

UNION UNIVERSITY

Engineering NEWS

Chair's Message

We hope you enjoy another edition of the Union University Engineering News newsletter!

We would like to keep you up to date on the latest news and information from our department. If you have any information you'd like to contribute towards a future issue, please email crowland@uu.edu

In this issue we continue to be blessed with excellent students' active-learning through engineering project activities, public presentations and service-learning through humanitarian projects. The department adds Boeing, Huber Engineered Woods, Schlumberger and Dana to the list of Corporations where our graduates work. The department maintains Vanderbilt University as the graduate school where we have the most graduates attend (4). The department lists the state of Hawaii as the most distant place where we have senior student go for Undergraduate Research. Engineering Seniors continue to perform well both statewide and nationally in the Fundamentals of Engineering Exam. The Program continues to do well in the world of academic accreditation. One hundred percent of our engineering faculty are professionally licensed.

To cap off this string of good news, please join me to usher in new engineering leadership and support Dr. Jeannette Herring Russ as our new Department Chair beginning the fall semester 2012.



Congratulations to the Engineering Class of 2012!



Pictured left to right: Rob Calvert, Nate Peterson, Jeff Maharrey, Karl Magnuson, Rachel Quinn, Eric Olson, John Hall, Jacob Hodge, and Aaron Porterfield

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Alumni News.....

"I am still working at Anvil International in Henderson, TN. I've been here just over a year now and have had some fantastic experiences thus far. I have been heavily involved with the design and launch of Anvil's seismic bracing line of products and stainless steel pipe hangers as the primary product engineer. I've also had the opportunity to draft industry standards while learning from the pipe hanger industry's best and brightest as Anvil's representative on MSS (Manufacturer's Standardization Society) Committee 403. I really enjoy my job and look forward to serving here for many years to come.

On a more personal level, I am getting married to my longtime girlfriend, fellow Union alum, and current Union employee Kristi McMurry on October 6 of this year.."

Rhett Woody ('11)

"My wife, Elizabeth, and I have three children. Lydia 7, Nolan 4 and Levi 2. Who are growing up way too quickly, full of energy and bringing us great joy. We continue to live in Jackson and I continue to work at Teknor Apex in Brownsville, TN. This seems hard to believe, but in June I will began my seventh year of service with the company. And after a brief and unique stint as Process Engineer for our Garden Hose Manufacturing Division, I am back serving as an Electrical Engineer for the Plant Engineering Group."

Alan Baker ('05)

"I started back with ABB last August. I have been added to a team working to incorporate one of ABB's subsidiaries (COMEM, out of Italy) into our local product offering and am currently in the beginning stages of learning about these new products. This is a big undertaking and will have me doing some training in Italy in the near future. I am very excited about this adventure!."

Debi (Eley) Sullivan ('08)

"I am currently working at ABB in Alamo TN as a contracting engineer. I have been working here since January 2012 and I will be working until July 20th 2012 at which time I will be going to training to become a great commission worker. Then in October I will be leaving to go to North Africa to work and build relationships with people groups of the area ."

Robert Lynn ('11)

"I am currently a production engineer at TBDN in Jackson TN and have been here over a year now. Here we manufacture the air filtration systems for an assortment of vehicles, but mostly Toyota. I am going on 3 months with my lovely new wife and couldn't be happier at the direction God is directing my life."

Christian Christenson ('10)

"I am at the beginning of my second, and hopefully final, year of my M.S. in CISE (Computer Information Systems Engineering) with my focus being in A.I. and controls at Tennessee State University. I work as a Research Assistant, and my current research project is developing a distributed network controlled system for a turbine engine platform. I hope to receive this experience and continue a career designing intelligent systems for engineering applications."

Tayo Adedokun ('11)

"Dana is pretty awesome. I have a lot of learning to do though! Everything seems fast paced so I will have to get used to that. At least they aren't throwing me in the deep end right off the bat! They are training me by actually letting me work out in the plant on some of the lines and learning the processes."

John Hall ('12)

"Right now I am just out of seminary (graduated in May), and am adjusting to life that is not bound by semesters! I am currently working at a Wal-Mart Distribution Center, working my way slowly up into leadership and getting in shape. I am planning to move up to PA by the end of the year to be closer to family and perhaps start looking for an engineering career, or maybe even a pastorate. Who knows? I'm enjoying where I am now, making the most of my church here and I'm also enjoying having only one thing on my plate."

Josh Armacost ('09)

I just finished my first year of PhD studies in Analog and Mixed Signal Integrated Circuit Design at The University of Tennessee at Knoxville. I'm enjoying an internship at NASA JPL this summer, and getting ready to start my second year of classes and research.

Kyle Harris ('11)

I acquired an M.S. in Electrical Engineering from Vanderbilt University in May 2012, and am now transitioning into full-time research towards the Ph.D. I'm still working as part of the Radiation Effects and Reliability group, but my research interests have also expanded to include systems-level reliability, fault modeling and tolerance, EDA, and VLSI design.

