

2013-2014 Undergraduate Scholarships (continued)

Gaither, Arielle
 Goontz, Larry
 Kosko, Steven
 Lucas, John
 McKenzie, Ozias
 Melroy, Samantha
 Palley, David
 Posa, Rebecca
 Rogers, Eric
 Schultz, Justine
 Strader, Jared

WVU Institute of Technology

Burdette, Derek
 Cox, Jordan
 Dinh, Thy

Ross, Garron
 Shaffer, Christopher
 Slater, Bryan

WV Wesleyan College

Bair, John
 Greza, Cameron
 Haines, Thomas
 Hoone, Cullen
 Hypes, Shane
 Kimble, Dustin
 Schiffour, Mark
 Stinson, Samantha
 Stroud, Bronnie
 Todd, Landon
 Turner, Cody

NASA West Virginia Space Grant Consortium

The NASA WVSGC is a National Aeronautics and Space Administration (NASA) sponsored organization established in August 1991. It is comprised of 12 West Virginia academic institutions and 8 corporate and scientific partners. It is dedicated to building research infrastructure and promoting Science, Technology, Engineering and Math (STEM) education in West Virginia.

Affiliates

West Virginia University (Lead)
 Bethany College
 Bluefield State College
 Fairmont State University
 Glenville State College
 Marshall University
 NASA Independent Verification & Validation Facility
 NRAO Green Bank Facility
 Polyhedron Learning Media, Inc.

Shepherd University
 TechConnectWV
 The Clay Center for the Arts & Sciences of WV
 TMC Technologies, Inc.
 West Liberty University
 WV High Technology Consortium Foundation
 West Virginia State University
 WVU Institute of Technology
 West Virginia Wesleyan College
 Wheeling Jesuit University

Upcoming Events

NASA Research Day at Shepherd University	April 16, 2014
NASA Research Day at WV State University	April 25, 2014
NASA Research Day at Marshall University	May 2, 2014
Summer Aviation Camp at WVU	June 11-13, 2014
SPACE Day at WV Wesleyan Collage	October 11, 2014




Share your Story

Contact NASA WVSGC to share your story and keep us updated on ongoing events, we would love to feature you in our next issue!

NASA WVSGC

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NASA West Virginia Space Grant Consortium

NEWSLETTER

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The NASA West Virginia Space Grant Consortium (WVSGC) supports many programs that focus on research, collaborations with high-technology industries, student fellowships as well as K-12, and public outreach programs. In this issue, we aim to highlight a few of those programs.



At the National Council of Space Grant Directors Spring 2014 Meeting, pictured left to right: Anne Barth (TechConnectWV), Majid Jaridi (WVSGC), Mary Sandy (Virginia SGC), Nancy Vinh (WVSGC) and Candy Cordwell (WVSGC)

National Council of Space Grant Directors Spring 2014 Meeting

The National Council of Space Grant Directors Spring 2014 Meeting held in Washington, DC was a very eventful and informative meeting.

New leadership at NASA included Dr. Lenell Allen, the Director of Aerospace Research and Career Development, Office of Education and Dr. Roosevelt Johnson, the Acting Associate Administrator for Education. Dr. Allen shared updates at NASA including the introduction of an iPhone application to view our planet's vital signs in 3D, "Earth Now." Dr. Johnson emphasized the importance of transparency and communication between the Space Grant Consortia and NASA. In all, NASA emphasized that the National Space Grant College and Fellowship Program is a highly regarded and well-recognized program. There will also be a competitive opportunity for partnerships with community colleges and technical schools released in the near future.

One of the discussions between the Consortia was the use of social media such as LinkedIn, Facebook and Twitter, and their ability to inform the public about Space Grant programs. We, at the NASA WVSGC, aim to increase our public presence using these social media resources.



