The Virginia Space Grant Consortium's (VSGC) Student Research Conference and Luncheon was held April 18 at the Old Dominion University (ODU) Ted Constant Convocation Center in Norfolk. The conference is an annual event held for VSGC scholarship and fellowship recipients and was hosted this year by ODU. Forty-one Graduate Research Fellows presented the results of their research in 15-minute oral presentations and 11 undergraduate scholars presented posters during the conference. Graduate oral presentation sessions included: Aerospace; Applied Science; Applied Physics; Planetary Science; and Astrophysics sessions. Also attending were 22 VSGC Undergraduate STEM Bridge Scholars who are current sophomores at VSGC member institutions.

During the Student Research Conference, ODU hosted a Luncheon in honor of the 2012-13 Scholars and Fellows. Dr. John Broderick, President of ODU, provided opening remarks to welcome students and guests. Dr. Charles Steger, President of Virginia Tech and Chairman of VSGC's Board of Directors, also made opening remarks. Dr. Frederick McKenzie, Graduate Program Director, Department of Modeling, Simulation and Visualization Engineering from ODU provided the keynote address titled, "Pectus..."
The President’s budget for FY 2014 contains major changes in how federal funding for STEM programs will be allocated across agencies. Space Grant is included in the President’s proposed NASA budget at a reduced level, which is a concern. Many other wonderful NASA programs would be completely eliminated, including the NASA LARSS program which has successfully placed student interns at NASA Langley for 28 years. NASA is unique in its ability to offer educational programs because of the highly inspiring science and technology work undertaken by the Agency and the deep involvement of NASA employees in mentoring and sharing information with students. Much of the funding for NASA education programs currently comes through NASA’s research directorates. The President’s budget would eliminate all of that funding, which currently totals $47.9 million dollars. Please let policy makers know about the value of Space Grant and NASA education programs from your perspective as they consider the NASA budget for FY 2014.

Summer is just about here and VSGC has a wealth of summer programs for students and teachers. Thanks to new Commonwealth funding, we have expanded the number of rising high school seniors participating in Virginia Aerospace Science and Technology Scholars summer academies at NASA Langley to 180. State funding also has allowed us to kick off three new programs this summer. BLAST will offer rising ninth and tenth graders a residential program with lots of hands-on engineering activities at UVA; the Virginia Space Coast Academy at NASA Wallops and in partnership with the Mid-Atlantic Regional Spaceport will provide student flight experiences for rising juniors. The Commonwealth STEM Industry Internship Program (CSIIP) initiated this year is providing internships with Virginia industry for Virginia STEM undergraduate students.

A series of web forums produced by our partner, the Institute for Advanced Learning and Research, will offer our CSIIP interns and college students at large great STEM career planning information from a variety of STEM experts including Virginia Secretary of Trade and Commerce, Jim Cheng and Alice Scott, Vice President of the Virginia Manufacturer’s Association. (See page 3 for more information on Forums).

VSGC is partnering with WGBH-TV of Boston, NASA Langley and the Virginia Department of Education on a solar system workshop August 8 for teachers in grades 3 – 7. Teachers will receive curriculum guides developed by WGBH under a National Science Foundation Grant. A summer camp for students involved in our Gear Up project will be held at Norfolk State University in June. VSGC continues to work with the Colorado Space Grant to support the RockOn! sounding rocket payload workshop for college students at NASA Wallops June 15-20. STEMConnect will offer integrated STEM professional development for high school teachers July 29–August 1.
The Virginia Space Grant Consortium (VSGC) is partnering with the Institute for Advanced Learning and Research (IALR) to produce six webcasts to be presented to students this summer through the Commonwealth STEM Industry Internship (CSIIP) program. The webcasts will be taped and available online for convenient viewing.

The internship itself is a valuable opportunity for STEM majors to expand their hands-on experience; however, the webcasts are designed to enhance knowledge beyond their specific major. Viewers will learn “soft” skills such as how to interview and negotiate, and will find out how their STEM studies can be applied throughout the industries in Virginia.

