

UA Points of Research Pride 2015

- The Office of the Vice President for Research and Economic Development (OVPRED) has assisted in bringing in new – early career stage faculty members – that have received early recognition from CAREER to PECASE awards.
 - Over the last 3 years, the Research Grants Committee Award Program through OVPRED has funded 145 investigator awards totaling over \$800,000 in investments to support faculty research and scholarship. A total of 258 awards were funded over the last 5 years, in excess of \$1.2 million – leading to a host of successes across all disciplines.
 - Prestigious awards by our faculty include:
 - NSF CAREER awards are NSF’s most prestigious recognition of top-performing young scientists and engineers who are beginning their careers. The OVPRED has sponsored workshops for early-career stage faculty interested in CAREER awards. UA faculty members have received 16 awards since 2008.
 - ✓ (2016) Dr. Kimberly D. Genareau, geological sciences, and Dr. Alexey N. Volkov, mechanical engineering.
 - ✓ (2015) Dr. Claudia Mewes, physics/MINT, and Dr. Ryan Hartman, chemical and biological engineering.
 - ✓ (2014) Dr. Xiangrong Shen, mechanical engineering.
 - ✓ (2013) Dr. Patrick Frantom, chemistry.
 - ✓ (2012) Dr. Yuping Bao, chemical and biological engineering; Dr. Samantha Hansen, geological sciences; and Dr. Dawen Li, electrical and computer engineering.
 - ✓ (2010) Dr. Seongsin Margaret Kim, electrical and computer engineering, and Dr. Tim Mewes, physics and astronomy.
 - ✓ (2009) Drs. Michael Jennings, Timothy Snowden and Laura Busenlehner, chemistry, and Dr. Kim Caldwell, biological sciences.
 - ✓ (2008) Dr. C. Heath Turner, chemical and biological engineering.
 - Other Recent Awards:
 - ✓ November 2015: Dr. Andreas Piepke and Dr. Jerry Busenitz, professors of physics and astronomy, along with former UA postdoctoral assistant Dr. Evgueni Yakushev and former UA graduate students, Zelimir Djurcic, Dong-Ming Mei and Kevin McKinny, received recognition for making key contributions to a landmark study of neutrinos that won the Breakthrough Prize in Fundamental Physics. The prizes aim to celebrate scientists and generate excitement about the pursuit of science as a career. Breakthrough Prizes are funded by a grant from Sergey Brin and Anne Wojcicki's foundation, The Brin Wojcicki Foundation; a grant from Mark Zuckerberg's fund at the Silicon Valley Community Foundation; a grant from Jack Ma Foundation; and a grant from Milner Foundation.
 - ✓ August 2015: The National Security Agency and the Department of Homeland Security designated The University of Alabama a Center of Academic Excellence in

Cyber Defense Research. UA joins about 60 universities nationwide that have earned this designation.

- ✓ July 2015: Dr. Melissa Wilmarth, an assistant professor in UA's College of Human Environmental Sciences, received the Family & Consumer Sciences Research Journal Emerging Scholar Award for 2014 at the American Association of Family & Consumer Sciences' annual conference in Jacksonville, Florida. To be considered for the Emerging Scholar Award: the topic must be original; the research design and methodology must demonstrate high standards; the article should have the potential to make a lasting contribution to theory and practice in family and consumer sciences; and the recipient must be a tenure track assistant professor.
- ✓ February 2015: UA's Alabama Innovation and Mentoring of Entrepreneurs Center was selected by the National Science Foundation as an Innovation Corps site, becoming the only NSF I-Corps site in the state and one of only three in the Southeast. This selection strengthened UA's ability to foster entrepreneurship and, ultimately, create jobs and includes \$300,000 in grant funding over three years.
- ✓ February 2015: Dr. Takao Suzuki, director of UA's Center for Materials for Information Technology, was selected by the IEEE Magnetics Society for its 2015 lifetime achievement honor. This is the highest award of the Society and is given for scientific and technical achievements and service to the Society.
- ✓ July 2014: Dr. Lin Li was selected for a Ralph E. Powe Junior Faculty Enhancement Award from Oak Ridge Associated Universities (ORAU). This award will support Li's research on multi-scale modeling of shear banding in metallic glasses. Her research addresses how detailed metallic glass structure determines the formation of shear bands by virtue of multi-scale computer simulations and material models.

