

ARKANSAS ACADEMY
OF MECHANICAL
ENGINEERING

*A University of Arkansas
Alumni Association*

**ARKANSAS ACADEMY OF
MECHANICAL ENGINEERING**

**PROSPECTIVE MEMBER
INFORMATION PACKET**

2017 Induction Banquet & Business Meeting

***New Members are Required to Attend
the Annual Induction and Awards Banquet.***

Details are:

Banquet:

Date: April 28, 2017

Location: UARK Bowl, Fayetteville, Arkansas

Time: 6:30 P.M. (New Inductees are asked to arrive at 5:30 for photos and brief introductory session.)

Hotel: TBA

Annual Business Meeting:

Date: April 29, 2017

Location: Mechanical Engineering Building, University of Arkansas

Time: 8:30 A.M.—12:00 P.M.

About Us

Mission:

To promote and support the Mechanical Engineering profession, to honor the Mechanical Engineer and to work with the University of Arkansas Department of Mechanical Engineering , to increase the appeal of Mechanical Engineering and further the educational development of future engineers.

Requirements for Membership:

Must be a University of Arkansas Mechanical Engineering graduate of at least 15 years nominated by an AAME member. (There are a small number of non University of Arkansas graduates who have made contributions to engineering in the state of Arkansas who are members of AAME)

AAME Facts:

- Formed in 1982 with 30 original members
- 150 current members
- Since the inception of AAME, \$500,000 has been donated to the University of Arkansas Mechanical Engineering Department for scholarships, student support, and other improvements.

Past AAME Projects:

Renovations to the UA ME Building including: eight classrooms upgrades, student lounge upgrades, computer room upgrades and upgrades to the administration offices.

Purchasing misc. equipment to include: computers, printers, furniture, carpeting, tools, and display cases.

Financial assistance to increase student retention to retain teaching assistants.

Assist in UA ME career day and in judging UA ME student projects.

Assist in ME student projects & competitions, such as SAE Baja car and Solar boat

AAME Commitment:

AAME Headlines

Promoting & Supporting the Mechanical Engineer

SUMMER 2016

SPECIAL POINTS OF INTEREST:

- **President's Corner from Mac Hogan**
- **Leadership Change in the Department**
- **2016 Scholarship Recipients**
- **Member Spotlight: Jack Murders**
- **Call for Creative Project Advisors**
- **2016 Inductees**
- **Arkansas Athletics & ME**

President's Corner

As you know, the **ME** Department, with the aid of **AAME**, is making great strides in the improvement of the education of our students, the number of which is increasing rapidly to almost 1/3 of the College of Engineering. One can only conclude the Engineering is "in vogue" and opportunities abound. It is my pleasure to be your new **President of AAME** during this incredible time.

Someone said, "**The only thing constant is Change.**" We live that in our businesses, professional and personal lives. Adapting is the key to continued long term success. Change is upon the **ME** Department with **Dr. Leylek** stepping down as the Department Head. **Dr. Darin Nutter**, a most popular veteran of the Department with 22 years of service, will assume the role of Interim Department Head effective July 1. We all know **Darin** and look forward to working with him to continue the development of the **M E** Department.

While **Darin** assumes the reins of the department, we will be active in areas in which we have activities in place such as

Scholarships, Special Projects, Student Mentoring, etc. We anticipate meeting frequently with **Dr. Nutter** to establish priorities for **AAME** which reflect those of the Department.

The main items to work on and discussed at the meeting were:

- Through Melynda, analyze all the areas where **AAME** resources are spent. As we are of limited resources we must from time to time challenge every activity to which those precious resources are allocated. Some may no longer "make the cut".
- Try to enlist **Academy Members and Alums** to aid in the Industry Projects we have acquired. We are faculty-limited on these projects. Possibly, some of us can take responsibility for projects in our areas of expertise, assisting the students in lieu of faculty members. The projects are most popular with the students and faculty as "real world" project and design experience are "magic" for education.
- **Additive Manufacturing:** 3 D printing has rapidly evolved from its early



start. I read recently it is now a \$27B industry. New concepts are being introduced daily. Our lab is overused and becoming obsolete rapidly. We must develop a laundry list and goals on how to improve the lab and keep the students on the cutting edge of this design and manufacturing experience and discipline. To that end **Bob Harrison** and I may attend a 3D printing seminar and exhibition in Charlotte in August. **Stan Allen** gave me the information and he or I will share it with any of you interested.

Thank You for your support and efforts in **AAME**. We are on a roll we must continue. Plan on a fall meeting where we visit another industry and become acquainted with their problems and needs. Those translate into opportunities for students and research opportunities for faculty.