Featured program speakers include Virginia’s Secretary of Trade and Commerce, Jim Cheng, and the Vice President of the Virginia Manufacturers Association, Alice Scott. Additional webcasts feature NASA and aerospace career pathways in the Commonwealth; Virginia Space Grant Consortium scholarship, internship and other opportunities; and workplace and job search skills. Students are being asked to view the programs as part of their participation in the CSIIP program, but the webcasts are available to the public, free of charge.

Links for the webcasts, feedback, and surveys will be available on the Events page of the CSIIP website at http://csiip.spacegrant.org.

CSIIP, which is funded through the Commonwealth of Virginia, offers a centralized, online application system that enables STEM undergraduates at accredited Virginia colleges and universities to search and apply for paid, STEM-related summer internships with Virginia companies. It also provides industry with free access to a large state-wide pool of qualified students for their summer internship opportunities. Students submit a single, comprehensive application that can be reviewed by potentially hundreds of companies throughout the state. Applications for summer 2014 will be accepted beginning in September.

Governor McDonnell, who launched the program last September, said, “A good education is the key to a good job. The Commonwealth STEM Industry Internship Program will help to prepare our students for the high-quality, high-paying jobs of the future. By better aligning higher education and the business sector, we are working to give every Virginia graduate a path to success. We must continue to develop the pipeline between Virginia’s excellent community colleges and universities and the business sector. This program, and programs like it, will enable more Virginia students to engage and learn the much-needed skills that so many careers of the 21st century require.”
Two professional development opportunities will be offered to educators this summer as part of the Expanding Geospatial Technician Education Through Virginia’s Community Colleges (GeoTED) project awarded to VSGC through a grant from NSF. These opportunities are designed to provide educators with an array of rich and rewarding professional development activities for the classroom.

Geospatial Institute: This week-long institute, which targets community college faculty and high school teachers, will be held June 1-7 at Virginia Tech coordinated by the Virginia Geospatial Extension Program (VGEP). Participants will gain foundational knowledge of geospatial topics, geospatial products and services and will receive valuable resources for classroom instruction.

GEOTREK-12: VSGC will coordinate this workshop for 22 Virginia high school teachers and administrators. The workshop is scheduled for August 13-15 at J. Sargeant Reynolds Community College in Richmond. Teachers will learn how to incorporate GPS, GIS and remote sensing technology in their classroom.

Program partners include: Virginia Western Community College (VWCC); Thomas Nelson Community College (TNCC); Southwest Virginia Community College (SWCC); J. Sargent Reynolds Community College (JSRCC); Virginia Geospatial Extension Program (VGEP) at Virginia Tech; Virginia Community College System (VCCS); and the Virginia Association of Mapping and Land Information Systems (VAMLIS).

http://www.geoted.org/event/geoted-geospatial-in-

VSGC has awarded over $5,682,803 in scholarships and fellowships to 1,358 students since inception in 1989.

Graduate Fellowship awards are $5,000 renewable awards up to two years and Undergraduate Scholarship awards are non-renewable and up to $8,500 for one year. www.vsgc.odu.edu
Through a collaboration between the VA STEM CoNNECT project and Virginia Space Grant Consortium, a program targeting high school math and science teachers entitled Project STAT: STEM Team Academy for Teachers is scheduled for July 29 - August 1. The program is designed to challenge and support science and mathematics teachers to more effectively implement integrative STEM in high school mathematics and science classrooms. Twenty-five teachers from across the state have been chosen to participate in the professional development workshop which will be held at New Horizons Regional Education Center in Hampton.

By participating in Project STAT, the teachers will develop the knowledge and skills needed to create iSTEM instructional units that fully incorporate the Engineering Design Process in their science or mathematics classrooms. [http://www.vsgc.odu.edu/VASTEMCONNECT/](http://www.vsgc.odu.edu/VASTEMCONNECT/)

The VA STEM CoNNECT project is a collaborative partnership that includes George Mason University, James Madison University, The Institute for Teaching through Technology and Innovative Practices (ITTIP) at Longwood University, Frank Batten College of Engineering at Old Dominion University, The College of William and Mary, Virginia Tech, University of Virginia, MathScience Innovation Center, Virginia Space Grant Consortium, Virginia Mathematics and Science Coalition, Virginia Association of Science Teachers, Virginia Council of Teachers of Mathematics, Southside Virginia Regional Technology Consortium, and 48 school divisions across Virginia. Additional partners include STEM businesses and industries as well as STEM-related non-profit organizations.

