Orange County Scholar Selected to Design Robotic Rovers for NASA
**Returning Santa Ana College Student Reaches for the Stars**

(Santa Ana)—Santa Ana College (SAC) student Patricia Sullivan has been selected as a National Community College Aerospace Scholar (NCAS). Sullivan is one of 48 students from 25 states who will travel to NASA's Marshall Space Flight Center in Huntsville, Ala., for a three-day program Nov. 8 through 10. There, alongside her peers, NASA scientists, engineers, astronauts, and administrators, Sullivan will establish a team and create a company infrastructure to design and develop a rover.

She is the only Orange County student tapped for this honor; there are a total of seven from California. Fewer than 300 students have been selected to take part in NASA's prestigious National Community College Aerospace Scholars program since its inception in 2009.

For the 50-year-old Orange resident, who plans to graduate in June 2012 and transfer to California State University, Fullerton (CSUF), being named by NASA is a dream come true. For years, the mother of six and grandmother of four concentrated her attention on raising her children. Prior to returning to college in 2010, her role was as a mother and a wife. But even back then, she dreamt of running shows in a planetarium.

“The spark for my love of astronomy came from watching the Apollo 11 launch on TV,” said Sullivan. “That spark has always been there. I’m even married to a pilot.”

A second-year student at SAC, Sullivan, who carries a 4.0 GPA, was in Dr. Steve Eastmond’s Astronomy 110 “Introduction to Stars and Galaxies” class when she learned of the NASA program.

“Patricia is the most motivated and engaged student I have had in my 38 years of teaching astronomy at Santa Ana College,” said Steve Eastmond, Ph.D., SAC professor, physical science. “The clarity of her writing, her attention to detail, and her ability to quickly get to the heart of a scientific question will serve her well. We’re proud to have her represent our college in this unique NASA program.”

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Students were selected by a NASA panel based on an application, letter of recommendation and project evaluation. Applicants must be U.S. citizens and currently pursuing their degrees at community colleges and have an interest in mathematics, science, engineering or computer science.

To get accepted by the NASA program, Sullivan had to design her concept for a manned space mission to Mars. Working independently over the summer, she had eight weeks to turn in an abstract, create a timeline, and write a full-blown proposal for a robotic rover complete with a line drawing of her rover.

“At the beginning of the summer, there were 240 individuals under consideration, but after the summer projects were reviewed and graded, there were 48 named to go to Huntsville,” said Sullivan.

The cost of Sullivan’s proposed four-year mission would be $805 million. The mission’s goal is to assess the possibility of life on Mars. To do so, the mission would investigate, record and analyze the following:

- Data generated by magnetic particle movement in Martian dust;
- Hydroelectric data patterns in water vapor;
- Electromagnetic signatures in the atmosphere of Mars;
- The nature of the Martian magnetic field and its interaction with the solar wind;
- How to reduce the risk of mission operations.

Today, Sullivan is working on an associate of arts degree in business management with an emphasis in astronomy. After finishing her bachelor’s degree at CSUF, she hopes to work in management for the NASA Jet Propulsion Laboratory in Pasadena. She believes that the three most traumatic events in the U.S. space program—the Challenger disaster, the Columbia explosion, and the budget and launch delays for the Mars Science Lab—could have been avoided had a different management structure been in place. Consequently, she wants to combine her passion for astronomy with a focus in business management.

In the meantime, as a returning student, she is very glad to be at Santa Ana College. “It feels like coming home,” said Sullivan. Her mother Nellie Kaniski worked at SAC for 28 years as a student services specialist and as a counselor. Sullivan remembers seeing shows at the college’s Tessmann Planetarium and dreaming about running star shows herself.

She talks enthusiastically about how she will put her NASA experience to work for the
community. As the president of MANA de Orange County, a national Latina organization, Sullivan will share her NCAS experiences with the girls who attend MANA’s annual Adelante Conference. “I hope I can encourage more of them to enter STEM (science, technology, engineering, and math) fields,” she said. She also plans on making presentations in the Santa Ana schools.

And as Sullivan sees it, everything comes around in a beautiful circle. In May, she will be trained and ready to run three shows on her own at Tessmann Planetarium.

About the Rancho Santiago Community College District
The mission of the Rancho Santiago Community College District (RSCCD) is to respond to the educational needs of an ever-changing community and to provide programs and services that reflect academic excellence. Santa Ana College and Santiago Canyon College are public community colleges of RSCCD, which serve the residents of Anaheim Hills, East Garden Grove, Irvine, Orange, Santa Ana, Tustin and Villa Park. Both colleges provide education for academic transfer and careers, courses for personal and professional development, customized training for business and industry, and programs to train nurses, firefighters and law enforcement personnel.

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