~ **Mac Hogan**

Students Selected for AAME Scholarships

Each year, AAME awards academic scholarships to deserving students majoring in mechanical engineering. This year, 10 recipients were selected and each received \$1,500 to assist with tuition, fees, and textbook expenses, as needed.

Chase Briscoe (Springfield, Missouri) is a junior ME major who plans to work in the aerospace industry after graduation, with the hope of joining the NASA Astronaut Program. As a junior, he worked on two of our “Big 5” creative project teams, both Design-Build-Fly and NASA Robotics team.

Theodore Christian (Arlington, Texas) is a member of ASME, serves as the Fundraising Chair for the National Society of Black Engineers, and is a Campus Crusaders for Christ (CRU) group leader. He plans to pursue a career in propulsion engineering and would be a part of design team for the next generation of spacecraft.

Eric Eby (Morrilton, Arkansas) has taken on many leadership roles on campus such as Lead Hogs, a program designed to help incoming freshmen adjust to campus life and make connections that will help them be successful during their college career. Additionally, he was the team leader for one of the CDIO projects focusing on creating a model of joints in structures, using SolidWorks and 3-D printing.

Hannah Huffman (Fayetteville, Arkansas) decided to combine her biomedical degree with mechanical engineering and focus on prosthetics design. Hannah also likes to play the guitar and write songs about people she knows, especially her family.

Jonathan Lawson (Carrollton, Texas) decided he wanted to become a mechanical engineer after a tour of Lockheed Martin in high school. After seeing the manufacturing process of F-22 & F-35 jets, he knew he wanted to play a part in technology and design.

Matt Pocta (Huntington Beach, California) Matt is an honors student and is also pursuing a minor in nanotechnology. In addition to engineering, Matt has a passion for video production and currently produces videos for the U of A Division of Student Affairs.

Ronald Salter (Arlington, Texas) is involved in the National Society of Black Engineers and recently represented the U of A at their national conference in Boston. This summer, Ronald is currently working in an internship at Phillips 66 and hopes to continue with them in a full-time capacity after his graduation.

Jason Steck (Little Rock, Arkansas) is a member of the U of A honors college and recently completed a research project on fuel cells. Jason keeps himself busy outside of classes by helping his parents remodel their home, including repairing their underground sprinkler system.

Sam Stephens (Garfield, Arkansas) is very interested in control and automation and looks forward to working within the steel industry, upon completion of his degree. In his spare time, Sam enjoys blacksmithing, machining, and welding, but most of his free time is spent enjoying his son.

Landan Taylor (Joplin, Missouri) is a member of ASME, the Residence Assistants Senate and is involved with Dr. Darin Nutter researching energy efficiency in industries. He plans to work in the energy field, where he can research and develop energies to eliminate the dependence on fossil fuels.

Arkansas Athletics + Mechanical Engineering = AAME!

On June 24th, **AAME** held the quarterly board meeting at the U of A. Following the meeting, we were treated to VIP tours of some of the newest Razorback Athletic facilities and had the opportunity to learn some “insider” information from our tour guide, Jon Fagg, Senior Associate Athletic Director.

After refueling at the **Jones Student-Athlete Success Center**, we toured the facility and



learned how the UA is focusing on athlete’s academic career, as well as building their physical abilities. After that, our group headed to the **Fred W. Smith Football Center**, where we got photos with the famous “Golden Boot” and had an impromptu meeting with **Coach Bielema** in his office!

We ended the tour at the **Basketball Performance Center** where we had the opportunity to hear from **David England**, Head Athletic Trainer, and former classmate of **Russell Kennedy**, by the way! We also had the opportunity to stand on one of the beautiful courts with gorgeous floors finished with products produced by **Mac Hogan’s own PoloPlaz, Inc.**

Mac probably expressed it best, “This has to be one of the best experiences the members of **AAME** have ever had. This is a clear example of the type of experience which will Enlist, Engage and Energize our membership.”



It was a great afternoon and we greatly appreciate the **Arkansas Razorback Athletics** for hosting us and giving us complete access to anything we wanted to see...yes, that included all the locker rooms, where we discovered the Razorback line of shampoo...Hog Wash!



Jack D. Murders, BSME 1986

We sat down with Jack Murders, AAME member since 2007 and College of Engineering Distinguished Alumni Award Recipient, to learn a little more about him. Here's what we found out:

Tell us about your background. I grew up in Hot Springs, AR and am a 1981 graduate of Fountain Lake High School. I have one sister, Jill (my parents have a sense of humor), and she is a school teacher in Little Rock. My parents owned and operated Arkansas Glass Company in Hot Springs, and they put me to work there part time and summers when I was 14 years old.-they taught me the value of hard work, that you get what you earn - no one owes you anything, and that life isn't always fair. Those values have stuck with me and I could never repay my parents for those lessons. It really defines who I am.

