OU Professors Named Fellows of the National Academy of Inventors

OU Professors Daniel E. Resasco (Chemical Engineering) and Paul H. Weigel (Biochemistry and Microbiology, Health Sciences Center) have been named fellows of the National Academy of Inventors, a professional distinction awarded to academic inventors who have demonstrated a prolific spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on quality of life, economic development and the welfare of society.

“Dr. Resasco and Dr. Weigel deserve this high honor, which brings great credit to the entire university,” said OU President David L. Boren.

Resasco is a founder of SouthWest NanoTechnologies, a company recognized as a leader in producing high-quality single-walled carbon nanotubes, and inventor of their core technology, their patented production method. He holds 60 patents issued in 14 countries, demonstrating his inventive proficiency. Resasco has demonstrated innovation in his teaching, research and commercialization efforts and has been a role model to faculty for combining academic pursuits with societal impact.

Weigel is a leader in promoting entrepreneurship as well as collaboration between academia and the biotechnology industry. His research program has led to 27 issued U.S. patents and 39 foreign patents.

He has been awarded over $11 million in research grants, many of which directly contributed to the commercialization of his basic research, including four Oklahoma Applied Research Support grants.

Fellows of the National Academy of Inventors will be inducted by the Deputy U.S. Commissioner for Patents, Andrew Faile, from the U.S. Patent and Trademark Office, during the Fourth Annual Conference of the National Academy of Inventors on March 20, 2015, to be held at the California Institute of Technology in Pasadena, California. Fellows and their institutions are listed on a plaque on permanent display at the U.S. Patent and Trademark Office headquarters in Arlington, Virginia. Weigel and Resasco will join 2013 OU Fellows Paul DeAngelis and Jeff Harwell in this distinguished honor.

Statewide Affordable Housing Assessment

The College of Architecture is pleased to announce that it, in partnership with Integra Realty Resources, an estate consultation and Valuation Company with 65 offices and over 700 employees nationally, has been awarded the contract to complete the Statewide Housing Needs Assessment (SHNA) by the Oklahoma Housing Finance Agency.

The SHNA will be developed over the 2015 calendar year beginning in January with anticipated completion by year-end. On the OU side, this project will be led by Associate Professor Dawn Jourdan (Regional & City Planning), Professor Charles Graham (Construction Science), Assistant Professor Meghan Wieters (Regional & City Planning) and Assistant Professor Bryce Lowery (Regional & City Planning). The OU team will also include up to 10 masters level interns from the City and Regional Planning program in the College of Architecture. During the spring semester, Integra Realty Resources and OU’s team will jointly build the template of the SHNA. Once the template and action plan are finalized, OU student interns will collect data in each of the 77 counties and associated population centers. The main period of data gathering will occur from May through August, 2015. The Disaster Resiliency Component and the Assessment of Fair Housing Component will also be completed during the summer months using OU student interns directed by OU staff with experience in these specific component areas.
Secretary of the Interior Sally Jewell announced that Interior’s South Central Climate Science Center is awarding nearly $550,000 to universities and other partners for research to guide managers of parks, refuges and other cultural and natural resources in planning how to help species and ecosystems adapt to climate change.

“These climate studies are designed to help address regional concerns associated with climate change, providing a pathway to enhancing resilience and supporting local community needs,” said Secretary Jewell. “The impacts of climate change are vast and complex, so studies like these are critical to help ensure that our nation’s responses are rooted in sound science.”

The six funded studies will focus on how climate change will affect natural and cultural resources as well as identifying management actions that can be taken to help offset such changes. They include:

Studies focusing on drought and fire, specifically:
- Providing information to resource managers about how future precipitation will affect fire frequency and how that may impact species distribution in the South Central United States.
- Assessing drought resilience in communities by analyzing drought exposure, impacts and adaptation.
- Creating a better understanding of drought dynamics and fire weather forecasting by linking precipitation variability, soil and air temperatures, and daily temperature changes.

Efforts to foster better ways to communicate climate science, including:
- Developing effective tools for communicating drought information.
- Identifying vulnerabilities by initiating studies to assess tribal climate change and extreme event response.

“The continuing drought in the South Central U.S. is a strong reminder of the impact changing climate can have on our lives,” said Kim Winton, South Central Climate Science Center director. “Thus we have focused our projects on understanding the implications of long-term drought and how to best communicate our findings to natural and cultural resource managers and to the public.”

The studies will be undertaken by teams of scientists from the universities, tribes, USGS, as well as other partners such as NOAA’s Southern Climate Impacts Planning Program, NOAA’s Geophysical Fluid Dynamics Lab, the USDA’s Southern Plains Regional Climate Hub, and the Landscape Conservation Cooperatives in the South Central region.