Brad Kiddie ('10)

I have enjoyed having a little break from the stress of school for the last few weeks before I start working. I am really excited about the Boeing job. I will be working with integrating all the electrical systems onboard the F/A-18 fighter jets! I think it will give me a great opportunity to gain valuable knowledge about all aspects of the avionics with the opportunity to specialize in any particular system should I want to do so.

Nate Peterson ('12)

I just accepted a new position at ABB, effective on August 1st. My new title is Sr. Account Executive/ Technical Specialist. My team and I just returned from our mission trip (July 2012) where we completed the church/clinic that we started last year in Hope Creek, Belize.

Jon Brasher ('06)

Graduates Conveying Departing Advices



Before Final Exams!



STUDENTS NEWS...

Spring 2012 Ninth Annual Scholarship Symposium

Faculty-sponsored student projects:

A Green Solution for Campus Patrol

Presenters: Jacob Hodge and Eric Olson

Faculty Advisor: Don Van

A More Graceful Glider

Presenters: Caroline McConnell, Joel Ingram and

Jonathan Gwaltney

Faculty Advisor: Jay Bernheisel

Golf Ball Optimization

Presenters: Scott Kahler, Wilson Holland and

Phillip Johnson

Faculty Advisor: Jay Bernheisel

Warming Hearts in North Africa Through Rocket Mass Heaters

Presenters: Grace Morriss and Joel Ingram

Faculty Advisor: Georg Pingen

Off-Grid Cashew Roaster

Presenters: Karl Magnuson, Nate Peterson, Rob Calvert and John Hall

Faculty Advisor: Don Van

Stewardship and Materials Engineering:

Analyzing Bio-based, Bio-degradable Plastics

Presenters: Dylan Baker, Zachary Baker, Meinrad

Charles, Cody Giles, Robert Jones, Taylor Mayo,

Grace Morriss, William Murray, Rachel Townson and

Alexander Wainscott

Faculty Advisors: Jay Bernheisel and Georg Pingen

Lattice Boltzmann, 3D Thermal Topology Optimization

Presenter: Caroline McConnell

Faculty Advisor: Georg Pingen

PringLess Drain Cleaning Robot

Presenters: Rachel Quinn, Aaron Porterfield and

Jeffrey Maharrey

Faculty Advisor: Don Van

The Smart Switch: A Solution to Modern Automated Lighting

Presenters: Josh Grant, Rebecca Sharpe, Brady Sheppard and Jon Vunk

Faculty Advisor: Jeannette Russ

The Perfect Shot

Presenters: Alex Charles and Zac Baker

Faculty Advisor: Georg Pingen

Greenhouse Effect for Solar Water Heating

Presenters: William Murray, Taylor Mayo and

Derique Cannon

Faculty Advisor: Georg Pingen

Determining the Effectiveness of a Green Roof

Presenters: Dylan Baker, Todd Jones, Kian Jost and

Alex Wainscott

Faculty Advisor: Georg Pingen

Going-Green: Off-grid Instructors Station

Presenters: James Avery, Jonathan Gwaltney, John Hall,

Wilson Holland, Phillip Johnson, Scott Kahler, Caroline

McConnell and Ryan Substad

Faculty Advisor: Don Van

Electronic 'Pit' Bull

Presenters: Ky Bailey, Rachel Carbonell and Matt Wilson

Faculty Advisors: Jeannette Russ

Optimized Topper

Presenters: Thomas Drury and Ryan Substad

Faculty Advisors: Jay Bernheisel

Wind Tunnel Flow Visualization

Presenter: Thomas Drury

Faculty Advisor: Georg Pingen

Mechanism Prototyping

Presenter: John Hall

Faculty Advisor: Jay Bernheisel



John Hall, Karl Magnuson, Rob Calvert and Nate Peterson with customer (private sector)



Cashew roaster
(Humanitarian Project)



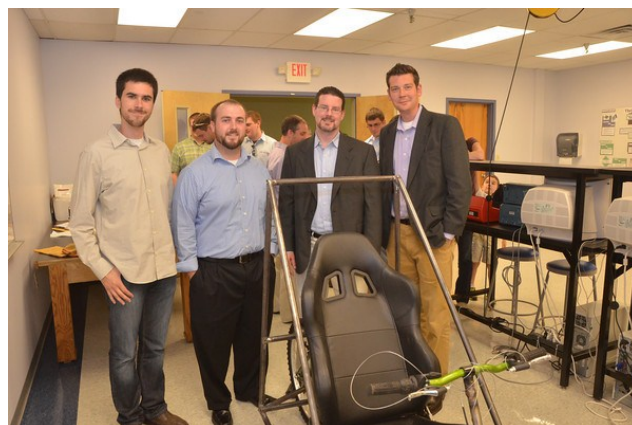
Rachel Quinn and Aaron Porterfield demonstrating their robot



Aaron Porterfield, Jeff Maharrey, and Rachel Quinn with customers (Kellogg's)



Jacob Hodge, Eric Olson presenting the human powered vehicle design



Eric Olson and Jacob Hodge with customers
(Union University Safety Dept.)



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Bill Dement (Dement Construction)
Kyle Spurgeon (Jackson Area Chamber of Commerce)
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Dennis Henderson (TLM Assoc.)