[We've had two other Ralph E. Powe awards within the past 5 years; Dr. Yuping Bao in 2010 and Dr. Brian Fisher in 2012.]
- ✓ December 2013: PECASE (Presidential Early Career Award for Scientists and Engineers) UA assistant professor of geological sciences, Dr. Samantha Hansen, among 102 up-and-coming researchers recognized by President Obama for her innovative research (and commitment to community service) on earthquake-monitoring in hopes of understanding the origins of Antarctica's longest mountain range. She was nominated by the National Science Foundation, which awarded her a five-year \$715,000 CAREER grant in 2012 that has funded her trips to Antarctica to research the formation of the Transantarctic Mountains.
- ✓ December 2013: Dr. Ernest A. Mancini, professor emeritus in the department of geological sciences and retired Distinguished Research Professor, was named the 2014 recipient of the Sidney Powers Memorial Award by the American Association of Petroleum Geologists. Dr. Mancini was recognized at the opening session of the April 2014 AAPG Annual Convention and Exhibition in Houston. The Powers Award is given annually in recognition of distinguished and outstanding contributions to, or achievements in, petroleum geology. Mancini became the 67th Powers medalist.
- ✓ August 2013: Dr. Chunmiao Zheng, professor of geological sciences was named as the 2013 recipient of the O.E. Meinzer Award by the Geological Society of America. The award is given annually to the author(s) of a published paper or papers of

distinction that have advanced the science of hydrogeology or some closely related field. Since the award's inception in 1965, it has been considered the highest distinction for hydrogeologists internationally. Zheng was also awarded the M. King Hubbert Award from the National Ground Water Association, which honors a scientist who has made a major contribution to the groundwater industry through research, publications, teaching, or practical applications.

- ✓ August 2013: Dr. Daniel Levine, assistant professor of political science, has been awarded the 2013 Sussex International Theory Prize. The award is given each year for the best piece of innovative theoretical research published in the field of international relations.
- ✓ April 2013: Dr. Beverly E. Thorn received one of the first 25 Patient-Centered Outcomes Research Institute (PCORI) awards. The initial funding, for \$1.3 million, was awarded to study different psychosocial treatments for chronic pain management: cognitive-behavioral therapy compared to pain education groups in individuals with low income and limited literacy.
- An initial \$125,792 provided to UA through the Governor's Alabama Innovation Fund (AIF) Renewal Program funding in 2012 – has led to development of 5 companies, SBIR and Launchpad Awards in excess of \$2.19 million, and the creation of 11 new jobs.
- UA and the OVPRED have supported, mentored and incubated over a dozen new ventures. This investment has generated follow-on investments of over \$30 million and contributed to the creation of 48 jobs.
- Investments in technology have increased UA's innovation capacity—over the past 5 years there have been over 214 new technologies disclosed, contributing to the issuance of over 34 US patents.
- UA has 32 inventors who have been inducted into the National Academy of Inventors. The academy recognizes individuals that have received an issued US patent.
- UA and the OVPRED have facilitated commercialization opportunities of our faculty, students and UA stakeholders.
 - UA is a part of the National Innovation Network, and through our National Science Foundation (NSF) Innovation Corps (I-Corps) Site we nurture STEM teams to transition their ideas into the marketplace so they can build sustainable companies, create new jobs, attract investment, and benefit society. In 2015, UA's I-Corps Site delivered entrepreneurial training to 56 teams comprising UA faculty, students and entrepreneurs. UA's I-Corps Site sponsored booths for two teams, Brandt Hendricks (MBA '16) and Dr. Edward Sazonov (Electrical and Computer Engineering) who were selected to showcase their innovations at the world's largest wearable technology exhibition show, IDTechEx Wearables 2015, in Santa Clara, CA.
 - Through the Alabama Innovation and Mentoring of Entrepreneurs (AIME) center, UA's dedicated commercialization center, the OVPRED assists faculty members, staff and students to create both new businesses and minimum viable prototypes. In 2015, we helped develop 9 prototypes, ranging from a robotic tick trap to a new soap sheet. AIME and the OVPRED partially sponsored Dr. Shuhui Li, Electrical and Computer Engineering, and three students who were selected from hundreds of academic innovators

nationwide to demonstrate their prototype at the National Innovation Summit and Showcase in Washington, DC at TechConnect World.

- Spin-offs: In 2015, two companies formed based on UA technologies: MaxOrg, out of the School of Library and Information Studies, and BitWear, out of the department of Electrical and Computer Engineering.
- In 2015, three student interns and 15 employees were hired by companies that reside in the Bama Technology Incubator. One company, ThruPore, received an NSF SBIR Phase II award to scale up production of its innovative catalyst.
- The Central Analytical Facility (CAF): During the year a total of 239 hands-on instrument users were served. Research groups that are currently using the CAF have more than \$5 million in external research funding. In addition to quality graduate education, this research infrastructure unit supports the research projects of a growing number of undergraduate researchers.