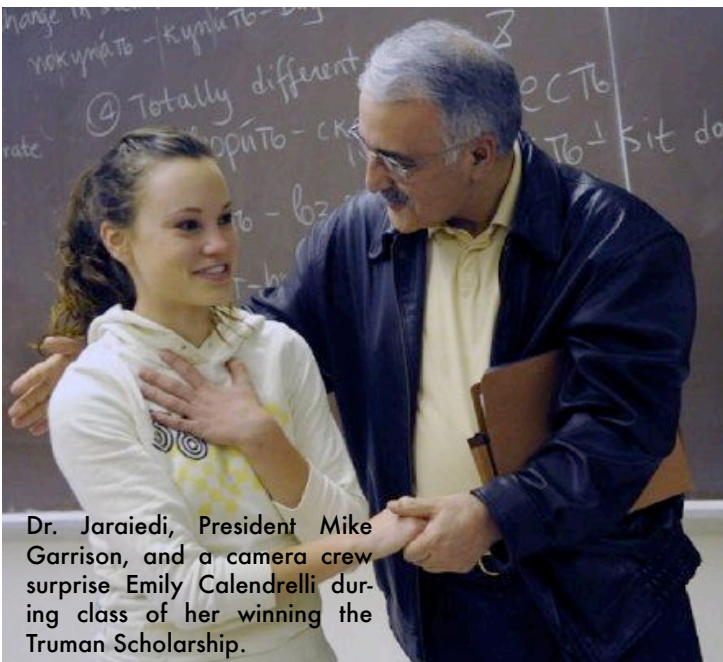


# WV Space Connections

VOLUME 3 ISSUE 2

Spring 08



Dr. Jaraiedi, President Mike Garrison, and a camera crew surprise Emily Calendrelli during class of her winning the Truman Scholarship.



Eileen Poling and Hector the puppet experience zero-g on an STS 117. Poling is a teacher at NASA Explorer School, Tucker Valley Elementary.

## Letter from the Director

Dear Friends,

I am happy to welcome you to another edition of WV Space Connections. Thanks to the dedication and hard work of our faculty, our affiliates, our Board Members, and our colleagues, Space Grant Consortium and NASA EPSCoR continue to expand their coverage and services in West Virginia.

I would like to welcome our newest affiliate, National Radio Astronomy Observatory, Greenbank. We look forward to working with Site Director, Dr. Richard Prestage, on future projects.

I am also proud to announce that NASA Scholar, Emily Calendrelli, has recently won the prestigious Truman Scholarship. Emily was a member of the Microgravity Team and an intern at NASA Glenn. She will be joining the NASA Academy at Ames Research Center in the summer. Calendrelli exemplifies the type of students that our program produces, and we wish her the best on all of her future endeavors.

Dr. Majid Jaraiedi  
Director, NASA West Virginia Space Grant Consortium

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Kerri Phillips, a graduate student in aerospace engineering at WVU, was named to the 2008 USA Today All-USA College Academic Team.

## Kerri Phillips Named to USA Today All-Academic Team

Kerri Phillips, a WVU graduate student in aerospace engineering from Weirton, was named to the 2008 USA Today All-USA College Academic Team's third team.

The team, comprised of 60 students on the first, second and third teams and 20 honorable mentions, was selected by a panel of judges from almost 500 students nominated by colleges and universities across the United States. Judges considered grades, leadership, activities and, most importantly, how students extend their intellectual talents beyond the classroom.

The announcement was made in Feb. 14's issue of USA Today and brings WVU's total number of academic team honorees to 11.

For Phillips, the announcement is an affirmation of many years of hard work, but also provides an opportunity to highlight the University.

"We are exceedingly proud of Kerri, not only for her many academic accomplishments, but also for her commitment to helping others and to making a difference in our world," said Gene Cilento, Glen Hiner dean of the College of Engineering and Mineral Resources.

Phillips graduated with dual bachelor's degrees in mechanical and aerospace engineering from WVU in December 2007, but she already has a wealth of experience in the field. Her interest in developing technologies and aerospace engineering led her to under-

graduate research with NASA and The Boeing Co. From 2005-06, as part of the NASA Reduced Gravity Flight Opportunities program, Phillips worked to develop a research proposal on jet impingement cooling. She also spent the summers of 2005 and 2006 working at NASA's Goddard Space Flight Center to design and construct an autonomous underwater vehicle. Most recently, she performed flight control lab testing on the Boeing 787 Dreamliner project during the summer of 2007.

"Some of my most memorable experiences include flying aboard NASA's

'Weightless Wonder' aircraft conducting an experiment in microgravity that our WVU team developed," Phillips said. "The NASA West Virginia Space Grant Consortium has supported my internships and research projects, and they have helped fulfill my goals of working with NASA on interesting projects."

