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Virtual propulsion system meets real-time diagnostics system

Glenn news release

Researchers recently demonstrated successful real-time fault detection and isolation of a virtual main propulsion system at Glenn. The goal of this research was to mature and demonstrate key Integrated Vehicle Health Management (IVHM) technologies — several technologies that are involved in NASA's Space Launch Initiative (SLI), an Agencywide effort to significantly increase crew safety while reducing payload launch costs.

Using a detailed simulation of a vehicle propulsion system to produce synthesized sensor readings, the team of researchers demonstrated that advanced diagnostic algorithms, running on actual flight class computers, can, in real time, successfully diagnose the presence and cause of faults.

This demonstration was conducted as part of the NASA Propulsion IVHM Technology Experiment (PITEX). It was a joint effort that included Glenn, Ames Research Center, and Kennedy Space Center. The experiment supports work for the SLI-IVHM project contracted to Northrop Grumman of El Segundo, CA.

Glenn researchers developed a detailed simulation of a main propulsion feed system, which they ran under both nominal and fault conditions to generate time histories of propulsion system parameters. Noise was superimposed on the simulation output to provide realistic sensor signals. Typical propulsion system failures such as valves sticking open or closed, regulator problems, and sensor and microswitch failures were injected at various points in a simulated mission.

The simulated data were fed, in real time, to IVHM software running on a computer that is a commercial-grade version of actual flight hardware. The computer hardware was designed and assembled by Kennedy Space Center.

"In all cases, the PITEX diagnostic software detected and isolated the injected fault correctly," said Claudia Meyer, Controls and Dynamics Technology Branch.

Continued on page 6

NASA announces deputy administrator

The U.S. Senate has confirmed Frederick D. Gregory as NASA deputy administrator. Gregory, a veteran space shuttle commander who previously served as the associate administrator for Space Flight, becomes the Agency's first African-American deputy.



Gregory

"I couldn't be happier for Fred," said NASA Administrator Sean O'Keefe. "His considerable experience as an astronaut and aviator, and his leadership in space flight safety are needed at this critical time for the Agency."

This is the first time in more than a decade that the deputy administrator position has been filled. Gregory will serve as the

Continued on page 2

Inside

BRIDGING THE GAP 6
Glenn kicks off its 2002 Combined Federal Campaign

CUSTOMER FOCUS 9
Glenn welcomes new Human Resources chief

VALUING TECHNOLOGY 12
Headquarters representative visits to promote Space Act Awards

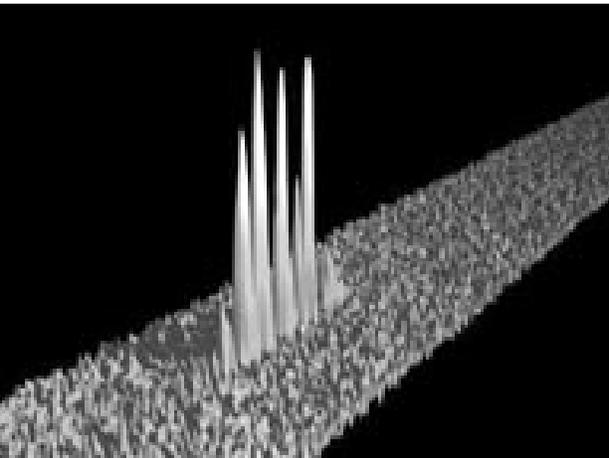


NASA GLENN REMEMBERS HONORING AMERICA'S HEROES

SEPTEMBER 11, 2001

Atom research may help detect volcanoes and oceans

Breakthrough research on waves of ultracold atoms may lead to sophisticated atom lasers, which may eventually help predict volcanic eruptions on Earth and map a probable subsurface ocean on Jupiter's moon Europa. Manipulated to form tidy bundles of waves, these atoms, called solitons, retain their shape and strength. They



Pictured is a 3-D image of matter wave soliton train. Each peak in the train is a Bose-Einstein condensate, a collection of atoms cooled to nearly zero temperature.

were created in a laboratory at Rice University, Houston, under a grant from NASA's Biological and Physical Research Program through the Jet Propulsion Laboratory. Dr. Randall Hulet, the Rice University physics and astronomy professor who led the research team, noted that the atom-wave solitons could be used in advanced lasers, which use atoms instead of light photons. He added that this is the first glimpse of a wondrous and sometimes surprising set of quantum phenomena with no way to know exactly what may come out of it. For more information on the experiment, visit <http://atomcool.rice.edu>.

NASA aids Con Edison's environmental operations

Consolidated Edison of New York, Inc., (Con Edison) recently signed a technology affiliate agreement with the Jet Propulsion Laboratory (JPL) to develop sensor technology that speeds detection and analysis of hazardous chemicals found in the field to protect the environment. The first phase centers on detecting polychlorinated biphenyl compounds (PCB's) and perfluorocarbon tracers (PFT's), which, prior to a 1970's ban, were used to insulate high-voltage transformers and to pinpoint insulating-oil leaks from underground power lines, respectively. The second phase involves making the sensors compact, portable, and compatible for use by Con Edison. This JPL sensor technology system was first developed through two separate partnerships with the Federal Aviation Administration and U.S. Navy, with applications to detect chemical vapors, such as explosives, and for nerve-agent detection at airports, harbors, and in public buildings where speed is key in attaining security without impeding the commercial flow.

