For the third year in a row, Elizabeth City State University (ECSU), North Carolina held a two-week training program for middle school students, between June 18 and July 1, 2008. The training was led by a diverse team of professors from ECSU, the University of Kansas and CReSIS. Fifteen students attended the outreach program this year.

The training started with a presentation entitled “Preparing for College” by Dr. Darnell Johnson, ECSU, which was followed by lectures covering the technical and scientific aspects of studying glaciers. Presentations on using a digital camera and PowerPoint, as well as robotics and radar, were part of the program. Students were educated about math (using Antarctic temperature measurements) and climate change.

“After the training, I told my friend how walking instead of riding in a car helps prevent the rapid progression of global warming,” said Jessica N. Hathaway of Central Middle School. “I would like to complete high school, go to college with scholarship, get a degree in math and become an elementary school teacher.”

“Beyond the CReSIS commitment to recruiting students and informing the public about climate change, this program helps middle school students to prepare for college in the future,” said Dr. Darnell Johnson, ECSU Program Coordinator.

The third annual CReSIS REU program took place this summer at KU and Pennsylvania State University with ten students from around the nation. The REU students at KU included James Bramante of Dartmouth, Wanda-Marie Carey of Elizabeth City State University, Ryan Cummings of the University of Missouri-Kansas City, Phillip Funderburk of North Carolina State University, Megan O’Sadnick of Wheaton College, Carly Sakumura of Princeton, and Chelsea Vick of Elizabeth City State University. The PSU REU students were Bryce Carmichael of Elizabeth City State University, Amber Smith of North Carolina Central University and Uniquiea Wade of Elizabeth City State University.

Each student was assigned an academic advisor to guide them in research and a student mentor to guide them through the inner-workings of CReSIS and PSU.

“I’ve enjoyed working at CReSIS because we got to work on wireless networks, which is an emerging field.” - Chelsea Vick

ECSU PREPARES MIDDLE SCHOOL STUDENTS FOR COLLEGE

by Uyanga Bazaa

REU STUDENTS AID CReSIS WORK

by Beth Ruhl

>> From left to right Phillip Funderburk, James Bramante, Ryan Cummings, Megan O’Sadnick, Carly Sakumura, Chelsea Vick and Wanda-Marie Carey pose after giving their end of summer presentations.

>> cont’d on page 3
K-12 educators from all over Kansas came to CReSIS June 2-6 to learn about climate change and the cryosphere. The workshop, entitled “The Heat Is On,” which was originally developed at Ohio State University directed by Carol Landis. There were twenty-five teachers who participated.

“There was a great wealth of information on both a local and global level,” said teacher Brandon Gillette, a former PolarTREC teacher with CReSIS. The teachers listened to eight lectures by CReSIS scientists. They then split into smaller groups to discuss the material presented and make lesson plans.

“We had really great results. People learned a lot,” said Ryan Bowman, CReSIS graduate student and workshop organizer. Bowman said the teachers were looking for a scientific view on climate change, rather than the media perspective.

“They need to do it again,” said Gillette. “Many teachers could benefit from this kind of workshop.”

The workshop lectures can be found online at:
http://www.cresis.ku.edu/education

Sarah Seguin has been accused of spending more time playing with toy cars than doing engineering research, but behind what appears to be child’s play is a dedicated researcher studying the technology behind Improvised Explosive Devices or IED’s. Seguin recently completed her dissertation on the topic of IED’s, which can be made from the simple parts of a child’s remote control car. They have recently been a problem during the Iraq war where terrorist groups chose to use them as an unconventional type of weapon.

Seguin joined CReSIS in May 2008 as an Assistant Professor in KU’s electrical engineering and computer science department (EECS). She will teach three classes per year starting with Electromagnetics I in the fall semester of 2008.

“Climate change will be one of the biggest problems of our lifetime,” said Seguin of the research done by CReSIS. She enjoys working at CReSIS because at the end of the day there is a physical product to back up the research that has been done.

“I’m an engineer, so I will do whatever needs to be done around here,” said Seguin of her work with CReSIS. She will start advising students during the fall semester of 2008. “We couldn’t do anything with out the students.”

Seguin received her bachelor’s, master’s and her doctoral degrees in Electrical Engineering from Missouri University of Science and Technology. In her free time she enjoys learning languages and running marathons. She has run the Chicago Marathon three times and the Oklahoma Marathon twice.

