President’s Monthly Research and Development Highlights

Record Setting Funding by CIMMS

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) expenditures in CY 12 were a record $14.17M. This is a record for both CIMMS and any OU unit, and culminated a more than 11-fold increase over the last 20 years. Approximately 80% of the 2012 funding came from NOAA, for which CIMMS serves as its link with the University. Consistent with that role, CIMMS passed through $2.1M of the NOAA funding to other OU units ($323K to OCS, $928K to ARRC, $932K to CAPS). Most of the remaining $3M came from several other federal agencies (National Science Foundation, Department of Energy, Department of Defense, National Aeronautics and Space Administration). Only 2.6% of CIMMS funding was from the state.

Appointment of CIMMS Federal & Faculty Associates

CIMMS has appointed Donald MacGorman, David Stensrud, and David Turner as CIMMS Federal Associates. All are Senior Scientists in the NOAA National Severe Storms Laboratory (NSSL) in the National Weather Center. Lance Leslie (George Lynn Cross Research Professor and R.E. Lowry Chair, Meteorology), Aondover Tarhule (Chair, Geography), and Xuguang Wang (Assistant Professor, Meteorology) have also been appointed as CIMMS Faculty Associates. These appointments are an important next step for CIMMS as OU’s leading research center, and therefore for OU as a whole. They result from CIMMS being made a University Strategic Organization (USO) in 2012, in recognition of its successful national recompetition as a NOAA Cooperative Institute for 2011-2016.

OU President David Boren said “for over two decades, CIMMS has been the largest generator of external funds on the Norman Campus. CIMMS’ unique strategic relationship with NOAA is a key factor in the success of our weather and climate enterprise, and CIMMS serves as a role model for new partnerships now being developed between OU and other Federal agencies.”

Donald MacGorman
David Stensrud
David Turner
Lance Leslie
Aondover Tarhule
Xuguang Wang
American Society for Microbiology

The American Society for Microbiology appointed Jizhong Zhou (Director, Institute for Environmental Genomics/Botany & Microbiology) to its Committee on Global Engagement. The committee is part of ASM's International Board, whose mission is to "sustain and promote the global activities of the American Society for Microbiology."

Phi Alpha Theta Conference (State History Honor Society)

The statewide annual Phi Alpha Theta Conference (the History Honor Society) was held on the campus of Oklahoma State University, Stillwater, OK on February 22-23, 2013. The History Department had 12 undergraduates present their original, primary source-based work and three of those received special recognition thanks to the high quality of their work. Participation of the undergraduates is underwritten by the History Department and, more specifically, by an endowed fund made possible by the generosity of a donor whose son was a history major-Hart/England Fellow.

First place, undergraduate, US History: Katy Shannahan (The Impact of Failed Lesbian Feminist Ideology and Rhetoric)

First place, undergraduate, non-US History: Sarah Willey (whose score, incidentally, was "100") (Stereotypes of Japanese Women and Cultural Context of Japanese Feminism in Comparison to Western Feminism in the Post World War II Era)

Second place, undergraduate, non-US History: Arthur Dixon (Kings and Countries: Portraits of a Declining al-Andalus and an Ascending Christian Spain)

Advanced Radar Research Center Student Awards

Lei Lei (ARRC/ECE student) was notified that her conference presentation, "A Comparison of Planar and Cylindrical Configurations of Polarimetric Phased Array Radar for Weather Observation" had been recognized for a student award at the recently held American Meteorological Society Weather Analysis and Forecasting Symposium. Lei will receive a certificate and monetary award for her achievement.

Congratulations to Vivek Mahale (ARRC/SoM student) who recently won the 2013 Best Student Paper Award for the 16th Conference of the AMS Committee on Aviation, Range and Aerospace Meteorology. Both Vivek's oral conference presentation and written paper, "The Microphysics of the June 14, 2011 Norman, Oklahoma, Downburst from Dual-polarization and Dual-Doppler Radar Measurements" were commended by the judges. In addition to an AMS certificate of achievement and monetary prize, the award will be announced in an upcoming issue of BAMS. Drs. Guifu Zhang and Ming Xue are Vivek's advisors and co-authors of the paper.