New alloy could improve gas mileage, lower emissions

A new high-strength, aluminum-silicon alloy developed at Marshall Space Flight Center promises to lower engine emissions and could improve gas mileage in cars, boats, and recreational vehicles. Co-inventors Jonathan Lee, a Marshall structural materials engineer, and PoShou Chen, a scientist with Morgan Research Corporation, began developing the alloy 7 years ago for use in a piston redesign to lower engine emissions. The new alloy, MSFC-398, offers greater wear resistance and surface hardness. When tested at 600 degrees Fahrenheit, it is three to four times stronger than conventional cast aluminum alloys, which enables manufacturers to use less material, thus reducing the part's weight and cost and improving gas mileage, engine performance, and engine durability. It is ideal for high-temperature cast components used in engines such as pistons, connecting rods, actuators, brake calipers, and rotors. MSFC-398 can be produced at a projected cost of less than \$1 per pound.

NASA names Gregory's successor

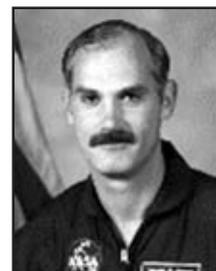
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chief operating officer for the Agency and report directly to Administrator O'Keefe. Gregory will be responsible for directing and managing many of the programs as well as the day-to-day operations and activities at NASA.

Before being named associate administrator for Space Flight in December 2001, Gregory served as associate administrator for Safety and Mission Assurance and was charged with the oversight of all safety issues within NASA. He developed, implemented, and managed quality assurance policies that dealt with reliability and maintainability.

"This is an incredible opportunity," Gregory said after hearing of the Senate's vote. "I appreciate the President's confidence and I'm thankful for the Senate's speedy consideration. We have a lot of work to do and I'm confident we'll be able to continue NASA's historic legacy of accomplishment."

Administrator O'Keefe has selected William F. Readdy to replace Gregory as associate administrator for Space Flight. Readdy, a veteran space shuttle commander and Navy test pilot, will be in charge of NASA's human exploration and development of space. Since July



Readdy

1998, he has served as Space Flight's deputy associate administrator overseeing Marshall, Kennedy, Stennis, and Johnson Space Centers. He also managed top-level policy planning and management of the space shuttle, International Space Station, Space Communications, and Space Launch Vehicles programs.

"Bill is a distinguished astronaut, naval aviator, and leader. He's played an important role in NASA's safe and successful human space flight operations," said Administrator O'Keefe. ♦

OMB scorecard

Agency in the green

NASA is the only agency to achieve perfect green marks on the Office of Management and Budget's (OMB) color-coded scorecard released June 30, which evaluated the overall progress of 26 agencies in carrying out President Bush's Management Agenda. Initiated this year, the OMB scorecard sets specific requirements for agencies to receive a red, yellow, or green score in five areas of the President's Management Agenda: strategic workforce management, expanded use of e-government, increased competitive bidding of government services, improved financial performance, and linking performance to budgets. ♦

News releases available in Russian

NASA has initiated a new service that provides Russian-language translations on select NASA news releases. Like a recent Web link created at www.nasa.gov offering aerospace news and information in Spanish, it will extend its reach and share the Agency's mission of discovery with more people around the world.

This service, called Ames-novosti, "novosti" being the Russian word for "news," is provided by Ames Research Center. It delivers a variety of NASA news and media-related products to Russian speaking reporters, educators, and members of the general public.

"NASA plays an important role in helping unravel the mysteries of the universe and our entire home planet," said Glenn Mahone, assistant administrator of Public Affairs at NASA Headquarters. "Our vision and missions extend far beyond our borders and we have a responsibility to do whatever we can to breach language barriers so the people of the world can share in our incredible stories of accomplishment."

To receive selected NASA news releases in Russian via e-mail, send an electronic mail message with the word "subscribe" (no quotations) in the subject line to ames-novosti-request@lists.arc.nasa.gov. ♦

Estess retires; Parsons takes helm

Roy S. Estess, Center Director for John C. Stennis Space Center in Mississippi, recently retired after 42 years in government service, 37 with NASA. Administrator Sean O'Keefe named William (Bill) W. Parsons, Jr., the current center operations and support director at Stennis, as Estess' successor, effective August 25, 2002.

Estess joined NASA in 1966 as a test engineer on the Saturn V second-stage test program. He later served as head of the Applications Engineering Office, deputy of the Earth Resources Laboratory, and director of the Regional Applications Program. From 1980 to 1988, he served as Stennis' deputy director and was named center director in 1989.

In 1992, Estess was temporarily assigned to NASA Headquarters as a special assistant to the Administrator and served two consecutive NASA Administrators. From February 2001 to April 2002, Estess was temporarily assigned as acting director of the Johnson Space Center in Houston.



Roy Estess (standing) welcomes his successor Bill Parsons as Stennis Space Center's director.

Parsons is a veteran of the U.S. Marine Corps and decided to join NASA after watching a space shuttle launch while on a Florida vacation. He joined the Cape Canaveral Air Force Station in 1986 and transferred to the Kennedy Space Center in 1990.

