Fellows of the National Academy of Inventors Named

Two University of Oklahoma professors, Paul L. DeAngelis and Jeffrey Harwell have been named Fellows of the National Academy of Inventors, a highly 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.

Professor DeAngelis (Biochemistry and Molecular Biology, OUHSC) is the co-founder of four spin-out companies and holds a total of 92 patents in 20 countries. In 2000, Hyalose was formed to commercialize unique recombinant technologies. Two sister companies, Choncept and Heparinex, are based on DeAngelis’s inventions to offer related recombinant technologies for biopolymers, which are important to healthcare, cosmetics and biomedical research.

Professor Harwell (Asahi Glass Chair, Chemical, Biological and Materials Engineering) has 30 patents in 12 countries and has launched and collaborated with start-up companies in the areas of enhanced oil recovery, ground water remediation and carbon nanotubes. These companies, based wholly or partially on his inventions, employ more than 30 people in Oklahoma. He has worked with Fortune 500 companies around the world to invent and improve surfactants, nanoparticles and colloids for better product performance, greater cost efficiency and reduced environmental impact in areas such as nanotechnology, consumer products, environmental remediation and polymer composites.

Harwell’s creative pursuit of inventive concepts, determination to reduce them to novel practices and his ability to apply them in the world have yielded tangible impact on society through the creation of jobs, a cleaner environment and a generation of students prepared to emulate his leadership.

National Academy of Inventors Fellows will be inducted by Deputy U.S. Commissioner for Patents Andy Faile, from the U.S. Patent and Trademark Office, during the Third Annual Conference of the National Academy of Inventors on March 7, 2014 in Alexandria, Va. at the headquarters of the U.S. Patent and Trademark Office. Fellows will be presented with a special trophy and a rosette pin. Fellows will also be honored in a full-page advertisement in The Chronicle of Higher Education and in a future issue of Technology and Innovation—Proceedings of the National Academy of Inventors.
IEEE Fellow

Professor Rui Q. Yang (Electrical & Computer Engineering) was elected a fellow of The Institute of Electrical and Electronics Engineers (IEEE) for his contributions to the mid-infrared interband cascade laser and related optoelectronic devices.

Professor Receives Humanities Research Fellowship

Associate Professor Sarah W. Tracy (History of Medicine and Director of the Medical Humanities Program in the Honors College) has received a National Endowment for the Humanities Research Fellowship to complete a biography on nutrition and heart disease researcher Ancel Keys (1904-2004). The biography is tentatively titled *Health Revolutionary: Ancel Keys, Science, War, and the American Diet*. Few people have exerted more influence on American eating habits than physiologist and epidemiologist Ancel Keys.

In the 1940s, Keys helped usher in the era of highly-processed, preservative-rich food through his development of the K Ration for the U.S. Army. In the 1950s, 60s and 70s, Keys wrote internationally bestselling cookbooks that introduced the United States and the world to the Mediterranean diet and heart healthy eating habits.

Since joining OU in 1999, Tracy has received two NEH Fellowships in support of her research. She won an NEH Fellowship in 2002-2003 to support the writing of her book, *Alcoholism in America from Reconstruction to Prohibition*, published by Johns Hopkins University Press in 2005.

Department of Communication Awards

- Professor Young Kim and co-authors Kelly McKay-Semmler and Shane Semmler (Ph.D. graduates) received the 2013 Ralph Cooley Award during the recent conference of the National Communication Association in Washington, D.C. This award is given by the Association’s International and Intercultural Communication Division in recognition of the “outstanding research and scholarship” reflected in the division’s top-ranked paper.

- Assistant Professor Justin Reedy received the 2013 Lynda Lee Kaid Outstanding Dissertation Award from the National Communication Association’s Political Communication Division. His dissertation was titled “Political Discussion and Deliberative Democracy in Immigrant Communities.” Reedy received grant support from the Kettering Foundation to help complete the research.
NSF Highlight

Gordon Uno’s (Microbiology & Plant Biology) current project titled “Building a Better Introductory Biology Course” has been published on NSF’s SEE Innovation website [http://go.usa.gov/ZWhC](http://go.usa.gov/ZWhC). Over 500 faculty members from across the U.S. are participating in the Introductory Biology Project (ibp.ou.edu). Through a series of 12 meetings across the country, educators have organized to improve a class taken by over 800,000 students each year at the start of their undergraduate biology program.

Formation of the Center for Energy, Security and Society

OU and Sandia National Laboratories announce the launch of the Center for Energy, Security and Society—the latest in a 25-year history of collaborations between researchers at the two organizations. Together, OU and SNL have outlined a vision to enhance the nation’s security and prosperity through sustainable, transformative approaches to the most challenging energy, climate and infrastructure problems.

Specifically, the 25-year collaborative research effort between OU and Sandia researchers related to the nuclear fuel cycle has created a shared vision for: (1) how physical and social scientists should work together toward finding and implementing sustainable solutions to nuclear fuel cycle problems; (2) how states and local communities need to be effective participants in the development and implementation of national nuclear energy policies; and (3) the education of new generations of leaders, an essential component of the successful implementation of national nuclear energy policies because of the long lead times associated with these policies.

Nuclear energy will continue to play a role in the mix of energy resources that is needed to meet growing energy demand, and the Center will continue to focus on nuclear energy as a core research topic, including topics such as the future potential for small modular nuclear reactors and further research into the disposition of spent nuclear fuel.