Yunsung Hwang (ARRC student) recently received notification that he had been selected as a winner of the 11th Conference on Artificial and Computational Intelligence and its Applications to the Environmental Sciences Student Competition. The competition took place during the AMS annual meeting in Austin, Texas. Yunsung received the award for his abstract "Novel Gust Front Detection with Polarimetric WSR-88D Using Neuro-fuzzy System."
President’s Monthly Research and Development Highlights

First Flight for the OU SMARTSonde Aircraft

On March 14, 2013, an OU research team led by Phil Chilson (Meteorology/Atmospheric Radar Research Center) made the first flight of a research-class, unmanned aerial vehicle under its recently awarded FAA Certificate of Authorization at the Kessler Atmospheric and Ecological Field Station. This was the first activation of the CoA at KAEFS. During its four flights, the OU SMARTSonde aircraft collected atmospheric data and tested instrumentation mounted on the SMARTSonde platform. Chilson described how the instrumentation on the aircraft is able to provide accurate and detailed information about the structure and evolution of the atmosphere that can be compared to ground-based equipment. Robert Huck (Center for Applied Research & Development) explained that the data collected are part of a capstone project for two senior meteorology undergraduates, David Goines and Aaron Scott, and provided UAS training time for the Pilot-in-Command Robin Torres. Kelvin Droegemeier (Vice President for Research) noted that OU is the only university in the state to hold a CoA, and the first CoA flight was a historic day for OU. Chilson commented that the flights represented Oklahoma’s first integration of an UAV into the US National Airspace System for civilian applications. The test flight was made possible through coordinated efforts with the OU Aviation Program, the FAA TRACON in Oklahoma City and contributions from James Grimsley (Center for Applied Research & Development) Robert Huck, Ken Carson (Aviation), Robin Torres, Phil Chilson and Phil Gibson.
School of Drama Students Receive Top Honors

Students from the Peggy Dow Helmerich School of Drama won many top honors at the Region VI Kennedy Center American College Theatre Festival (KCACTF) in Shreveport, Louisiana February 25-30, 2013. A team of professors including Director Tom Orr, Rena Cook, Jon Young, Alissa Millar and Dr. Judith Pender led a group of 43 students to major victories at this prestigious theatre festival.

OU Drama students who received top honors in the Irene Ryan Acting Competition were senior Lindsey Kite and her partner Andre Gallop, and junior Brooke Reynolds and her partner Kamron McClure. In addition, junior Josh Bonzie and his partner Oliver Archibald were named first alternates and Andre Gallop won best partner. Also in the Irene Ryan acting finals were junior Kyle Whalen and Lindsey Pittman.

In the area of Design, Technology and Management, OU students won a total of 11 awards. F. Leahe Knott received the Region 6 National KCACTF Award for Theatrical Design Excellence for *Mary Stuart* and an opportunity to showcase her work at the national festival in Washington, D.C. Brad Gray received Meritorious Achievement in Lighting Design for *Cinderella*. Ethan Hartman received the KCACTF Allied Design and Technologies Award for *Avenue Q*. Two students received honors from the KCACTF National Stage Management Fellowship, Rachel Arditi received the Meritorious Achievement in Stage Management for her work on *The Resistible Rise of Arturo Ui*; as did Madeleine Borg for *Avenue Q*.

Paul Kim received the Focal Press Rafael Jaen Show Case Award for his costumes design work on *Avenue Q*. Ethan Hartman received the Society of Properties Artisans and Masters Award for *Avenue Q*. Madeleine Borg received the Doug Getzoff Award for Undergraduate Design Excellence for her scenic design of *Julius Caesar*.

The Region 6 Award for Costume Crafts Technology went to Melissa Perkins for *Iphigenie En Tauride*. The Region 6 Award for Scenic Technology was awarded to Mitchell Southerland for *Cinderella*. The USITT-SW Technology Award was awarded to Caitlin Yost for her 1940’s suit.

Kyle Bradford received the Dramaturgy Award and will also be traveling to the Kennedy Center for the national festival in Washington, D.C.
President’s Monthly Research and Development Highlights

**CREST Hydrological Modeling Science Meeting**

Supported by National Aeronautics and Space Administration, United States Agency for International Development and National Science Foundation Partnerships for International Research and Education program, OU HyDROS Lab member Zac Flamig (SoM/ARRC Ph.D. student) was invited to build flood prediction capacity for Namibia and Rwanda governmental agencies for two weeks in February 2013. During the first week, Flamig visited Namibia to discuss with Guido Van Langenhove, director of the Namibia Department of Hydrology, about requirements for establishing a hydrologic model for prediction of flooding on the Okavango River. The desire is to set up the OU Coupled Routing and Excess Storage hydrologic model using satellite precipitation estimates over the watershed in order to provide predictions of future flooding events. The predictions of future flooding events will then be disseminated from the national level down to the regional level using the Cloud-based Namibia Flood Dashboard SensorWeb. After Namibia, Flamig hosted a weeklong CREST hydrologic model training workshop in Kigali, Rwanda for the Integrated Water Resources Department. The workshop covered how the hydrologic model works, how to use the model, how to set up the model for local regions, how to visualize the output and how to integrate the output into an operational environment. The workshop was given to 20 people, a combination of hydrologists and meteorologists working for the Rwandan government.

**Publications**

Santiago de Chile, Uqbar Editores has published 2323 Stratford Ave. by Marcelo Rioseco (Modern Languages, Literatures and Linguistics) (December 2012).