What did you tell your parents you were going to be when you grew up? The one I remember is that I told my parents I was going to grow up and be a truck



driver. I was probably 4 or 5 when I told them that.

How did you meet your spouse? Sarah and I actually worked together for a short period of time. We didn't really talk much, and then she 'Facebooked' me a few months after she left Marshalltown. She asked if we could meet up. I was surprised and expected her to ask for a job or reference but she had other thoughts in mind. The rest is history...

What do you do in your spare time? Family time is the best. I love following the Razorbacks, Cowboys, the Tour de France, and the NBA. I enjoy travel, and I also like all sorts of outdoor activities. I'm passionate about all types of fishing and go when I can, which hasn't been very much of late.

What do you find yourself doing that you said you "never" do? Raising two young children in my 50's.

What do you consider your greatest accomplishment/achievement? Being a Father.

If you could invite anyone in the world (living or dead) to



dinner, who would it be and why? My two best friends, Wes Davis (BSME 1987) and John Hardwicke, both got sick and died in their early 40's. I wish I could invite them to dinner one more time to talk about how their kids have grown up, the Razorbacks and Cowboys, and about all the great times we had. Life is precious and nothing is guaranteed.

When did you first know you wanted to be an engineer? My high school Physics teacher told me I should go to school to be an engineer. I told him (Mr. Davis) that being an engineer was the last thing I would ever do. After attending Architecture School in Fayetteville for a year, I knew that Mr. Davis had been right.

What's been your biggest challenge as an engineer? There are many. Keeping up with the pace of change in technology and business is a never ending struggle. The other one is that I once survived being cross-examined on the witness stand by Lamar Pettus!

Changing of the Guards

Effective July 1, Dr. Jim Leylek will step down from his role as Department Head and turn the reins over to Dr. Darin Nutter. As Jim prepares to focus his attentions to his research endeavors and teaching, he took some time to reflect on his experiences with AAME and express his thoughts.



*I have often said, “**MEEG has no better friends than AAME**” – this, in all honesty, is a serious understatement. Reviewing my tenure as the department head during the past five years, I consider my interactions with **AAME** as one of the key highlights.*

*As it has done for many decades, **AAME** continues to have profound impact on the Department of Mechanical Engineering. **AAME**'s dedication to quality education for our students is most impressive. Annual scholarships for our undergraduate students, strong support for our excellence in teaching initiative (CDIO), and enhancing **MEEG**'s economic development activities by expanding our network of corporate partners are three unique contributions that are especially noteworthy.*

*I am most grateful for the strong, unconditional support I received from **AAME** – this was most reassuring!*

~ Jim Leylek

Darin is looking forward to his new role and working directly with the Academy.

*I am very excited to have been asked to step in and help the department during this transitional year. I plan to put the majority of my effort into supporting our great faculty and staff in their various roles. Of course, we seek to provide a quality education to our students, perform cutting edge research, and impacting **Arkansas** in positive ways.*

*Finally, I believe that **MEEG** has made great strides and improvements over the last five years, thanks in large part to **Jim's** efforts. I look forward to being a part of that continued upward trend. **~ Darin Nutter***

We wish both Jim and Darin the very best as they begin this new phase of their careers!



2016 AAME Inductees & Banquet

Beautiful Evening & 10 Stellar New Members



Front Row (L to R): Christopher C. Galloway, BSME 1995; John E. Symonds, BSME 1971; Lamar D. Currington, BSME 1981; Stan C. Allen, BS 1977 & MSME 1986; Mark R. Martin, BSME 1998
 Back Row (L to R): Edward C. Campbell, BSME 1988; Robert J. DeStefano, Jr., BSME 1990 & MBA 2005; Joseph R. Daven, BSME 1981; Bruce M. Jordan BSME, 1981 & MSPE 1985; Karl C. Van Scyoc, BSME 1984

Outside of its inaugural year, **AAME** has never had a class of inductees that includes so many inductees! We are proud to welcome our newest members to the Academy!



The 2016 Annual Induction & Awards Banquet was held at the UARK Bowl in Fayetteville, Arkansas, and was attended by over 150 members and guests. It was great to see all of our old friends and meet some new ones.

Wanna Be a Student Advisor?

As you may know, the **Department of ME** has started working with several industry partners on Creative Design Projects for seniors. These projects are initiated by various industries and generally consists of teams of 3-5 students and an advisor who is overseeing their progress, offering feedback on designs and concepts and evaluating the students overall performance in regards to the project goals.

Given the large number of these projects, ME is struggling to find advisors for all of them and would like some **volunteers from AAME**. This is a great opportunity to work directly with students and is a way to do so without having to be in Fayetteville, since meetings and feedback can be done via telephone or videoconferencing, as well as face-to-face.

