# COLLEGE OF ENGINEERING

## **DEPARTMENT OF ELECTRICAL ENGINEERING**



Electronic Newsletter / May-June 2013 / www.ee.psu.edu

### They're back ...

Penn State Electrical Engineering golf shirts are back. I sold out the first time around. The navy blue shirts with white embroidery are \$30 and are available in men's sizes: Medium, Large, X-Large, and 2XL. To order, email Cathy: CLS118@psu.edu or call 814-863-0253.



## Two Electrical Engineering Alumni Wins Prestigious Awards

#### Allison Wins Distinguished Alumni Award

Shani Allison, a 2001 electrical engineering graduate, was one of seven Penn State alumni named by the University's Board of Trustees as a recipient of the 2013 Distinguished Alumni Award for her outstanding contributions to the Penn State engineering community, and for championing diversity and technical excellence.

The award is the University's highest honor for an individual.

If you're willing to work hard, then being an engineer is a reachable goal, Shani Allison advises girls who are considering a major in engineering. "You can be a straight-A student in high school but get lower grades in college," she tells them. "It's going to take some extra work in your freshman year to learn how to navigate through college and get a high GPA, but the result is worth it."

Allison puts in countless hours in support of young women and minorities who want to be tomorrow's engineers. A project management analyst for Ford Motor Company, she said she benefited from the support of others while she was in college. That is why it's essential to her that she gives back to others in any way she can. Allison embraces the words of Jackie Robinson: "A life is not important except in the impact it has on other lives."



Born in Detroit and raised in Pittsburgh, Allison decided in high school to follow in her father's footsteps and study engineering. Drawn to the problem solving aspect of the field, Allison credits her parents for making sure she was academically prepared for a rigorous academic program. Her parents believed that education was very important to being successful in life and instilled in her and her brother, Darius Allison '07, the determination to go to college and get good grades, she said.

When faced with deciding among five engineering schools, Allison said she chose Penn State because of its strong support programs for women and minority students. "You don't typically see a lot of women or minorities in engineering classes," she said. Programs like the Women in Engineering Program (WEP) and the Multicultural Engineering Program (MEP) helped her to network and to study with other students in her field.

Allison said her bachelor's degree in electrical engineering from Penn State opened up many opportunities. She went on to earn a master's degree in engineering management from the University of Michigan, studying part time while she worked full time at Ford Motor Company. As soon as she graduated from Penn State, Allison began giving back to her alma mater.

She has served on the Engineering Diversity advisory board to the dean of the College of Engineering since 2002, including a two-year term as chair. She has been a design judge, distinguished career participant, panelist, and leadership team member for Penn State's WEP orientation, and a panelist for the MEP orientation. In March 2013, she received the Penn State Engineering Diversity Award in recognition of her years of leadership and mentoring to WEP and MEP students, inspiring them to become world-class engineers.

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Allison's contributions extend beyond Penn State. As an alumna of the Jackie Robinson Foundation, she regularly volunteers as a judge for the Detroit Tigers Annual Jackie Robinson Essay, Poetry & Art Contest. She is the National Society of Black Engineers—Detroit Alumni Extension liaison to the Society of Women Engineers (SWE) and chair of the SWE—Detroit girls' engineering exploration parent and teacher workshop. Though her service often has focused on increasing underrepresented groups in the science, technology, engineering, and math (STEM) fields, she advises all students that college should be a first priority.

Allison is the critical link between the Engineering Society of Detroit (ESD) and other organizations. She has judged the ESD Future City Competition multiple times and has volunteered for the ESD career fair, presenting a workshop to other engineering professionals. She promotes the involvement of her peers through key fundraising events such as the ESD Today, ESD Tomorrow Annual Fundraising Breakfast. ESD recognized her volunteer efforts with its 2011 Outstanding Young Engineer of the Year Award and 2010 Distinguished Service Award.

Allison is a life member of the Penn State Alumni Association and lives in Novi, MI.

#### Brezina wins Alumni Achievement Award

Matthew P. Brezina was one of eleven alumni honored for outstanding professional accomplishment and presented with the Penn State Alumni Association's 2013 Alumni Achievement Award.

Brezina is the co-founder and chief executive officer of Sincerely, a mobile startup whose apps allow users to send gifts to friends and family. Brezina is a proven product visionary and capable leader by having started not only one, but two successful technology companies—Xobni and Sincerely. Brezina founded Sincerely in 2011. By 2012, Sincerely had 16 employees and raised more than \$3 million in venture capital.

