE '89) – Russ grew up in White Hall, Arkansas near Pine Bluff and earned his BSChE in '85, before completing his master's in I.E. Since 1996, Russ has worked for TMAC, located at UT-Arlington, where he is the program manager for Lean Six Sigma.

Kevin Barrentine (BSIE'90) – Kevin grew up in Atlanta and Indianapolis. He helped found Corporate Revitalization Partners. (later named CRG Partners) and is currently a partner with the firm.

Lane Denison (BSIE '93, MSIE '95) - Lane grew up in Fordyce, Arkansas and has worked for ABF Freight Systems in Fort Smith since graduating from the UAF. He now serves as director of the Administrative Services department.

Ken Gaines, Jr. (BSIE 1992) - Ken grew up in the Little Rock area. He is currently with The Hall Group in NLR as the VP of Engineering and Production.

David Harp (BSIE Dec 1990) – David hails from Berryville, Arkansas. Since 2005, David has worked with Tyson Foods in Springdale—first as the PMO Director and now as the Director of Business Intelligence.

Greg Hogue (BSIE Dec 1990) – Greg grew up on Air force bases located in Louisiana, Alaska, and Arkansas. He has served as Plant Manager for American Air filter International in Fayetteville since 2007.

Angela Harrison Kuli (BSIE 1992) – Angela was born and raised in Shreveport, Louisiana but completed high school in Little Rock. Of note she is the 4<sup>th</sup> member of her family to graduate from the U AF I.E. Department. Angela has been self-employed with Market Leadership Consulting, LLC, an independent business consulting firm since 2006.

Matthew Lindsey (BSIE Dec 1990) – Matthew is a native of Harrison, Arkansas. Since 2006, Matthew has been employed at Unilever in Trumbull, CT and Rogers, AR as the Senior Director of Customer Supply Chain.

David Moncrief (BSIE 1984) – David grew up in North Little Rock, Arkansas. In 1994, he completed his MBA at UALR and moved to Fort Smith to work for Rheem Manufacturing, where he is currently the Division Manufacturing Engineering Manager.

Victor Moses (BSIE 1991) – Victor is a native of Dermott, Arkansas. Since 2005 he has been employed with GE Energy Services as manager of a Parts & Repair Service Center.

Sharen Reeder (BSIE 1994) – Sharen is a native of Ft. Smith. After graduation she began her career with Whirlpool Corporation in Fort Smith and has served as Human Resources manager with Whirlpool since 2004.

Raghav Sharma (MSIE 1992) – Raghav earned a BS in Computer Science Engineering at UAF before completing his MSIE. He is currently employed with Data Systems International in Overland Park, Kansas as VP for International Operations.

Tony West (BSIE 1987) – Tony grew up in Little Rock. He retired last summer after 21 years as a U.S. Air Force acquisition officer and is currently the Manager of Air Force Acquisitions for Whitney, Bradley & Brown, Inc. living in the D.C, area.

Renee Wright (BSIE Dec 1982) – Renee grew up in Little Rock. She is currently Project Manager for the Corps of Engineers Bull Shoals Lake, Water supply Storage Reallocation Study.

Department" from Page 3)

conference theme will be *Lean and Green: Building a Sustainable Future Through Engineering Management*. There has been overwhelming response to the conference with the receipt of 180 abstracts for paper presentations. It appears as though the sustainability theme has struck an accord with the engineering management community. Please plan to join us at this event and refer to our web page at <http://asem2010.ineg.uark.edu/home.html> for further information. In a related initiative surrounding the sustainability theme, Dr. Ernie Fant is creating a Renewable Energy Laboratory within the department and partnering with Ozarks Electric Cooperative to develop a workshop on solar photovoltaic systems.

In February, the department conducted its annual Liaison Committee meeting under the leadership of AAIE Past-President, Mr. Ralph Sandage. Ralph was teamed together with AAIE President Mrs. Melinda Faubel, and AAIE President-Elect Mr. Lee Hartz, along with academic members from Auburn University and the University of Pittsburgh, as well representatives from key employers including Arkansas Best Corporation and J.B. Hunt. I am pleased to report that the committee concluded that the department is strong and committed to continuous improvement, with an impressive level of engagement by department stakeholders that fosters a high-performing culture. The full-report will be available to the membership at its April meeting following the banquet.

Now let me share some of the recent accomplishments of our talented faculty. Dr. Richard Casady presented his novel approach to engineering education at the National Academy of Engineering's (NAE) inaugural Frontiers of Engineering Education symposium this past November. This symposium brought together the nation's brightest young engineering researchers and educators. He also received Fellow Status in the Society of Reliability Engineers (SRE) at the Reliability and Maintainability Symposium (RAMS) in San Jose on January 26. On another note, Dr. Russ Meller is to receive the *IIE Transactions* Best Applied Paper Award – "Aisle Configurations for Unit-Load Warehouses" at the IERC Honors and Awards Banquet in Cancun June 5-9. Finally, our faculty continue to be prolific writers. Dr. John White recently published two textbooks, *Principles of Engineering Economic Analysis, 5<sup>th</sup> edition* (with KE Case and DB Pratt, 2009) and *Facilities Planning, 4<sup>th</sup> edition* (with JA Tompkins, YA Bozer and JMA Tanchoco, 2010). And Dr. Ray Asfahl together with former student Mr. David Rieske published the 6<sup>th</sup> edition of *Industrial Safety and Health Management* textbook in 2009.