Phillips was named a 2006 Barry M. Goldwater Scholar - the nation's premier award in math, science and engineering. She has received several honors from NASA, including a space grant scholarship (2004-05 and 2005-06) and undergraduate research fellowship (2006-07).

## MARS Victorious in Pittsburgh

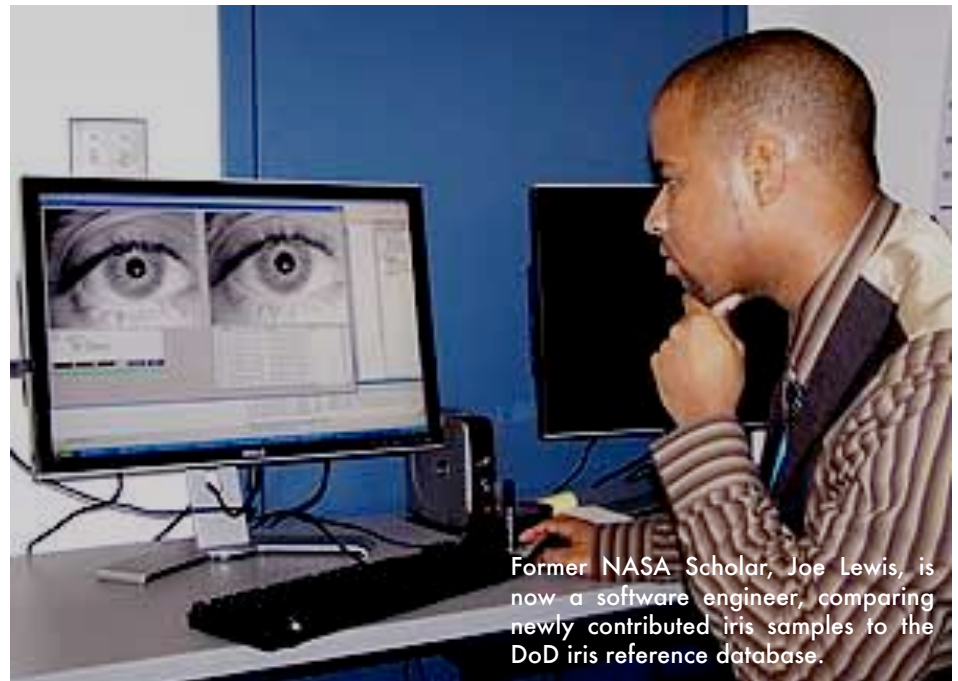
The Mountaineer Area Robotics (MARS) team emerged victorious in the FIRST Robotics Competition in Pittsburgh, PA on March 15, 2008. The For Inspiration and Recognition of Science and Technology (FIRST) Robotics Competition is a national program that requires high school students to build a tele-operated robot from a limited set of parts in just six weeks. The team is co-sponsored by WV NASA Space Grant Consortium.

In its initial year of competition, the MARS team beat out seven other rookie teams for the Rookie All Star Award in Pittsburgh. The Rookie All Star award, which recognizes the best all around rookie team, sends the top rookie team on to the World Festival in the Georgia Dome in Atlanta.

A recent Brandeis University study found that FIRST Robotics Competition participants are 50% more likely to attend college and 2-3 times more likely to major in science or engineering once in college. Thus, the MARS program specifically looks to local science and engineering-based organizations for mentor and funding support.

Now moving on to Atlanta in four weeks, the team needs to raise an additional \$8,000 to register for the national championship and to travel to Georgia.

For more info, contact Earl Scime (escime@wvu.edu) or visit [ulysses.phys.wvu.edu/~escime/MARS/MARS.html](http://ulysses.phys.wvu.edu/~escime/MARS/MARS.html).



Former NASA Scholar, Joe Lewis, is now a software engineer, comparing newly contributed iris samples to the DoD iris reference database.





Two Piedmont Elementary teachers participating in the NASA Explorer School Reduced Gravity Flight Opportunity in Houston, Texas February 6-17.

## WVSGC & NASA IV&V Facility Interns

In the summer and fall of 2007, the NASA IV&V Facility Research Team had the opportunity to work with five outstanding college students. During this time, the students had the opportunity to work with members of the NASA IV&V Facility scientific staff on a variety of projects. This year's students included Adam Anderson (Shepherd University), Robert Ball (Fairmont State University), Kayla Medina (WVU), Jonathan Meyer (WVU), and Benjamin Ridgway.

Four students, Adam Anderson of Shepherd University, Robert Ball of Fairmont State University, Jonathan Meyer of West Virginia University, and Benjamin Ridgway of the University of Idaho, worked together to perform flight software traces on the GLAST Large Area Telescope source code and developed, executed, and analyzed robustness tests on the VxWorks real-time operating system. These students also conducted evaluations on new cutting edge software engineering technologies, developed supporting documentation, and presented their findings to NASA employees. One of these reports was so well done that it was used as a case study for the "7<sup>th</sup> International Project Management Workshop in Esc Lille, France".

