



JCET NEWS

VOLUME 13, ISSUE 2

SUMMER 2015

Summer Storms Studied by JCET Researchers

The Plains Elevated Convection at Night, or PECAN, project recently wrapped up a marathon in the field campaign from June 1 to July 15.

JCET's Director, Belay Demoz, along with his team, participated in these field experiments that involved 14 universities, eight research labs across the country and several international collaborators.

PECAN was designed to study night time precipitation and convection in the plains. Night time storms are difficult to predict, in particular if they are initiated above the surface. These storms can produce tornadoes, thunder, lightning, strong winds and hail. The biggest challenge is to predict whether these storms will stay elevated or make it down to the surface.

PECAN is funded primarily by NSF, but also involves participation from the National Oceanographic Atmospheric Association (NOAA), NASA and the Department of Energy (DOE). UMBC is funded by NSF to organize one of the Fixed PISA (PECAN Instrumented Site) at Greensburg, Kansas. In 2007, Greensburg was almost wiped out (only three buildings were spared) by the strongest Tornado observed (EF5 scale). JCET scientists Belay Demoz, Ruben Delgado, Brian Carroll, Kevin Vermeesch; Howard Grad students Lorenza Cooper, Sium Tesfai; UMBC Undergrad Interns Glorianne Rivera (from U. Miami) and Dial Huang (from U. Davis) also participated.



Photos: Top courtesy NASA GSFC Scientific Visualization Studio (SVS), Bottom: UMBC scientists in front of instrument trailer.

In addition to the UMBC instrumented trailer (Profiling Radiometers, MPL, Wind Profiler, Radiosonde, Weather Station, Ceilometers), this site also included the NASA/GSFC ALVICE, GLOW, and XBAGER instruments as well as the DC8 and the LASE instrument from NASA/LaRC. A group from the NAVY research lab (NRL) in Monterey, CA.

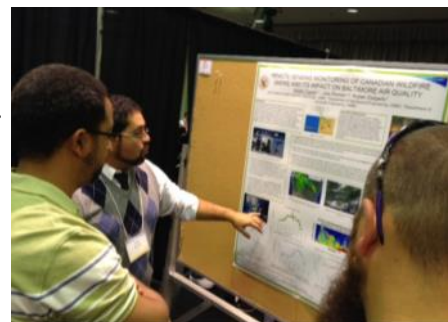
More information is available here:

<https://www.eol.ucar.edu/content/pecan-news>

Events

Summer Undergraduate Research Fest (SURF)

UMBC students mentored by JCET faculty presented results of their summer research at the 18th Annual SURF, held at UMBC on August 5th. Drs R. Delgado, B. Demoz, and A. Mehta advised the following students: Ms. Shelbi Tippett (UMBC - Mechanical Engineering Dept.), Mr. Julio Roman (UMBC - Computer Engineering Dept.), Mr. Christian Seas (UMBC - Physics Department), Ms. Glorianne Rivera (Meteorology - University of Miami). Dr. Amita Mehta also served as a collaborator with summer students in the High Performance Computing (HPC) program.



Julio Roman with SURF participants.

NASA's Applied Remote Sensing Training (ARSET) program reaches key milestone

Led by JCET's Ana Prados, the ARSET program conducted its largest training to date: 472 participants from 88 countries, 18 US states, and 310 organizations participated in a webinar entitled "NASA Remote Sensing Observations for Flood Management," held June 8-29, 2015. The webinar was developed by JCET faculty Amita Mehta and Brock Blevins. Topics included an overview of NASA remote sensing observations and mapping tools relevant to flood management and planning. It featured live demonstrations of the use of NASA satellite data for monitoring and detecting recent flooding events, and Geospatial Information System (GIS)-based analysis and applications. ARSET also provides training in air quality, water, land, and wildfire applications (<http://arset.gsfc.nasa.gov>).

Forest and Land Cover Meeting

Dr. Petya Campbell (JCET) co-led the 3rd South Central and Eastern European Environmental Network (SCERIN) meeting in Brasov, Romania July 13-17 with Jana Albrechtova (SCERIN regional coordinator) and Garik Gutman (NASA/HQ).

Over 40 participants from 13 countries attended to discuss remote sensing in forest management and administration; monitoring and assessment of protected areas; reviewing requirements and availability of satellite data, products, and approaches for land cover monitoring. Dr. Campbell chaired a plenary session and led working sessions and discussion groups. More information: <http://csebr.cz/scerin2015/program.html>



Participants with Petya Campbell, front right.

Congratulations!

Adriana Rocha Lima successfully defended her PhD project "Optical, microphysical, and compositional properties of volcanic ash, dust, and other atmospheric aerosols." Adriana works under the mentorship of Dr. Vanderlei Martins at UMBC.

Lorraine Remer has been selected as one of the 2015 American Geophysical Union (AGU) Class of Fellows. <https://eos.org/agu-news/2015-class-of-agu-fellows-announced>

JCET Faculty on the Move...

We wish Dr. Benjamin Johnson well in his new position at Atmospheric and Environmental Research (AER), a NOAA contractor.



Joint Center for Earth Systems
Technology (JCET)
5523 Research Park Drive
Suite 320
Baltimore, MD 21228
410-455-8812

Inquiries/comments, contact:

Valerie Casasanto
vcasa@umbc.edu
jcet.umbc.edu