Our students have also had their share of accomplishments. Our Alpha Pi Mu Chapter was awarded third place in the Outstanding Chapter Competition, and senior Ms. Becca Carlson received a 2009 Alpha Pi Mu National Scholarship.

On March 19, Mr. Bill Harrison, President of Trane Arkansas and AAIE Past-President (1995-1996), hosted a luncheon at his facility in Little Rock. This was a wonderful opportunity for me to meet some new AAIE members and other INEG alumni, as well as a great opportunity for the alumni to reunite. We hope to hold similar events like this in the future in Little Rock or elsewhere to keep the great tradition of the department alive. If you would like to host such an event, please let me know.

I am certain that you will agree, that the department is doing great things, and I can promise you that we plan to continue on this trajectory. In closing, don't be a stranger. If your travel plans bring you onto campus, please stop by to learn more about some of the wonderful things that we are doing. I hope to see many of you at our annual AAIE Banquet on Friday, April 9. In addition, if you are in town and your schedule permits, please plan to join us for the INEG Student Awards Banquet which will be held on Tuesday, April 20. For further details on either of these events, please contact Mrs. Karen Standley at 479-575-6029 or at [standle@uark.edu](mailto:standle@uark.edu). Together we can make this an even greater program!

Warmly,  
Kim Needy

## AAIE Officers/Board

The AAIE Board of Directors and officers for 2007-2008.

Pres. Melinda Faubel  
 Pres. Elect Lee Hartz  
 Sec/Treas. Grant Ducote  
 Past Pres. Ralph Sandage

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*You may contact the editor at wbdenton@swbell.net.*

## WHAT IS IT?

(from Page 2)

### ROMAN IVORY COMB

I-II centuries A. D.

Flat rectangular plate with with coarse teeth on one side, fine on the other. Both faces of central panel are decorated with incised concentric circles. Majority of teeth missing.



**Did you know that the Guinness Book of Records was invented to settle an argument!**



A state trooper stops a pick-up truck and asks the driver, "Got any ID?"  
 The driver says, "Bout what?"

**We're on the web!**  
[www.ineg.uark.edu/aaie](http://www.ineg.uark.edu/aaie)

## Ancient Engineering



The ancient city of Cusco, Peru, was laid out in the shape of a stylized puma, and Sacsayhuaman is at its head. As a matter of fact, another name for Sacsayhuaman is Saca Huma, which means the head of a puma. Although it sounds like "sexy woman", Sacsayhuaman is Quechua for "satisfied falcon," a name that refers to the carrion-eating birds

that feasted on the dead after a hideous battle was fought here in 1536, when Spanish invaders annihilated the defending Inca forces. Now, Sacsayhuaman is the site of Cusco's largest annual festival, Inti Raymi, (seen in photo at upper left) held during the June 21st winter solstice. Three parallel walls, built in a zig-zag pattern, were part of the defensive fortress, and correspond to the teeth of the puma.

Sacsayhuaman is noted for its irregularly-shaped, gargantuan stone blocks, one of which weighs more than 300 tons. They are fitted together without mortar, and the ones now remaining have withstood not only attempts by the Spanish to knock them down, but also more than half a millennium of earthquakes and other natural forces. Pictured at the right is an entrance near which a serpent pattern is carved into the rock. Almost exactly the same size as the human brain and spinal column, this carving is believed to represent the seven chakras, and it is said that the seven gouged-out areas were once filled with gold, crystals and gemstones. Mark Amaru Pinkham, author of the book *The Return of the Serpents of Wisdom*, regularly leads groups to sacred sites in Peru, through Soluna Tours. Mark says that another name for Sacsayhuaman is the Serpent-Lightning Temple, because it is believed that in ancient times the Incas performed rituals here to awaken the inner serpent, or kundalini energy, located at the base of the human spine.



Another area of Sacsayhuaman was probably a mystery school, used for teaching secrets of the universe and initiating new students into the priesthood. In this area are many mysterious stone carvings, including the one pictured at the left, where it seems like the underside of a stairway has been carved into the solid rock. Could this represent steps leading into another dimension?

Sacsayhuaman is located only 2 kilometers from Cusco, and the distance can be walked in about 45-minutes, although the climb is steep at an altitude of 3500 meters (more than 10,000 feet above sea level).

[Read Robert Scheer's blog.](#)