Parsons met Estess in 1994 at Kennedy and moved to Stennis in 1997 where he served as chief of operations for all propulsion test operations. In 1998, Parsons was named deputy director of Johnson, where he was later reunited with Estess. He moved back to Stennis in 2001. ♦

Dr. Earle Knowlen Huckins III dies

Dr. Earle Knowlen Huckins III, 59, former deputy associate administrator for Space Science at Headquarters, died July 22 at his home in Centreville, VA, of complications from amyotrophic lateral sclerosis, often called ALS or Lou Gehrig's disease.



Dr. Huckins

During his tenure as deputy, Huckins oversaw the successful launch of 25 space missions including the Hubble Space Telescope; the Chandra X-Ray Observatory; and planetary missions including Mars Pathfinder, Mars Global Surveyor, Mars Odyssey, the Galileo mission to Jupiter, and the Cassini mission to Saturn. He was also responsible for the overall contract management of the Jet Propulsion Laboratory. Huckins resigned as deputy in November 2001 because of his declining health, but continued working as a special assistant.

Huckins' distinguished 40-year career with NASA began in 1962 as a student trainee at Langley Research Center. He specialized in the field of spacecraft dynamics, stability, and control. Among his many awards, Huckins received two NASA Distinguished Service Medals, a NASA Outstanding Leadership Medal, a NASA Exceptional Service Medal, and an asteroid named in his honor. ♦

Institute partnership

Center Director Donald Campbell and (seated left to right) Cleveland State University President Michael Schwartz, Cleveland Advanced Manufacturing Program, Inc., President Stephen Gage, and Cleveland Mayor Jane Campbell joined to



Photo by Marvin Smith

sign a Memorandum of Understanding on July 25 at City Hall to establish an Industrial Technology Institute that will strengthen the technology core in Cleveland. Center Director Campbell said that the Institute would expand Glenn's opportunities to transfer its world-class technology and affirmed NASA's longstanding support of university and industry partnerships as one of the most efficient methods of transferring cutting-edge technology to the marketplace. The Institute will initially be housed at Cleveland State University, until a home is identified within a research or business park near Cleveland Hopkins Airport.

Regional strategies

Elected officials, development officers, and chambers of commerce from Cuyahoga and seven surrounding counties participated in the Northeast Ohio Regional Economic Development Summit, which was held at Glenn on July 26. This is the first in what is hoped to be an ongoing series of discussions among counties to develop cooperative strategies to strengthen the shared regional economy. Pictured below is Center Director Donald Campbell with former Congresswoman Mary Rose Oakar. Inset picture is Cuyahoga County Commissioner Peter Lawson Jones, who coordinated the event.



Photos by Marvin Smith



Photo by S. Jenise Veris



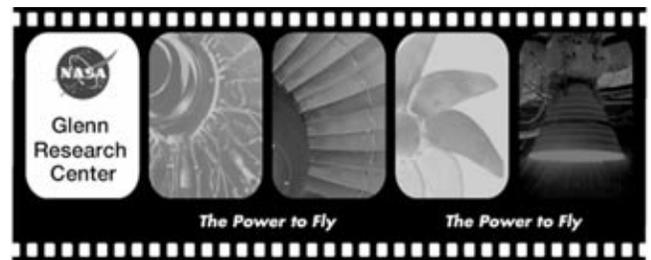
Photo by Marvin Smith

Top honors

General Lester L. Lyles (right), commander of Air Force Materiel Command at Wright-Patterson Air Force Base in Dayton, accompanied Center Director Donald Campbell in presenting the 2002 NASA Honor Awards. In his keynote address, Five-Star Gen. Lyles talked about his background as an electrical and mechanical engineer and thanked Glenn employees for their valuable contributions to the Nation. He also stressed the importance of communications, transformation, and partnerships for both Wright-Patterson and Glenn.

Bond drive

WOIO/Channel 19 TV news anchor Denise Dufala was the surprise guest speaker for what was yet another successful Savings Bond kickoff held July 8. More than 185 employees enjoyed Dufala's talk as well as the antics of host Dennis Pehotsky (0612). The event also included drawings for 50 door prizes donated by local businesses, music by Gary Lee, and refreshments.



Graphic by Terry Condrich

Contributions to flight

Glenn's Centennial of Flight Action Team unveils the logo selected for Glenn's contributions to the Centennial of Flight Celebration. Designed by Terry Condrich (IDI), Logistics and Technical Information Division, the logo communicates the Center's contributions to powered flight from both the aeronautics and space perspectives. The logo design is a filmstrip that designates time, movement, and history. The four engines pictured in the clips each have historical significance and represent a glimpse of Glenn's tremendous contributions to 100 years of flight. The Power to Fly, the logo's byline, captures Cleveland's NACA and NASA contributions.





Director's Corner
With Donald Campbell

Removing barriers through F2M

The President's Management Agenda states that a principal goal of this Administration is to remove barriers to more efficient management of government, with the expectation of improved accountability and performance.

NASA Administrator Mr. Sean O'Keefe has appointed a Freedom to Manage (F2M) Task Force to solicit input from the NASA workforce. As initiatives are proposed, the task force screens and assigns the appropriate action within the Agency. The F2M Task Force, chaired by Chief of Staff Mr. Courtney Stadd, sets aggressive deadlines for the development of action plans and implementation strategies, and provides feedback to the initiator.

The Agency has implemented changes ranging from the elimination of travel restrictions to the delegation of authority in the area of human resources to the field centers. In addition, NASA has simplified the time and attendance process by eliminating the timekeeper function, and implemented a new policy that no longer requires civil servants to be badged as visitors when traveling to a different Center.