The South Central Climate Science Center is hosted by University of Oklahoma. The South Central CSC consortium is comprised of Texas Tech University; Louisiana State University; The Chickasaw Nation; The Choctaw Nation of Oklahoma; Oklahoma State University; NOAA’s Geophysical Fluid Dynamics Laboratory. It conducts climate science for the states of Texas, New Mexico, Oklahoma, Louisiana and the fringes of the surrounding states.
Faculty Recognition

- Mary Jo Watson (Director Emeritus & Regents’ Professor Art History) was inducted into the Oklahoma Higher Education Hall of Fame in October 2014. The Oklahoma Higher Education Hall of Fame was established in 1994 to recognize and honor individuals, living and deceased, for outstanding meritorious service to higher education in Oklahoma.
- Professor Jonathan Hils (Art & Art History) was selected by the Oklahoma Turnpike Authority to produce a sculpture for the renovation of the I-44 Vinita Service Plaza (the iconic bridge over I-44/Route 66 between Tulsa and Joplin). Hils created a car sculpture after a 1959 Corvette first featured in the TV series “Route 66” that ran in the early 1960’s. The install and dedication with Governor Mary Fallin and other state representatives was held in November 2014.
- Professor Yang Hong (Civil Engineering & Environmental Sciences) has been elected to Executive Committee of AGU Natural Hazard Focus Group (NHFG). NHFG is the only group that fosters a focus within AGU on studies of geophysical hazards, including droughts, earthquakes, fires, floods, heat waves, landslides, space weather, storms, tsunamis, volcano eruptions, impact by near-Earth objects, and related events.

New Publications

- Peking University Press published Contemporary Literary Criticism: A Leitch Reader by Vincent Leitch (English).
Student Awards

- Petar Bukovcic (Ph.D student, Advanced Radar Research Center) wrote, “Convective-Stratiform Separation using Video Disdrometer Observations in Central Oklahoma - The Bayesian Approach” and has been accepted for publication in the Atmospheric Research Journal. Bukovcic is the first author, with co-authors and advisors, Dr. Dusan Zrnic (Meteorology) and Dr. Guifu Zhang (Advanced Radar Research Center).
- Emisha Young (full-time staff member, Early Childhood Education Institute, Tulsa/Ph.D. student, Instructional Leadership and Academic Curriculum) has been selected as a scholar for the 2015 Society for Research in Child Development—Frances Degen Horowitz Millennium Scholars Program. The Millennium Scholars Program provides educational and professional development for young scholars through mentorship and attendance at the SRCD Biennial meeting. Mentors consist of advanced graduate students and early career scholars in the field committed to support graduate student’s attainment of their academic and career goals.
- OU astronomy graduate student Brian Friesen was a recipient of the 2015 American Astronomical Society’s (AAS) Rodger Doxsey Travel Prize. The prize was awarded based on the scientific merit of Friesen’s Ph.D. dissertation abstract and provided funding for him to present the results of his dissertation at the 225th AAS conference in Seattle, WA.
## December New Awards

<table>
<thead>
<tr>
<th>Name</th>
<th>Dept./Center</th>
<th>Funding Agency</th>
<th>Project Title</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Resasco</td>
<td>Chemical, Biological &amp; Materials Engineering</td>
<td>BP America Inc.</td>
<td>Hydrodeoxygenation of lignin-derived compounds to valuable aromatics</td>
<td>$150,000</td>
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<tr>
<td>Fanyou Kong</td>
<td>Center for Analysis &amp; Prediction of Storms</td>
<td>Universities Space Research Association, NIAC</td>
<td>CAPS Support to the WRF Lightning Forecast Algorithm for the NOAA R3 Effort</td>
<td>$10,000</td>
</tr>
<tr>
<td>Joseph Havlicek</td>
<td>Electrical &amp; Computer Engineering</td>
<td>OU Health Sciences Center</td>
<td>PET Image Analysis using a Novel Radioisotope Fluorothymidine for Identification of Bone Marrow Repopulation following Myeloablative Transplantation</td>
<td>$16,966</td>
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<tr>
<td>Xiangming Xiao &amp; Melissa Scott</td>
<td>Microbiology and Plant Biology/Center for Spatial Analysis</td>
<td>AmericaView</td>
<td>AmericaView Affiliate Development Grant for the State of Oklahoma</td>
<td>$15,000</td>
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<tr>
<td>Kimball Milton</td>
<td>Physics &amp; Astronomy</td>
<td>Julian Schwinger Foundation</td>
<td>New Directions in Casimir Physics</td>
<td>$50,000</td>
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<tr>
<td>Chris Fiebrich</td>
<td>Oklahoma Climate Survey</td>
<td>Research Foundation for the State University of New York</td>
<td>Task 6: Providing Assistance in Developing the New York Mesonet: Data Ingest, Quality Control, and Processing System</td>
<td>$40,381</td>
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<tr>
<td>Lisa Holliday, Marguerite Keese, &amp; Hans-Peter Wachter</td>
<td>Construction Science/Center for Spatial Analysis/Interior Design</td>
<td>Environmental Protection Agency</td>
<td>Balancing Safety, Sustainability, Healthy Buildings, and Healthy Learning Environments when Building Schools</td>
<td>$984,174</td>
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<tr>
<td>Cameron Siler &amp; Jessa Watters</td>
<td>Sam Noble Oklahoma Museum of Natural History</td>
<td>State of Oklahoma, Wildlife Conservation Dept.</td>
<td>Tracking the emergence of infectious diseases among amphibian species of greatest conservation need-Amphibian surveys of Wildlife Management Areas in Oklahoma to determine current distribution, status, and health of native communities</td>
<td>$29,834</td>
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<tr>
<td>Hank Jenkins-Smith &amp; Carol Silva</td>
<td>Political Science</td>
<td>2015 Energy and Environment Survey</td>
<td>Sandia Laboratories</td>
<td>$250,000</td>
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<tr>
<td>Jody Worley</td>
<td>Human Relations</td>
<td>Healthy Start Program</td>
<td>Tulsa City-County Health Department</td>
<td>$5,000</td>
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