Under the umbrella of the newly formed Center, topics for collaborative research between OU and Sandia also will be expanded to include subjects as diverse as the domestic use of unmanned aerial vehicles, renewable energy options and water challenges facing the western United States. The Center will operate under joint direction and management of the two founding groups. For more information about the Center, please visit [http://cess.ou.edu](http://cess.ou.edu) or contact Professor Hank C. Jenkins-Smith (Political Science and co-director of the Center) at hjsmith@ou.edu.

National Weather Association Meeting Awards

The Cooperative Institute for Mesoscale Meteorological Studies is proud to announce the awards listed below from the 38th Annual National Weather Association Meeting held October 12-17, 2013 in Charleston, South Carolina.

♦ Ben Herzog (M.S. student, School of Meteorology) won Best Graduate Student Oral Presentation for “Total Lightning Information in a 5-Year Thunderstorm Climatology.”

♦ Robert (Race) Clark III (Ph.D. student, School of Meteorology) won Best Graduate Student Poster for “A CONUS-wide Analysis of Flash Flooding: Simulations, Warnings, and Observations.”

♦ Dr. Charles A. Doswell (Senior Research Associate, Cooperative Institute for Mesoscale Meteorological Studies) received the Special Lifetime Achievement Award for his “exceptional service and contributions to the operational forecasting and research communities through high-quality scientific research, educational workshops and mentorship of colleagues and students.”
New Books

SRR LLC. published *Data Structures Featuring C++: A Programmer’s Perspective* by Sridhar Radhakrishnan (Computer Science) with Lee Wise and Chandra N. Sekharan (March 29, 2013).


The Universidad del Oriente published *Ventana de Zaci: Otras Miradas de la Guerra de Castas* by Terry Rugeley (History) with Jorge Canto Alcocer (2013).

New International Center for Ph.D. Training and Education

The School of Meteorology is proud to announce their participation in a new international center for Ph.D. training and education led by the University of Reading in the United Kingdom. The center is focused on a spectrum of research issues in the environmental sciences and is entitled SCENARIO (Science of the Environment: Natural and Anthropogenic Processes, Impacts and Opportunities). The program will receive approximately eight million dollars of funding from the UK’s Natural Environment Research Council over the next five years to pay for participation of 60 Ph.D. studentships. SCENARIO includes private sector partners in space, water, energy, insurance and risk management sectors and three international academic partners, the University of Oklahoma, Cal Tech and the University of Hamburg. As Dr. John Methven, the University of Reading professor who led the SCENARIO funding bid states "Ph.D. students are the lifeblood of research at universities and Ph.D. graduates go on to lead in many areas of scientific research, innovation and technological development." David Parsons (Director, School of Meteorology and co-PI of SCENARIO) estimates that over the next five years, 10-15 Ph.D. students from Reading will spend between 3 and 18 months at the School working on joint research projects at little or no cost to OU. This Ph.D. partnership will strength the School's undergraduate exchange program with the University of Reading.
November New Awards

- Musharraf Zaman, Civil Engineering & Environmental Science
  Ronald Barnes, Electrical & Computer Engineering
  Gerald Miller, Civil Engineering & Environmental Science
  Musharraf Zaman (Split 1), Petroleum & Geological Engineering
  “U.S. Department of Transportation, Research and Innovative Technology Admin”
  Southern Plains Transportation Center (SPTC)
  $2,592,500.00

- Rachel Riley, Oklahoma Climate Survey
  Mark Shafer, Oklahoma Climate Survey
  “Climate Training for Native American Tribes”
  U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration
  $75,414.00

- Chris Fiebrich, Oklahoma Climate Survey
  “Estimating Groundwater Recharge using the Oklahoma Mesonet”
  Oklahoma State University
  $6,061.00

- Jan Sunner, Microbiology and Plant Biology
  Joseph Suflita, Microbiology and Plant Biology
  Joseph Suflita (Split:1), Institute for Energy and the Environment
  “Metabolomics of Sulfolane Degradation”
  University of Alaska-Fairbanks
  $74,579.00

- Michael McInerney, Microbiology and Plant Biology
  “The Essential Biology of Microbial Cooperation in H2 and CH4 Production”
  University of California at Los Angeles
  $20,000.00

- Hank Jenkins-Smith, Political Science
  Carol Silva, Political Science
  “Environment and Energy Study 2014”
  Sandia Laboratories
  $42,000.00

- Jizhong Zhou, Microbiology and Plant Biology
  Zhili He, Microbiology and Plant Biology
  “Mapping Soil Carbon from Cradle to Grave: Drafting a Molecular Blueprint for C Transformation from Roots to Stabilized Soil Organic C”
  University of California, Berkeley
  $200,000.00

- Mark Shafer, Oklahoma Climate Survey
  Harold Brooks, CIMMS
  Yang Hong, Civil Engineering & Environmental Science
  Alek Krautmann, Oklahoma Climate Survey
  Peter Lamb, CIMMS
  Renee Mc Pherson, Oklahoma Climate Survey
  Renee Mc Pherson (Split:1), Geography & Environmental Sustainability
  Renee Mc Pherson (Split:2), South Central Climate Science Center
  Rachel Riley, Oklahoma Climate Survey
  Mark Shafer (Split:1), Geography & Environmental Sustainability
  Karen Sturgis, Oklahoma Climate Survey
  “Southern Climate Impacts Planning Program (SCIPP) Phase II”
  U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration
  $689,405.00

- Jeffery Volz, Civil Engineering & Environmental Science
  “Polyurethane Foam Infill for Fiber-Reinforced Polymer (FRP) Bridge Deck Panels”
  Missouri University of Science and Technology
  $40,087.00

- Jeffery Volz, Civil Engineering & Environmental Science
  Recycled Concrete Aggregate (RCA) for Infrastructure Elements
  Missouri University of Science and Technology
  $56,574.00