Deputy Director Dr. Julian Earls is the Glenn point of contact for the F2M activity. He continually works with NASA Headquarters to ensure that Glenn employees' ideas and suggestions are considered. I encourage Glenn employees to embrace this opportunity and to submit ideas regarding existing barriers to efficiency and effectiveness through Dr. Earls.

For additional information, you can visit the Web site at f2m.nasa.gov. ♦

News Notes

LESA MEETING: LESA/IFPTE, Local 28, will hold its next monthly membership meeting on Wednesday, September 11, at noon in Rm. 101.

HEALTH FAIR: Glenn's Safety Office, with the support of Medical Services, will host a Health Fair at OAI on Friday, September 20, from 10 a.m. to 3 p.m. There will be health screening, healthy food sampling, fitness demonstrations, giveaways, and more. Shuttle bus service will be extended to the West Area during the Health Fair. Also, mark your calendars for an October 18 Safety Fair in the

KNOW ANYONE WITH DIABETES?: Join "Team NASA" as they walk for a cure for diabetes on October 5. The route begins at Nautica and continues through the downtown area. Employees, retirees, and their family and friends are encouraged to join in the fun for this important cause. For more information, contact the Fitness Center, 216-433-6313.

WOMEN RETIREE LUNCHEONS: The success of the first luncheon of women retirees has determined that a luncheon should be held on a quarterly basis. The next one will be on Thursday, November 14, noon, at the Station House in Berea (formerly the Pufferbelly). For information, contact Gloria, 216-433-3194.

WALK FOR JUVENILE DIABETES: Glenn is participating in the Juvenile Diabetes Research Foundation's Walk To Cure Diabetes on Saturday, September 21, at 9 a.m. at the Cleveland Metroparks Zoo. In addition to serving as a checkpoint sponsor for the event, Glenn is committed to having a team of at least 50 walkers. For further information, contact Gregory Bobbitt, 216-433-5281.

AFGE MEETING: AFGE, Local, 2182, will hold its next monthly membership meeting at 4:30 p.m., on Wednesday, October 2, at the

All members are encouraged to attend.

SLOVENIANS IN AVIATION: Professor Edward Gobetz, author and editor of 16 books and numerous encyclopedia articles, is conducting research on Slovenian Americans in aviation and space programs. He invites all past and present, NASA employees of Slovenian descent to send him their biographical sketches and any other relevant materials to 29227 Eddy Road, Willoughby Hills, OH, 44092; Phone: 440-944-7237; Fax: 440-944-0461; e-mail: gobedslo@aol.com.

Barna returns to Space Directorate

The July 14 appointment of Dr. Julian Earls to the position of Center deputy director allows Gerald Barna, who served as acting deputy director, to return to his position of record as director of Space.



Barna

"I'm grateful to Mr. Barna for the support he has provided to me and the Center while serving as acting deputy director," affirmed Center Director Donald Campbell. "I know the employees at the Center recognize him for his dedication and service. I look forward to his continued leadership as a member of the Center's senior management team."

As Barna transitions back to the Space Directorate, he takes with him many experiences and accomplishments. "It has been a real privilege to have served the men and women of Glenn Research Center as acting deputy director these past 3 years." ♦

Employees bridge the gap

BY DOREEN B. ZUDELL

If it takes a village to raise a child, then it only makes sense that it took a community of dedicated, caring people to raise \$1.8 million for the Combined Federal Campaign (CFC) over the past 5 years.

"While Glenn has a reputation for generous giving, it also has a tradition of dedicated employees giving the gift of time through work on CFC committees," said 2002 CFC Chairperson George Saad, Research Instrumentation and Sensor Branch.

Saad, along with Cochair Robert Everett, Research Model Technology Branch, and nearly 200 employees across all directorates will work to communicate the 2002 CFC theme "Bridging the Gap: Embracing the Needs of Others" and to meet the goal of \$357,000.

Eric Overton, Electro-Physics Branch, served in various lead roles in Glenn's CFC over the past 5 years and chairs the Logistics Committee this year. He knows both the energy it takes to run a successful campaign and the rewards that result from the effort.

"Through my involvement in CFC, I've met employees from various areas on Lab and performed functions I don't do on a regular basis," Overton explained. "I've also seen the good work local organizations do to help people in Northeast Ohio."

Glenn's Agency Fair, set for September 23 to 25 in Building 15, will showcase some of this good work with representatives from 51 local CFC organizations.

David Hamilton, Research Instrumentation and Sensor Branch, serving his second year with CFC, proudly leads the Agency Fair/Special Events Committee. "We're holding the Agency Fair close to the kickoff date this year so that employees can learn more about some of the many CFC agencies and make informed decisions about their gift giving."

Lesley Janosik steps beyond her role in the Life Prediction Branch to coordinate both Glenn's and Northeast Ohio's CFC Web sites. "I didn't know anything about developing Web pages until I started working on the campaigns 4 years ago, but I've learned a lot along the way," she explained. "Maintaining two sites can be a lot of work, but it's a way for me to make a contribution (beyond monetary giving) to the community."

Other crucial subcommittee leads Gail Starcher, Test Installations Division, and Lisa Ferenc, Subsonic Systems Office, agree that working on Glenn's CFC is a win-win situation where volunteers and their local communities benefit.