Nathaniel Fowler, a WVU student with his design that promotes renewable energy

NASA Undergraduate Scholarship Award Leads to Larger Project

Nathaniel Fowler and Samantha Melroy, both undergraduates at West Virginia University (WVU) are recipients of the 2013-2014 Undergraduate NASA Scholarship (all awardees are listed on page 3-4). Working with mentor Dr. James Smith, a Professor in the Mechanical and Aerospace Engineering Department at WVU, Fowler & Melroy have furthered their scholarship award into a project that is currently in the stages of obtaining a patent with the United States Patent and Trademark Office. Melroy's scholarship allowed her to assist Fowler in the feasibility study of his project, "Control Methodology for a Hot Water Energy Reduction System." Fowler's project focuses on the use of "green heat" in creating a system to provide a simple and cost effective way to offset household energy costs. It uses the combination of a wind turbine, a patent-pending viscous controller, and thermal solar

collector as an add-on to an existing hot water tank. This technology allows for the average homeowner and/or small business owner to offset their current energy usage, incorporate renewable energy sources, and offer a three to four year return on their initial investment. The overall goal is to implement this system into a wider market in order to potentially offset the rising energy demands for the United States. Fowler is pictured on page one with a wind turbine and solar panel, both components in his “green heat” technology.



SPOT presenters in front of the NRAO, Green Bank Telescope

Space Public Outreach Team

The Space Public Outreach Team or SPOT is a program new to the state of West Virginia. This is an adopted program from the state of Montana where it has been very successful over the past 17 years. The goal of SPOT is to allow college students to go out to schools across the state of West Virginia ranging from kindergarten to high school and provide a technical presentation about a STEM topic that they have learned through their training.

At this time, there are two presentations offered to schools: The Invisible Universe, which was created by National Radio Astronomy Observatory (NRAO) – Greenbank, and Mars: Past, Present, Future, which was created by NASA IV&V in Fairmont, WV. These presentations last about 45 minutes each and provide benefits to both the students who give them, and the students who get to watch them. These presentations are adapted to the appropriate grade level and have major ties to West Virginia throughout the presentation. This technique shows how important STEM education is in West Virginia and will hopefully inspire these students to get involved in these types of careers when they see everything that is happening right in their home state.

For the 2013–2014 academic year, SPOT has been very successful across the state with 15 trained

presenters from four schools across the state, WVU, WVU Institute of Technology, Shepherd University, and WV Wesleyan College. In the spring of 2014 alone, SPOT presentations have been given over 20 times with an impact of over 1,000 students ranging from kindergarten to high school. There will be future opportunities for new students to get SPOT training and be able to give brand new presentations to students across the state. If you are interested in learning more or getting involved with SPOT, contact Justin Smith at NASA IV&V (justin.i.smith@nasa.gov) or Kathryn Williamson at NRAO, Greenbank (kwilliam@nrao.edu).



A girl scout learning about hand-eye coordination, one of many STEM activities planned for Girl Scout Math and Science Day at WVU

Girl Scout Math and Science Day

NASA WVSGC, students from SPACE and WVU Rocketry Club attended the Girl Scout Math and Science Day. It was a day when girl scouts can come together and learn about math, science, and engineering with college-age mentors. It was a full day of activities that showed just how fun STEM-related careers can be!



Grow-Boticists at North Elementary School in Morgantown, WV

TEKids

TEKids offers students the opportunity to learn about technology through “hands-on problem-solving, experimentation, and technology exploration.” At the culmination event held at North Elementary School in Morgantown, WV this past March, students were able to share everything they learned through the “Grow-Boticists” program (pictured at the bottom of page 2). It’s a program where students learn about circuitry and programming concepts on an Arduino (a single-board microcontroller, which makes the application of interactive objects or environments more accessible). Information about this project can be found at their website, www.tekids.org.