Stylus Publishing has published *Beyond the Asterisk: Understanding Native Students in Higher Education* by Heather J. Shotton (Native American Studies), Stephanie J.
2013 Campus Compact Newman Civic Fellow

Hailey Neubauer (undergraduate in Sociology and the Honors Program) was selected as a 2013 Campus Compact Newman Civic Fellow. This is a competitive national award based on her “engaged scholarship” and community service efforts. In addition, Neubauer has presented her research at the International Congress of Qualitative Research conference and a co-authored manuscript (with Dr. Penny Pasque in Adult & Higher Education and Women’s & Gender Studies) in press with About Campus entitled, “Beyond Discourse to Emancipatory Action: Lessons from an Undergraduate.” The article is directed at Secretary Arne Duncan and higher education researchers and practitioners as she offers research and reflection on the importance of undergraduate involvement in social justice research toward educational equity.

Faculty Recognition

♦ On Friday March 15, 2013, Kathleen Crowther and Peter Barker (History of Science) gave a workshop for early career graduate students at the Newberry Library in Chicago. Entitled “Johannes de Sacrobosco’s ‘De Sphaera’ from the Thirteenth through the Seventeenth Centuries.” The workshop addressed the use of rare books in research and the nature of the earth-centered medieval cosmos, based on one of the most widely-read science texts of all time.

♦ Michael W. Kramer (Communication) has been invited to give the keynote address at the annual convention of the Southern States Communication Association in Louisville, Kentucky on April 13, 2013. His talk will focus on “Changing Communication Choices and Consequences.”

♦ Lara Souza (Oklahoma Biological Survey/Microbiology and Plant Biology) has been invited to be an associate editor for Plant Ecology, an international journal, which reports research findings of applied and basic ecological research of vascular plants in terrestrial and wetland ecosystems. As an associate editor for Plant Ecology, Souza will handle manuscripts with a focus on climate change and invasive species with the authority of making final publication decisions.
February New Awards

- Priscilla Crawford
  Oklahoma Biological Survey
  “Exploring Biodiversity through BioBlitz! Oklahoma”
  NP-EEANM
  $4,800

- Kendra Dresback
  School of Civil Engineering & Environmental Science
  “Next Generation ADCIRC Tidal Database: Phase 2 - West Coast”
  DOD-COR
  $75,000

- Richard Elmore
  School of Geology & Geophysics
  “Outcrop to Subsurface Reservoir Characterization of the Lower Mesaverde Group, Red Wash Field, Uinta Basin and Douglas Creek Arch, Utah and Colorado”
  QEPRESOURCESINC
  $40,000

- John Greene
  Department of Geography
  “Metrics for the Socio-Economic Impact of Two Wind Farms in Oklahoma”
  UN-TCU
  $15,858

- Jeffrey Kelly
  Oklahoma Biological Survey
  “Developing Innovative Tools to Use Weather Radar Data to Assess and Monitor Impacts of Existing and Future Energy Facilities on Aerial Faunas in California”
  $49,500

- Jeffrey Moore
  Center for Creation of Economic Wealth
  “Testing Crowd Sourced Methods for Identifying, Describing, Funding, and Authoring Books”
  CROWDSCRIIBED
  $18,500

- Danyal Petersen
  School of Meteorology
  “Lightning Radiated Emissions Study”
  NP-NIA
  $30,000

- Daniel Resasco
  School of Chemical, Biological & Materials Engineering
  Smart Nanoparticles for Conversion of Biomass Gasification Products at Water/Oil Interfaces in Emulsion Systems
  IN-Abengoa
  $426,237

- Ian Sellers
  Department of Physics & Astronomy
  “Defect Passivation for Improved Material Properties in Gallium-based Strain layered Superlattices”
  AMETHYST
  $29,486

- Roger Slatt
  School of Geology & Geophysics
  “Consortium: Regional Woodford Shale Stratigraphy, Oklahoma”
  VAR OIL
  $70,000

- Brigitte Steinheider
  Department of Psychology-TULSA
  “Technology Use in Educating APRN and Allied Health Students for Team-Based Care”
  HSC
  $6,400

- Steven Wells
  School of Social Work
  “Motivational Interviewing Training and Consultation”
  CSCofTulsa
  $3,669
February New Awards

- Ming Xue
  Center for Analysis & Prediction of Storms
  “Contribution to Model Development and Enhancement Research Team by the Center for Analysis and Prediction of Storms”
  DOC-NOA
  $40,000

- May Yuan
  College of Atmospheric & Geographic Sciences Dean
  “Web GIS for GeoCIP”
  OK-COM
  $50,000

- Yan Zhang
  School of Electrical Engineering
  “EM Modeling and Evaluation of Precision RF Nulling Device with ASR-11 Radar”
  BOOZ
  $4,346