Here are some details to consider, if you are interested in volunteering.

- The senior capstone project is a two-semester sequence starting in August and ending in May. Students work in teams of 3-5 students. About $\frac{3}{4}$ of seniors (70 for Fall 2016) participate in industry sponsored projects and $\frac{1}{4}$ participate in national design competitions (BAJA, Solar Boat, Design Build Fly, NASA Rocket and Lunar Mining).
- During the first semester, all students working on a industry project meet weekly for lecture and group assignments relating to: project planning, idea generation, concept selection, appropriate analysis, BOM and drawing standards. Students practice their preliminary and final design reviews in front of their peers before making the presentations to their customers. A ME faculty member is responsible for the weekly lecture and grading of assignments. Individual groups are required to submit a weekly status update to their customer, the student projects coordinator, and their group advisor.
- Each small group has an advisor who gives them individual attention. The **advisor** reviews status updates and assignments, give students feedback and pushes them to fully understand the problem and develop the best solution by asking questions and challenging student assumptions. The students and **advisor** should meet in person or Skype every other week for about $\frac{1}{2}$ an hour. The meeting time and place is determined by students and **advisor**. **Advisors** are welcome to attend large group lectures during practice design reviews. Students are responsible for the success of their project and will know the expectations and schedule for the semester from the weekly lecture.
- During the second semester, students build/test/document their solution. Students meet as necessary (but not less than every third week) with their **advisor** (in person or videoconference) and continue to provide weekly status updates. A final report and presentation are made at the end of April and students must review both with their advisor before presenting to the customer. **Advisors** are encouraged to attend one sponsor site visit a semester if feasible.

If you are interested in learning more or serving as a project advisor, please contact Mr. David Albers, Student Projects Coordinator, at dalbers@uark.edu.

2016 Industry Sponsors included:



College of Engineering

Distinguished Alum

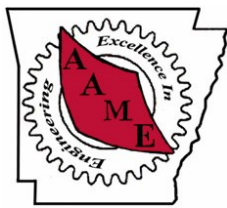
Congratulations to **Jack Murders** for being recognized as one of the **CoE Distinguished Alums!**

Jack Murders currently serves as the vice president of Arkansas facilities at Marshalltown Company (MC), where he started in 1985 as an intern.

At MC, **Jack** has created jobs for 300 Arkansans by expanding the plant, assuming a much larger fraction of the company's manufacturing capacity, and becoming by far the company's largest manufacturing plant. He has also paved the way for Arkansas students by developing the internship program, which has interned 14 students so far in 2015. During his time at MC, the plant has grown from 78 full-time employees to 300. Due to expansion led by Jack, he now manages 340,000 square feet in Arkansas. When Jack began in 1985, MC had 300 items, and since then their inventory has grown to 5,000. He has led the acquisition of EMBEE, Superior Featherweight Tools, and Cleform, and has been awarded six patents.

In his community, **Jack** served on the Fayetteville Chamber of Commerce board of directors. In this position, he got 20 additional lights added to the roads making them safer, better signage for delivery truck efficiency, and a sidewalk for pedestrians along S. Armstrong to 15th Street. Jack also served as a member of the board of directors at Roark Group.

At the University of Arkansas, **Jack** served as the president of the Arkansas Academy of Mechanical Engineering 2012-2013. He has also served as vice president and member of the board of directors. Jack resides in Bentonville with wife, Sarah, and their three children, Austin, Jackson, and Reagan.



Arkansas Academy of Mechanical Engineering

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Mission of the Arkansas Academy of Mechanical Engineering

To promote and support the mechanical engineering profession, to honor the Mechanical Engineer and to work with the University of Arkansas Department of Mechanical Engineering to increase the appeal of Mechanical Engineering and further the educational development of future engineers.

Officers:

Mac Hogan, President
Russ Rasnic, Past President
Jeff Hayes, Treasurer
Rick Couvillion, President-Elect
Cristine Wolf, Secretary

Board of Directors:

Jeff Hayes (2015-2018)
Jim Evans (2014-2017)
Jim Bacon (2016-2019)
Richard Royal (2015-2018)
Will Myers (2014-2017)
Lamar Currington (2016-2019)

Committee Chairs:

Awards: Rick Couvillion
Finance: Robert Porbeck
Membership: Bob Norwood
Nominations: Bob Harrison
Conduct/Bylaws: Zane Boatright
Fundraising: Chris Weiser
Newsletter/Publicity: Lamar Pettus

**Did you know that Mechanical Engineering now represents almost
30% of the entire College of Engineering?**

If you would like to be part of **AAME's** efforts to foster & develop
Mechanical Engineering at the University of Arkansas, please

contact aame@uark.edu.