Participants at the SFDC/SPACE Chapter Meeting pictured left to right, top row: Andy Shtanko (Shepherd), Conner Henson (Marshall), Joshua Waggoner (Shepherd), Steven Hard (NASA IV&V), Justin Smith (NASA IV&V), Jeffrey Northey (NASA IV&V), Thy Dinh (WVU Institute of Technology), Josh Hiatt (WV Wesleyan), Nathan Tehrani (WVU); bottom row: Dimitris Vassiliadis (WVU), Jon Saken (Marshall), Majid Jaridi (WVSGC), Tracey Delaney (WV Wesleyan), and Ralph Wojtowicz (Shepherd)

Student Partnership for the Advancement of Cosmic Exploration

The Student Partnership for the Advancement of Cosmic Exploration (SPACE) was established to improve upon the students’ comprehensive experience at college, with a specific emphasis toward developing and furthering space exploration. This past March, a meeting was held at WVU in order to chart the future of SPACE at each academic institution as well as the efforts to increase interaction among all SPACE chapters. Those in attendance included student leaders and faculty advisors from Marshall University, Shepherd University, WVU, WVU Institute of Technology, and WV Wesleyan College. SPACE chapters met with NASA WVSGC and project leaders at the NASA IV&V Facility (pictured above). Discussions included updates at the different SPACE chapters, assistance to start a SPACE chapter at Marshall University as well as expanding to other universities. Dr. Dimitris Vassiliadis, a Physics Professor at WVU, discussed the values of building a payload and the future projects in place for SPACE. For additional information, contact the NASA WVSGC to be connected with a SPACE representative.

2013-2014 Undergraduate Scholarships

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|--|---|
| Bethany College
DelGiorno, Alexander
Duvall, Samuel
Fischer, Jacob
Jacobs, Morgan
Lancaster, Amber
Sroka, Kristen | Goodman, Richard
Grubbs, Austin
Herbert, Rebecca
Johnson, Darryl
Logsdon, Kirsten
Piatek, Emilie
Revell, Dustin
Shane, Caitlyn
Shimer, Christian
Simms, Gerren
Tomlin, Jared
Walker, Kayla
Wells, Kyla |
| Bluefield State College
Bolden, Antonio
Reid, Ashley
Richmond, Sasha
Wiggins, Shakima | West Liberty University
Bell, Spencer
Fagundo, Raquel
Hall, Jesse
Jackson, Nichole
Knowlton, Samantha
Lucero, Michael
Mazzella, Leanne
Humphrey, Victoria |
| Fairmont State University
Golian, Megan
Phillips, Bobbi
Swiger, Courtney | Wheeling Jesuit University
Bain, Elizabeth
Barker, Nathaniel
Becca, Jeffrey
Buch, Sarah
Christman, Taylor
Dwyer, Patrick
Eisenhart, Andrew
Huth, Collin
King, Nicholas
Pennacchio, John
Schigel, Janelle
Schnelle, Anthony |
| Glenville State College
Fuller, Adam
Pifer, Steven
Ramezan, Emily
Rhodes, Jonathan
Smith, Randy
Taylor, Allison | WV State University
Dillon, Jordan
Martin, Chandra
McCoy, Markie
Unsel, Desiree |
| Marshall University
Blankenship, Heath
Campbell, Kristen
Chaudhry, Sumaiya
Cheeks, Shawn
Davis, Daniel
Fleming, Aubrey
Foster, Patrick
Gray, Miles
Gudivada, Akhil
Haldeman, Matthew
Henson, Conner
Hineman, Michael
Lefevre, Anna
McQuerrey, Jonathan
Paris, Derrick
Patel, Keyur
Pelfrey Jr, Curtis
Phelps, Stephen
Simmons, Brian
Vess, Andrew
Watson, Dylan
White, Logan
Whitt, Allen
Williams, Benjamin
Yanev, Andrey | West Virginia University
Ahrens, Caitlin
Butcher, Trevor
Carte, Nathan
Cunningham, Virginia
Khan, Amna
Marchiny, Gary
Maynard, Tessa
Sardone, Amy
Tehrani, Nathan
Cordonier, John
Dietzius, Barrett
Fowler, Nathaniel
(continued on page 4) |
| Shepherd University
Bass, Lawrence
Boucher, Donald
Brooks, Simone
Crites, Courtney
Glewwe, Gareth | |