Saad is confident that, as in past campaigns, employees' generous support through monetary contributions to CFC will enable the Center to meet its goal. This year, however, he hopes employees

will take added pride in coworkers who donate the valuable gift of time to this worthy cause.

He explained, "CFC committee members truly are the people who 'bridge the gap' between the Glenn community and the community of Northeast Ohio."

Contractors and retirees wishing to donate to Glenn's CFC should contact Eric Overton at 216-433-8648. ♦

CFC Campaign
September 19 to October 18

Glenn's Pacesetter Campaign
September 20 to October 4

Agency Fair
September 23 to 25

Web site
<http://www/grc.nasa.gov/WWW/CFC/GRC>

Virtual propulsion aids safety

Continued from page 1

In addition, resource utilization tests were performed to measure the real-time performance of the diagnostic software on the flightlike hardware. Data revealed that resources were largely underutilized, indicating that the diagnostic system could be expanded to cover additional components.

The PITEX diagnostic solution features monitor software, which processes the raw sensor data, and an Ames-developed, model-based diagnostic software, Livingstone, which detects and isolates anomalies. Livingstone uses a qualitative model of the system to predict the expected state; system-level reasoning is performed to resolve differences between the observed and expected states.

"These efforts are the culmination of many years of research," said Harry Cikanek, manager of the Space Transportation Project Office at Glenn. "PITEX application of these advances represents an essential step on the path to meet program goals for safety and cost."

In continuing work, the PITEX diagnostic solution is being migrated to Northrop Grumman's IVHM Virtual Test Bed (IVTB). In the IVTB, a broad range of vehicle subsystem health managers, in addition to propulsion, will be considered, and the benefits of coordinating the subsystem health managers through area and system-level health managers will be demonstrated. ♦

Celebrating Hispanic Heritage Month

Sharing a commitment to diversity

BY S. JENISE VERIS

Rubén Del Rosario, Adabelle Narváez-Legeza, and Dr. Félix Miranda, all past officers of the Hispanic Advisory Council (HAC), exhibit pride and support for HAC's vision and mission—to aid Glenn's commitment to workforce diversity and to assist Hispanic employees in reaching the highest levels of achievement.

Miranda, chief of the Applied RF Technology Branch, became a member of HAC at the urging of HAC founder Luis Beltrán, Facility Management and Planning Office, as well as coworkers Diana Centeno-Gómez, Lead Center Office for Workgroups, and Dr. Marla Pérez-Davis, Electro-Chemistry Branch.

"I became involved because I saw HAC as a vehicle to strengthen the Center's diversity, and I wanted to help bring attention to the issues already identified and collaborate on solutions," Miranda recalled.

The two major issues that HAC has successfully impacted over the years are hiring and promoting of Hispanics and retaining those employees Agencywide. The council continually encourages employees to seek and take advantage of career opportunities through training and developmental programs available at Glenn and within the Agency.

"The value of training is that instead of asking for opportunities because of our minority status, we are gaining more tools to better compete for future opportunities," said

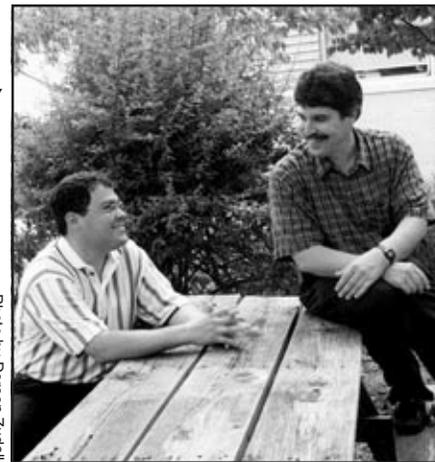


Photo by Doreen Zudeil

Rubén Del Rosario (left) and Dr. Félix Miranda exchange ideas.

Del Rosario, facility manager for the Engine Research Building and 1-by 1-Foot Supersonic Wind Tunnel.

Del Rosario became active in HAC in 1993 after a workshop on KSAOC's, which was coordinated by the council's career and professional development subcommittee. Since then, Del Rosario has been associated with HAC in multiple capacities, including chairperson from 1997 to 2000.

Narváez-Legeza, Instrumentation and Data Systems Branch, is the lead systems engineer for Glove Box experiments and second-generation launch vehicles. She has held the positions of secretary (1994) and chairperson (1995 to 1996) and was encouraged to participate in HAC to share her professional and leadership skills with others.

"I joined HAC to contribute to the values and benefits of diversity in a workplace as well as address the issues that affect our young professionals," she said. "Through HAC, I also learned about the Agencywide processes to address these issues."

Miranda, Del Rosario, and Narváez-Legeza are just three employees who have played an important role in sharing the Hispanic culture. All agree that participation in HAC has broadened their vision of the workplace and allowed them to serve others.

For more information on HAC, visit the Web site at <http://www.grc.nasa.gov/WWW/AdvisoryGroups/hispanic/>. ♦

Nurturing youth



Photo by Anna Falcon

Esperanza Scholars on tour in the 10-by 10-Foot Supersonic Wind Tunnel facility.

Glenn's Hispanic Advisory Council (HAC) has not only played an important role in sharing the Hispanic culture with the Glenn workforce, but also has devoted considerable effort to promoting educational outreach to Hispanic students in the Cleveland metropolitan area.