In 2012, Brezina's first startup, Xobni, had 30 employees and more than seven million downloads. Bill Gates called it "the next generation of social networking" when it was demoed on stage during Gates' keynote at the Microsoft TechEd 2008 Developers Conference. During Xobni's first four years, Brezina and his co-founder raised more than \$40 million in venture capital.

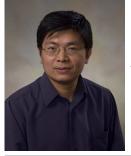


In 2008, Brezina was named one of 18 young, upstart entrepreneurs on the "Cool, Determined & Under 30" list in Inc. magazine. In 2006, he participated in Y Combinator, an intense educational pro-gram and venture fund for young digital entrepreneurs.

Brezina is a member of the Schreyer Honors College External Advisory Board; has spoken at the Penn State College of Information Science and Technology's Start-up Week; advises Innoblue, Penn State's student entrepreneurship incubator; and has served as an informal mentor and adviser to numerous Penn State students. Last year, he and a colleague hosted the Hackathon at Penn State, an event that he used as a recruitment tool. Brezina is an angel investor and adviser to more than a dozen startups, including Dropbox, Exec, Mailbox, Voxer, and others.

Brezina lives in San Francisco and is a life member of the Penn State Alumni Association.

written by Tracey Dooms and the Penn State Alumni Association



Zhiwen Liu, associate professor of electrical engineering, and his research team including doctoral students Perry Edwards and Chuan Yang have developed an optical spectrometer which has won one of three prizes in a wireless competition sponsored by the Vodafone Americas Foundation. The Vodafone Americas Foundation Wireless Innovation Project is designed to spark innovation and seek the best "mobile for good" solutions. Their optical spectrometer is designed to be integrated with a mobile phone which can be used for breast cancer detection, monitoring surgical wounds and color analysis for assisting people with color blindness. For more information on the project, please visit his research website.

#### **Department News**



Dominique Zwiebel was the student marshal for the Department of Electrical Engineering at the spring commencement. She chose Jack Mitchell as her faculty escort.

College of Engineering student marshals are selected for their outstanding academic achievement and contributons to engineering student life.



Congratulations to Ram Narayanan, professor of electrical engineering, for being awarded the Penn State Engineering Alumni Society Outstanding Research Award. The award recognizes and rewards outstanding engineering researchers for accomplishments in advancing the frontiers of knowledge. These research awards are established to confer honor on individuals who, by

their contributions to knowledge, have brought recognition to themselves, the College, and Penn State.

Improving communications security and efficiency, eliminating electromagnetic interference and easing the spectrum crunch are some of the topics that was tackled at the third Industrial Advisory Board meeting of the Industry/University Cooperative Research Center on Optical Wireless Applications (COWA), May 15-17, on the Penn State University Park campus. COWA is a joint center of Penn State and the Georgia Institute of Technology and is funded by the National Science Foundation. Mohsen Kavehrad, W. L. Weiss Chair Professor of Electrical Engineering, Penn State, is the director of COWA. The meeting, which is intended for engineers, leaders and executives in industry, and researchers in the communications and optical fields, will cover the broad field of optics and wireless in terms of technical science and engineering. Topics include communications, information processing and data storage; defense and national security; energy; and health and medicine.

The meeting reviewed present work and discussions on appropriate future investigations will follow.

For more information: cowa.psu.edu/IAB\_Meetings/home.html

The annual meeting of the Industrial and Professional Advisory Committee (IPAC) was held in March.

IPAC is a select group of alumni from industry, government agencies, and academia who advise the department on academic issues and on current trends and future directions in engineering. The council meets regularly with electrical engineering faculty and students to receive an update on the department, undergraduate and graduate programs, and research activities.

Members pictured are (top row from left), Scott Thompson, Oberon Inc.; Leslie Melaragno, Rockwell Automation; and Stephanie de Garay, Rockwell Automation; (second row from left) William Wannisky, Fitzpatrick, Cella, Harper, and Scinto; and Tammy Urbanski, Fairchild Semiconductor; (front row) Kultegin Aydin, department



head and Forrest Hunsberger, MIT Lincoln Labs. Not pictured are John Clark, Northrop Grumman; Tom Foley, Altran-North America; Tom Roell, Parsons; John Golombeck, Northrop Grumman.

