

De la Fuente, Olivas earn top honors at Hispanic conference

TransHab Deputy Project Manager Horacio de la Fuente and Astronaut Candidate Dr. John Olivas earned high honors during the Hispanic Engineer National Achievement Awards Conference held recently in El Paso.

JSC's de la Fuente took home the award for Outstanding Technical Achievement-Government, while Olivas was named Most Promising Engineer.

Since joining NASA in 1985, de la Fuente has achieved outstanding success, while making significant contributions in the engineering field. Responsible for the solution of special problems occurring during the design, development, manufacturing, qualification, and flight of human-rated spacecraft, he has proven himself to be an exceptional engineer.

Providing leadership on a wide array of engineering concepts, de la Fuente was at the forefront of the design and development of the TransHab, destined for potential use as a crew living quarters aboard the International Space Station and as a vehicle to carry humans to Mars. This significant milestone in lightweight vehicles for space exploration earned his team a Rotary National Award for Space Achievement Stellar Award.

In another major achievement, de la Fuente designed and developed a transparent Lower Body Negative Pressure Device for flight crew evaluation which allows full visual monitoring of the patient during testing. The device is being used in many U.S. and international medical institutions.

Featured in *Newsweek* as one of many rising young Latinos who are changing



JSC Deputy Director Capt. Jim Wetherbee, center, congratulates Hispanic Engineer National Achievement Awards Conference winners Dr. John Olivas, left, and Horacio de la Fuente.

the face of America, Olivas is a fourth-generation Mexican American and the ninth Hispanic to be selected as one of NASA's astronauts.

Although his 10-year trek to NASA's astronaut program took much longer than a trip to the moon, Olivas never gave up hope that one day he would realize his childhood dream. Throughout that period, he launched a promising career.

At Dow Chemical, Olivas designed a sliding pump base to compensate for high thermal growth of the first-of-its-kind process piping. At SEAL Laboratories, he impressed colleagues with his grasp of

mechanical and metallurgical engineering. At the Jet Propulsion Laboratory, his work was impressive enough to get him quickly promoted to lead the NASA Electronics Packaging Program, where he got a chance to exercise his technical management skills in addition to conducting research in the area of microelectronic materials evaluation for space application. Olivas also has two U.S. patents pending on behalf of JPL, one for an Ultra-sensitive Displacement Sensing Magneto-resistive Microelectromechanical Device, the other for a Protective Fullerene Packaging System for

Microelectromechanical Systems Applications.

"I am truly honored to receive this award along side some of our country's finest engineers and scientists, like Horacio de la Fuente," said Olivas. "My hope is that I can accomplish in my career what those award recipients before me have accomplished in theirs."

In June 1998, Olivas became one of 25 Americans selected to the 1998 Class of United States and International Astronauts. Currently undergoing training at JSC, he is expected to be flight qualified in 12 to 18 months. He also supports the Robotics Branch and other aspects of the space shuttle and International Space Station programs.

This year HENAAC organizers also included a special panel presentation highlighting NASA opportunities for undergraduate and graduate students. The seminars drew speakers from NASA Headquarters, Dryden, Langley, and Marshall.

Dr. Marla Perez-Davis, technical manager in the Plans and Programs Office at Glenn Research Center, was one of the featured speakers who addressed the subject of women in technology during another panel presentation.

In addition, middle and high school students from the El Paso Tri-City area got a chance to check out the many technical and scientific careers available to them during HENAAC's Pre-College Career Day. The Pre-College Program event featured speakers from many NASA centers including engineers from JSC, Ames, White Sands, and Dryden. ■

High school students get exposure to high-tech arena

More than 80 area students visited JSC November 8 as part of the High School/High Tech Expo. The expo is designed to provide students with disabilities a chance to meet with education and business representatives to help them get started in the high-tech arena.

"The three fastest growing job sectors are all computer related," said Nellie Wild, national program manager for the President's Committee on the Employment of People with Disabilities. "Businesses across the nation are searching for qualified technology professionals."

With that in mind, NASA partnered with United Cerebral Palsy in 1992 to help

these students realize their potential in this market. The program started with Goddard Space Flight Center and in 1995 was expanded to Ames Research Center, Lewis Research Center and JSC.

JSC has provided site tours for groups of students, as well as summer internships for two to three students each year. Additionally, JSC has hosted an annual kick-off or expo event four out of the last five years. Jessie Hendrick, JSC's Individuals with Disabilities Program manager in the Equal Opportunity Programs Office, oversees the program at JSC.

Many other local organizations have joined in including the National Weather

Service, the University of Houston, and South Texas College of Law.

"The program is successful because of the one-on-one involvement with students by professionals in high-tech fields," said Hendrick. "Students who have participated in the program and worked here at JSC are now attending colleges such as Rice University and Rochester Institute of Technology. We are hoping that some of these students will be part of JSC's future workforce."

Many JSC representatives contribute to making that happen, including Estella Hernandez Gillette, JSC's director of Equal Opportunities Programs, who was

recognized at the luncheon for her contributions, and Leroy Villareal, Information Systems Directorate lab manager.

"I became involved because I have always enjoyed teaching," said Villareal. "I like seeing the confidence on the students faces after they understand computers are not difficult to repair or upgrade. I feel the students take this understanding of computers with them and they seem to walk and talk with new confidence toward anything else they may have to work on."

"It's a very challenging program," said Clemente Quintana, X-38 life support engineer. "With the right motivation, there's nothing they can't do." ■

Brownie Girl Scouts honor NASA robot 'DART' as one of their own

This fall, a NASA robot became an honorary Brownie Girl Scout in a special ceremony in Bldg. 9.

Brownie Girl Scout Troop 152, a contingent of the South Texas Girl Scout Council, descended on JSC October 25 for an investiture ceremony deeming the Dexterous Anthropomorphic Robotic Testbed (DART) as a Brownie Girl Scout. The ceremony included a Girl Scout pledge and presentation of a Brownie sash.

Afterwards, Jessie Hendrick, JSC's director of Federal Women's Programs, presented the troop with a *Women of NASA* poster.

Astronaut Tammy Jernigan, a former Girl Scout and Lifetime Member of Girl Scouts, also made a presentation to the troop.

"Some of the things I learned in Girl Scouts I still use today," said Jernigan, "like how to work together. Working as a team is very important up in space."

The troop, comprised of nearly 20 five- to seven-year-old girls from the local area,

originally 'met' DART during a visit to JSC this spring as part of a special field trip focusing on women in science careers.

"DART was the one thing the girls remembered the most," said Joanna Grimmer, the troop leader. "The girls were just fascinated when they first saw DART and discovered it had a female voice."

DART, like many robotic/automated systems, features a female voice and resides in JSC's Dexterous Robotics Laboratory in Bldg. 9C. Although it is permanently mounted to the laboratory structure, DART has a great deal of mobility with its ability to rotate at the "waist" while moving its arms and hands much like a human. An operator sitting in a specially equipped chair can dictate DART's torso, head, arm and hand movements using virtual reality gear. DART can tie knots, grapple objects, and even manipulate tools. DART is a testbed for developing and demonstrating technologies that NASA is using in advanced robotic projects. ■



Honorary Brownie Girl Scout DART and Brownie Girl Scout Troop 152 with Astronaut Tammy Jernigan and (left to right) Ruth Griffin, Tanya Brewster, Shirley Olsen, Kathleen Jurica, NASA, Freda Birdwell, Joanna Grimmer, and Jessie Hendrick, NASA.

NASA JSC Photo S99-13294 by Bill Stafford