VISIT CRESIS ONLINE WWW.CREESIS.KU.EDU
BRAATEN AND FEDDEMA SELECTED FOR KANSAS ENERGY AND ENVIRONMENT POLICY GROUP

by Uyanga Bazaa

Dr. David Braaten, CReSIS Deputy Director, and Dr. Johannes Feddema, KU geography professor, were recently appointed to the Kansas Energy and Environmental Policy (KEEP) Advisory Group by Kansas governor Kathleen Sebelius. KEEP was formed in May 2008 and is comprised of Kansas business leaders, energy experts and scientists.

Kansas is particularly vulnerable to the impact of climate change. The group’s primary duty is to recommend ways Kansas residents can reduce greenhouse gas emissions while continuing to positively impact the state’s economy. “I’m confident that the combined expertise of this group will lead to innovative solutions across all sectors of Kansas industry which helps every corner of our state,” said Sebelius.

“It’s an honor to be selected to serve on the Kansas Energy and Environmental Policy Advisory Group, and to have the opportunity to work with such an interesting and diverse group of people,” Braaten said. “I hope that my expertise in atmospheric science will contribute to the development of sound recommendations.”

Dr. Feddema is also honored by the appointment. He added, “I believe KEEP represents a positive step in facing the potential challenges posed by climate and environmental change on the Kansas environment and economy. It is my hope that KEEP will help the state to identify and take a lead role in wise energy development strategies and help the state to take a leading role in developing alternative energy resources and creating new economic opportunities associated with this effort.”

GLACIER GOO AT EXPLORATION DAY

by Peter Burkett

Exploration Day at Penn State 2008, formally known as Space Day, is a celebration of the spirit and opportunity of exploration and science at Penn State featuring interactive activities, multimedia presentations, student-developed displays and activities and planetarium shows.

In order to accommodate the increased interest from student and faculty groups interested in science, technology, engineering, and mathematics (STEM) education, Space Day was renamed Exploration Day to highlight all the exciting research occurring at Penn State. Collaborations with Bio Days, the Society of Physics Students, and other student groups emphasize the importance of a strong STEM education.

Penn State Professor of Geosciences Dr. Sridhar Anandakrishnan and PhD student Patrick Applegate engaged elementary age school children and their parents with seismic demonstrations and “Glacier Goo” - a child friendly substance that behaves like a glacier. Both parents and students were taught the basics about ice sheets and the way glaciers move and behave as well as how scientists at PSU study these glaciers and their potential impacts on sea level change in our changing climate.

CReSIS RESEARCHERS INSTALL AIRBORNE RADAR IN CALGARY, CANADA

by Sarah Seguin

Calgary’s moderate 65 degrees Fahrenheit was a respite from the Lawrence, Kansas heat for CReSIS researchers who installed the airborne radar at Kenn Borek Air. Professors Fernando Rodriguez-Morales, Carl Leuschen, Sarah Seguin, and Graduate Student Cameron Lewis all participated in the installation of the Multi-Channel Radar Depth Sounder (MCRDS) radar. The antennas, mounted underneath the wings, needed to be completely cabled, tested and attached to the radar systems which were mounted within the fuselage. In total, this required nearly three weeks of work. In addition, great attention was spent trying to mitigate any possible electromagnetic interference with the MCRDS radar.

REU CONT’D

with Dr. Sridhar Anandakrishnan, professor of geosciences, on developing an autonomous imaging system that visually monitors a glacier in Iceland. Wade worked with Dr. Derrick Lampkin, professor of geography at PSU and used satellite data to measure melt rates in Greenland.

The work done by the PSU students was supported by the Science and Technology Center (STC) and Student Transitional Alliance for Research (STAR) in Science, Technology, Engineering, and Math.

The CReSIS students presented the findings of their research on July 29 to the CReSIS community.
Participants in the Remote Sensing Art Contest hosted by CReSIS during IGARSS 08 are shown with their CReSIS polar bears. Dr. John Kereker, IGARSS 08 General Co-Chair, Dr. Linda Hayden and a Raytheon representative are shown with the students.

UPCOMING EVENTS

- 10.1 - 10.2 WAIS Divide Science Meeting
- 10.8 - 10.11 WAIS Workshop
- 10.9 - 10.12 Society for Advancement of Chicanos and Native Americans in science (SACNAS)
- 11.20 - 11.22 NSTA Regional Meeting
- 12.15 - 12.19 American Geophysical Union
- 12.24 Antarctic Seismic Surveys Begin

For more events visit cresis.ku.edu