The department thanks Hunsberger, Golombeck, Roell and Wannisky for their years of service as their terms expire.



Kenji Uchino, professor of electrical engineering, is the recipient of the 2013 IEEE-UFFC Ferroelectrics Recognition Award. Uchino was cited for his discovery/inventing contributions in electrostrictive ceramics, multilayer piezoelectric actuators, high electromechanical relaxor single crystals, magnetoelectric devices, piezoelectric loss characterization methodology. The award

ceremony will be held at the IEEE ISAF Meeting on July 23, in Prague, Czech Republic where Uchino will provide the opening plenary presentation titled "Piezoelectic Actuator Renaissance."



Mohsen Kavehrad, W. L. Weiss Chair Professor of Electrical Engineering will present a keynote address at: NOC 2013, the 18th European Conference on Network & Optical Communications, in July in Graz, Austria. For more information: http://portal.tugraz.at/portal/page/portal/TU\_Graz/Einrichtungen/Institute/Homepages/i4510/noc2013/

## **Congratulations Spring Graduates**

M.S. Ph.D.

Gaurab Basu Gregory M Bower

Quinn C Burlingame Ho Him R Fok

Chen Cheng Ming Shih Huang

Kyle A Gallagher Yi Ma

Divya Ganti Dheeraj K Mohata

Ibrahim H Khawaji Kadappan Panayappan

Kaiming Li Jianqi Qin Yang Lin Ye Tian

Xi Luo Burak Tuysuz

Andrew J Meehan

Amanda C Mills

Sheng Qu

Ala H Sabeeh

Sonny Smith

Ying Sun

#### **Graduate Award Winners**

Five awards were presented at the annual spring electrical engineering graduate program picnic.

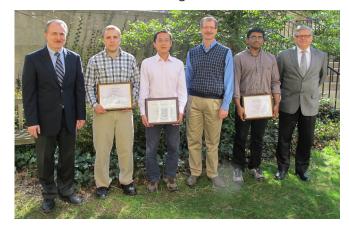
Micah Gregory, adviser Doug Werner, received the Nirmal K. Bose Dissertation Excellence Award

Jianqi Qin, adviser Victor Pasko, received the A. J. Ferraro Graduate Research Award

Bijesh Rajamohanan, adviser Suman Datta, received the Melvin P. Bloom Memorial Outstanding Doctoral Research Award

Perry Edwards, adviser Zhiwen Liu, received the Nirmal K. Bose Dissertation Excellence Award

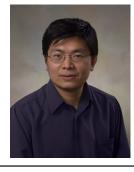
Ye Tian, adviser Aylin Yener, received the Melvin P. Bloom Memorial Outstanding Doctoral Research Award



Pictured from left, Kultegin Aydin, Micah Gregory, Jianqi Qin, Doug Werner, Bijesh Rajamohanan, Victor Pasko

Luke Shepley, BSEE'13, was a co-team leader for the Penn State EcoCAR 2 team that took top honors among 15 North American universities in year 2 of the competition known as EcoCAR 2, which took place during the week of May 20 in Yuma, AZ and San Diego, CA. Read the full story.

Milestones



Congratulations to Zhiwen Liu on marking 10 years with Penn State in January.

# Early Career Recognition Alumni Award

The Society of Penn State Electrical Engineers and the Department of Electrical Engineering is looking for nominations for the Early Career Recognition Alumni Award. This award honors outstanding Penn State electrical engineering alumni at the outset of their career. Nominations are due by July 15 and can be made by anyone with knowledge of the career progression and accomplishments of the nominee.

The nomination form as well as award criteria are available on <u>our website here</u> and in the electrical engineering office. The information can be mailed or faxed upon request.

Please contact Cathy McClellan, cls118@psu.edu or 814-863-0253 with any questions. We look forward to hearing all the wonderful things that our alumni have accomplished.

Past award winners include Brandon Ritrovato and Paul Mittan both from Lockheed Martin and Benjamin Campbell from Robert Morris University.

#### **Contact Information:**

Department of Electrical Engineering, 121 Electrical Engineering East, University Park, PA 16802, Phone: 814-865-7667,

FAX: 814-865-7065

Web: www.ee.psu.edu

Please submit news items to: Cathy McClellan at cls118@psu.edu

This publication is available in alternative media on request.

Penn State is committed to the affirmative action, equal opportunity, and the diversity of its workforce.

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