Recently, HAC joined the Office of Equal Opportunities in sponsoring an Orientation/Community Dialogue for the 30

recipients of the 2002 Esperanza/ NASA Science and Technology Scholarship Program. The event included presentations on scholarship, educational, and co-op opportunities, as well as a panel discussion led by Hispanic youth currently employed at Glenn. Brenda Morgan, (BTAS) Visitor Center, conducted a tour of several facilities to augment the event. Esperanza is a local nonprofit organization promoting Hispanic education.

Hispanic Heritage Month

Motivational speaker Pegine Echevarria headlines a group of activities that includes art, dance, and food sampling

Wednesday, September 25
9:30 to 11:30 a.m.

Hispanic Americans: Strength in Unity, Faith, and Diversity

Glenn summer internships: mission success

BY S. JENISE VERIS

With the conclusion of another successful summer, Glenn's Office of Educational Programs (OEP) again credits Glenn mentors with attracting the quality and quantity of high-achievers who return for summer internships each year.

"Many students initially choose Glenn despite higher paying industry stipends because of NASA's aura, but return for the quality of experience and relationships developed with their mentors," said Susan Gott, program manager of the Lewis Research and Collaborative Internship Program (LERCIP). "It's a win-win situation. NASA internships enhance students' scope of career opportunities and provide access to real-world experiences, while the students offer fresh ideas and an alternative to the Agency's dilemma of operating with limited human resources."

Janice Gassaway and Brian Smith, Microgravity Science Division, appreciate their intern, Magdiel Santana, and the focus demonstrated to learn business applications and program databases over the past 4 years. Santana came to Glenn in 1999 as a NASA Plus intern from Cleveland's John Marshall High School.

"My mentors have allowed me to test my knowledge so that I'm not intimidated when faced with a difficult task," said Santana, an Information Systems major at Ohio University. "That confidence has made me eager to get past the preliminary coursework at college and learn something new to bring to the table each time I return."

George Kumengi, an LERCIP intern from Case Western Reserve University, has continued the hard work that earned him SHARP (Summer High School Apprenticeship Research Program) Student of the Year honors 4 years ago, while working with mentor Dr. Jay Horowitz, Customer Interface Branch.

"College coursework forces you to be narrowly focused," Kumengi said. "NASA helped me expand my interests in

visualization hardware and software, including 3-D and video programming. As a result, I recently switched majors from computer to electrical engineering to have a broader range of options."

Similarly, a 1997 LERCIP internship helped Jael Panagaris determine what career path she didn't want to take—auto computer-aided design. In 1998, she participated in LINK, an offsite educational program for minorities pursuing careers in science and engineering supported by a Glenn grant.

Panagaris, a chemical engineering major at Cleveland State University, returned as a 1999 LERCIP intern and NASA Scholar in the Combustion Branch mentored by Nan-Suey Lieu, one of several who would mentor her in that branch over the next 2 years. There she learned simulation and evaluation of electrical devices. Last winter she was hired as a co-op with Dr. Marla Pérez-Davis, Electro-Chemistry Branch.

"I couldn't have achieved what I have without the summer internships offered



Magdiel Santana (left) reviews spreadsheets with mentors Janice Gassaway and Brian Smith, Microgravity Division.

here," Panagaris said. "Learning the lay of the land, getting to know the managers and their expectations—that's been invaluable."

This summer Glenn hosted 193 LERCIP interns, who are U.S. citizens pursuing a bachelors or higher degree fulltime in science, engineering, technology, or professional administration. NASA Plus and SHARP high school interns together totaled 63. All students must have a cumulative GPA (grade point average) of 3.0 on a 4.0 scale. Additional information on these and other Glenn summer educational opportunities is available at <http://www.grc.nasa.gov/WWW/OEP/textstudent1.htm>. ♦

Glenn holds first job fair for interns

Approximately 120 students representing the Lewis Research and Collaborative Internship Program, NASA Undergraduate Student Research Program, and high school seniors from the NASA Plus and the Summer High School Apprenticeship Research Program participated in Glenn's first job fair for summer students held July 25 at OAI. The Office of Human Resources (OHR) sponsored the fair, which offered students information and the opportunity to interview for co-op positions and other employment that will be available in FY03. The following directorates were represented: 0500, 0600, 2000, 5000, 6000, 7000, and 9000. Each directorate staffed a table with material on their organization and hiring opportunities. OHR staffed a table that provided material about the Agency, Glenn's Co-op Program, and information highlighting housing, business, and entertainment in Cleveland and the Northcoast area.

Photo by Tom Jares



Glenn welcomes new HR chief Gordon focuses on customer service

BY DOREEN B. ZUDELL

Robyn Gordon, who took the helm as Glenn's chief of Human Resources in May, is committed to customer service.

"The client is our primary concern," she affirmed. "It's our job to provide the Glenn community with the tools they need to complete their mission."



Photo by Doreen Zudell

Office of Human Resources Chief Robyn Gordon (right) with her Deputy Director Rick Bailer.

With a solid background in human resources—most recently with the City of Cleveland and the Cuyahoga County Public Library—Gordon is well-equipped to lead a multi-tude of personnel-related activities aimed at achieving a Model Workplace and meeting Agency directives.

"I want to change perceptions that human resources is a 'policing' unit that says 'no,'" she explained. "Rather, we see our role

as consultants who provide the best possible advice for people to make the best possible business decisions."