Middle School Students Participate in GAITE Program

Over the past several months, VSGC coordinated three exploratory Saturday events for 7th and 8th grade students participating in the Governor’s Academy for Innovation, Technology and Engineering (GAITE) program. A total of 191 students and 193 parents were engaged in interactive hands-on activities and demonstrations designed to provide career planning resources. The workshops were held at Thomas Nelson Community College, Canon Virginia, NASA Langley Research Center and ECPI. Also, 23 ninth and tenth grade students and 12 parents participated in an additional Saturday workshop held at ECPI. GAITE is a partnership between VSGC, Peninsula school divisions, NASA and industry partners.

GAITE Exploratory Saturdays are themed events with instruction led by current professionals and educators from STEM fields. Interns and co-op students serve as excellent role models for the young students. The three themes include: Connecting the Future, Designing the Future, and Automating the Future. Since 2008, 20 Saturdays have been attended by 1,152 students and 973 parents.
Ninety-one students from Hampton and Phoebus High Schools have attended GearUP STEM Saturday workshops held from November 2012 to March 2013. The program is designed to motivate and prepare students for success in higher education. During the workshops held at NASA Langley Research Center and Nauticus Museum, students participated in hands-on activities, tours and interactive lectures.

Also, VSGC will coordinate a summer STEM Academy for the GEAR UP students on June 17-19 which will be hosted by Norfolk State University (NSU). The rising juniors and seniors will learn about academic admissions, financial aid, housing and other aspects of campus life.

The opening keynote address will be given by Arel Moodie, a young entrepreneur and motivational speaker, who encourages students to graduate from high school and attend college. Dr. Julian Earls, a NSU alumnus and former Director of the NASA Glenn Research Center, will give the closing address.

These students have been engaged in GearUP since middle school and will be tracked throughout high school until they graduate to determine the impact of these STEM activities on their future academic plans. GearUP, which is funded through the U.S. Department of Education, is a partnership between VSGC and Hampton City Schools.
NICE presented a Teacher Professional Development Workshop Series in April. This interactive workshop was attended by both on-site and online Science, Technology, Engineering, and Math (STEM) educators, via the NASA Digital Learning Network (DLN). VSGC provides program integration and communication for the NICE program, which is managed through NASA Langley Research Center. The workshop was a four-part series featuring climate literacy content and an introduction to several classroom resources from NASA and NICE Earth Systems Scientists.

The topics included the greenhouse effect, Earth’s energy budget, the rise in average global temperature and the resulting impacts on plants, insects, and birds. The resources introduced included MY NASA DATA, S’COOL and GLOBE. All NASA resources have been reviewed for both scientific and pedagogical content. Links to these resources and much more can be found on the NICE website, http://nice.larc.nasa.gov.

The Professional Development Workshop Series was so successful that a new series is being planned. Starting in September, monthly interactive sessions will be offered through the NASA DLN. Session topics will include training with climate education resources and climate literacy content. Keep an eye on the website for more information.

We have an “Opportunities for Teachers” area on our website. If you would like to contribute an item concerning a climate education related opportunity for posting, please send the information to Mary Jo Leber, NICE Program Manager, mleber@odu.edu.

NICE has so far funded 71 climate change education projects (see the NICE website for details). This year the annual request for new proposals (RFP) is referred to as NICE-T, with the dash T referring to the Tribal component; the lead on each project must be a Tribal College or University. Proposed projects should build on existing climate change efforts. There are a number of institutions with ongoing projects that would like to team up with Tribal Institutions and there are Tribal Institutions that would like to partner with an institution with an ongoing project. Contact VSGC for help identifying a partner institution.

Student Research Conference
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Research in Medical Modeling and Simulation.”

Chris Carter, VSGC’s Deputy Director, stated, “This is always one of our favorite days of the year because we get to meet the students in person and see the results of their research projects.” VSGC Graduate Fellow, Ryan Johnson, VSGC Undergraduate Scholar, Minnae Chabwera, Hampton University, and Undergraduate STEM Bridge Scholar, Kevin Jackson of ODU made brief remarks during the luncheon as to the impact of the award on their research and educational pursuits.