Kayla Medina of West Virginia University has also been conducting an evaluation on a recently developed tool funded by the Facility Research Program called Software Reuse Analysis and Evaluation. In the early stages of this project, Kayla has become familiar with the tool and will begin utilizing

it on NASA projects. Kayla, Robert, and Jonathan also provided support in the planning and execution of the annual Office of Safety and Mission Assurance Software Assurance Symposium held at the Waterfront Place Hotel in Morgantown, West Virginia. The symposium was held to promote the research managed by the NASA IV&V Facility and thanks to intern support, the event was a success.

Most of these students will continue their internships and continue to provide support to the NASA IV&V Facility and its goal to provide high-confidence safety and mission assurance of NASA software. The students will have the opportunity to work with NASA IV&V project managers and their teams on projects ranging from software safety to complex electronics. Other opportunities include redesigning the Facility's research web pages and supporting the Research Management Team. Our goal is to continue providing opportunities to college students in the state of West Virginia.

## NASA Academy

Three WV students were selected to participate at NASA Academy in Summer 2008. This is the first time we have had three students selected in a single summer. Alan Talbott (WVU) will be interning at the Goddard Space Flight Center. Emily Calendrelli (WVU) will be interning at the Ames Research Center. Mary Beth Lewton (WJU) will be interning at the Glenn Research Center. For more information on Summer 2008 internships, refer to our Fall Newsletter which can be downloaded at [http://nasa.wvu.edu/events\\_news.html](http://nasa.wvu.edu/events_news.html).

## Affiliate Minute:

### West Liberty College

WV NASA Scholar, Katie Kacmarik, will be presenting a poster at the American Heart Association Meeting being held from April 15-18, 2008, Atlanta, GA. The title of the presentation is Tumor Necrosis Factor- $\alpha$  Induces Increased Synthesis of Messenger Ribonucleic Acid and Protein Expression for Vascular Cell Adhesion Molecule and Interleukin-8 in Human Aortic Endothelial Cells.

### Wheeling Jesuit University

The Center for Educational Technologies at Wheeling Jesuit University ran its third West Virginia FIRST LEGO League Robotics Tournament in December 2007. Participants prepared for three months for this WV Space Grant sponsored event. Tournament pictures are available under 2007 WV FLL Robotics Tournament Results at: [www.cet.edu](http://www.cet.edu).

Three teams scored over 300 out of a possible 400 points. Teams prepared for approximately three months for their three Power Puzzle interviews (Technical, Teamwork, and Research) and the best of three robot table rounds.

### Shepherd University

Shepherd University will be hosting East Coast Computer Algebra Day on May 10, 2008.

The themes to be covered include Algebraic Algorithms, Computer Algebra Systems and Generic Programming, Mathematical Communication, Complexity of Algebraic Problems, Scientific and Engineering Applications of CAS, Computer Algebra and Mathematical Education, and a panel discussion on Hybrid Symbolic-Numeric Computation.

Notable speakers at the conference include Nobel Prize Winner John F. Nash from Princeton University, Emmanuel N. Barron from Loyola University, and Erich Kaltfofen from North Carolina State University.

For more information, visit [www.shepherd.edu/eccad2008](http://www.shepherd.edu/eccad2008).

# Upcoming Events 2008

April 5- WV Academy of Science at Fairmont State University.

April 23- NASA Day at Shepherd University. NASA Scholars present their research.

April 25- Annual Research Symposium, WV State University.

May 10- East Coast Computer Algebra Day: Shepherd University.

July 28-August 1: SATELLITES Teacher Institute in Morgantown, WV.

June 22-27: RockOn! at Wallops Flight Facility (<http://spacegrant.colorado.edu/rockon>).



## About WVSGC

The West Virginia Space Grant Consortium is a group of West Virginia academic institutions with industrial partners who have joined under the sponsorship of NASA in order to encourage and support West Virginia's participation in science and engineering. The Consortium's Programs focus on research, fellowships, and K-12 Outreach; and a strategic vision for the state's involvement with the nation's future endeavors in science and technology.

The Consortium, which was established in August of 1991, consists of Bethany College, Bluefield State College, The Clay Center, Marshall University, Fairmont State University, NASA IV & V Facility, Shepherd University, West Liberty State College, West Virginia High Tech Consortium Foundation, West Virginia State University, West Virginia University, West Virginia Wesleyan College, Wheeling Jesuit University, NRAO Greenbank, and the WVU Institute of Technology. The Consortium is housed in the College of Engineering and Mineral Resources at West Virginia University.

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