One of the ways Gordon's office will achieve this goal is by becoming more knowledgeable about the Center's projects and programs through exchange and dialogue among managers and the human resources staff. Gordon believes that the better you understand your customers' products and needs, the better you can serve them.

Examining her office's processes and streamlining data and activities has been high on Gordon's list over the past months. "It's an ISO concept," she said. "We identify what, why, and how we conduct our processes and we meet our metrics."

Gordon realizes that welcoming a new chief, retiring some seasoned staff members, and adjusting to changes within the Agency make for a challenging time of transition for the human resources staff. She will work to ensure that her staff receives the training, tools, and support needed for them to serve the Glenn community. ♦

Engineering training teams recognized

On June 20, the Center hosted an appreciation breakfast for the Engineering Training Teams who supported the development of the Glenn Engineering and Scientific Training Plan over the last year. Glenn Lindamood, Instrumentation and Data Systems Branch, and Phuoc Thai, Risk Management Office, were recognized as outstanding contributors (both receiving cash and time-off awards) to this important process.

"With the rapid evolution of technology, engineers are finding that the knowledge obtained through a technical education quickly becomes outdated. Therefore, maintaining our technical competencies is both an opportunity and a responsibility of every employee," explained John Taylor, chief of the Engineering Design and Analysis Division and chairman of the Engineering Training Committee (ETC).

Teams composed of engineers and scientists in 13 disciplines worked to identify specific training needs. The disciplines include acoustics, chemical/combustion, aerospace propulsion and systems analysis, electrical/controls/health management, engineering mechanics/manufacturing, optics, thermal/fluids/icing, software, systems engineering, materials, Pathfinder, technology transfer, and biotechnology.

The discipline teams consist of a facilitator from the ETC and discipline experts from the relevant divisions across the Lab. This approach enables areas of common interest to be identified and prioritized across organizational boundaries to come up with the most comprehensive and efficient training plan possible.

The ETC was formed in February 1998 to develop a Centerwide, integrated training plan to meet the needs of approximately 1,000 engineers and scientists at Glenn and to align



Lindamood



Thai

them to the NASA Strategic Plan and Center Implementation Plan. Current ETC members include Taylor; Kathleen Schubert, Microgravity Science Division; Sandra Foust, Research and Technology Directorate; Barbara Esker, Aeropropulsion Research Program Office; and Nona Akos, Kathy Clark, and Cynthia Forman, Organization Development and Training Office.

To view the entire FY02 Engineering and Scientific Training plan, visit the Web site at <http://www.grc.nasa.gov/WWW/ODT/etc.htm>. ♦

SES Appointment

Dr. Jaiwon Shin has been named deputy director for Aeronautics. This position includes appointment to the U.S. Government's Senior Executive Service, the highest management classification in the Federal Government. In his new position, Shin will play a pivotal role in assisting the Director of Aeronautics at Glenn in effective planning, advocacy, and implementation of Glenn's Aeronautics Program, which is crucial to maintaining the global preeminence of the U.S. aeronautics industry.



Dr. Shin

magazine and *Hispanic Engineer & Information Technology* magazine, the annual awards recognize the gains that women of color are making in government and defense.

VIP Nominee, Community Outreach: **Karen Hickman**, liaison officer, Office of the Director, is recognized as a woman who has used technology in innovative ways to improve educational opportunities and access to careers as well as to boost the community's general understanding of technology's potential to improve daily living.

Technology All-Star: **Dr. Yolanda Hicks**, research engineer, Turbomachinery and Propulsion Systems Division, is recognized as an accomplished woman of color in government who has demonstrated excellence as a role model and leader during her career in science, engineering, or technology.



Hickman



Dr. Hicks

Presidential Rank

President George W. Bush has conferred the Presidential Rank Award of Meritorious Executive on Chief Information Officer **Sasi Pillay** and Chief of the Office of Safety and Assurance Technologies **Vernon "Bill" Wessel**. This honor recognizes sustained accomplishment in management of U.S. Government programs and for noteworthy achievement of quality and efficiency in public service.



Pillay



Wessel

Student Leadership Award: **Eileen Saenz**, a student in the Lewis Educational and Research Collaborative Internship Program, Communications Technology Division, is recognized for her technological contributions to Glenn during her internships, including optimizing filter design for L-band application and procuring their fabrication using novel technologies.



Saenz

Women of Color

Three Glenn employees were honored at the 2002 Women of Color in Government and Defense Technology Awards Conference, July 18 to 19, in Washington, DC. Sponsored by *US Black Engineer & Information Technology*

AIAA Achievement

Ronald "Joe" Sovie, Space Directorate, has received the American Institute of

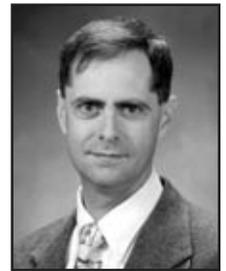
Aeronautics and Astronautics Aerospace Power Systems Award for "a lifetime of personal contributions in the guidance and management of advanced space power research and development, including the development of a foundation for a national nuclear space power capability as deputy program manager for the Spacecraft Systems Program-100."



Sovie

GSA Honor

The General Services Administration (GSA) recently recognized **Dave McKissock**, Analysis and Management Branch, as recipient of their Cornerstone Award for the Great Lakes Region. He was recognized for his work in rescuing Cleveland FedKids, the childcare center for Federal employees located in the downtown Cleveland Federal Building. When FedKids was seeking new management, McKissock (who serves as treasurer for Glenn's Lewis Little Folks, Inc. (LLF) childcare center) and the LLF board took on the responsibilities on an interim basis.



McKissock

Continued on next page

DEADLINES: News items and brief announcements for publication in the October issue must be received by noon, Friday, September 13. The deadline for the November issue is noon, Friday, October 11. Submit contributions to the editor via E-mail at doreen.zudell@grc.nasa.gov, fax 216-433-8143, phone 216-433-5317 or 216-433-2888, or send to Ideas for news stories are welcome but will be published as space allows.

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People

Continued from page 10

This critical step saved the center, helped secure a new governing board, and put the Center on the path of accreditation by the National Academy of Early Childhood Program.

Retirements



Lippert



Sokolowski

Wayne Lippert, Facilities and Test Engineering Division, retired on May 3, 2002, with 40 years of NASA service.

Daniel Sokolowski, Subsonic Systems Office, retired on July 13, 2002, with 39 years of NASA service.

Robert Firestone, Procurement Division, retired on June 28, 2002, with 26 years of NASA service.

In Appreciation

On behalf of myself and my family, my wife Linda and my daughter Nicole, I would like to send a giant THANK YOU to all the employees here at Glenn who supported me over the past 7 months with leave donations for recuperating from my spinal surgery. I no longer have a 43-degree curvature of the spine. I'm 2 inches taller and happy to be here. Thanks again.

—Mark Bodziony

I retired on April 3, 2002, after 22 years of NASA service with the Financial Management Division and the NASA Inspector General's Office. I also had 12 years of civilian and military service with the Department of the Navy. I'm now enjoying my music avocation and would like to sincerely thank all those who made my retirement such a positively memorable event.

—J. Mark Czupkowski

In Memory

Edwin Graebner, 72, who retired from Glenn in 1982 with 29 years of service, recently died. Graebner returned with Sverdrup Company to serve 12 additional years at the Center.

Clint Hart, 79, who retired from Glenn in 1988 with 37 years of service, recently died. He worked as an aerospace engineer.

Geza Major, 92, who started the Instrument Branch and retired as its chief in 1973 after 29 years of service, recently died. He completed his NACA/NASA career with several commendations.



Major

Wojciech Rostafinski, 80, who retired from Glenn in 1994 with 34 years of service, recently died. As an aerospace engineer, Rostafinski worked with compressors used in jet rocket engines and conducted research in fluid mechanics and fluid dynamics.

Vern Rollin, 95, who retired from Glenn in 1962 with 32 years of NASA service, recently died. He came to Glenn from Langley Research Center in 1943, and worked in the icing and wind tunnels.

Joseph Smail, 76, who retired from Glenn in 1991 with 29 years of service, recently died. While at Glenn he worked as an electrical design engineer.

Harold Schum, 82, who retired from Glenn with 33 years of service, recently died. While at Glenn, he worked as an aerospace engineer.

Behind the Badge

a closer look at our colleagues

Floyd Truskot



Job Assignment: I'm an electrical engineering technician in the Space Electronic Test Engineering Branch.

Time at Glenn: Ten years on September 14.

Hometown: I was born in Amherst and have lived in most of my life.

Describe your family: My family consists of my dad, Frank Sr., and mom, Florence; two sisters, Francine Jane (deceased) and Francine Marie; and three brothers, Frank Jr., Frederick, and Florian. I am the youngest.

Career Alternative: Forensic anthropologist or journalist/writer.

Favorite music: Everything from classical and baroque—Bach, Beethoven, Brahms, Chopin, Handel, Shostakovich, Sousa, Tchaikovsky—to jazz, to rock and '80s stuff.

Favorite book or magazine: James Clavell's *Asia Saga* series, John Grisham, Pat Frank, and Frederick Forsythe.

Favorite movie or play: *Lovers of the Arctic Circle* and *An Affair of Love* (French).

What do you see as an area of expertise at Glenn: That I work for the leader of the aerospace industry in the world. I work with smart, intelligent, bright, competent, and brilliant professional men and women with diverse cultural backgrounds. The managers and the engineers for which I provide drawings and solid models have helped develop my career infrastructure, enabling me to be successful in my vocation. They have provided the tools and plentiful opportunities for learning, growing, evolving, and excelling the human mind.

Technical achievements make dollars and sense

BY S. JENISE VERIS

To promote the value of reporting technological achievements, Glenn's Commercial Technology Office (CTO) invited Walter Hussey, NASA's new director of staff for the Inventions and Contributions Board, to the Center August 7 to 9.

"My job is to help Glenn's scientists and engineers recognize the full value of their contributions—to NASA, other government agencies, and commercial industry—which may qualify them to receive a Space Act Award," Hussey said. "Individual scientists, engineers, and contractors at NASA can receive a personal award up to \$100,000 based on the value of the inventions in terms of savings to the government. An award of this magnitude for developing technology doesn't exist anywhere else in government."

During Hussey's 3-day visit, he met with Glenn managers, listened to presentations by award-winning scientists and engineers, enjoyed a Hawaii-themed CTO picnic, and toured selected facilities. He also gave his own presentation on the

history and value of the Space Act Award, which was part of the legislation that created NASA in 1958.

"The Space Act Award enables the Agency, other government agencies, and industry to take full advantage of the talent that exists in our country," said CTO Director Dr. Larry Viterna. "These monetary awards can be substantial and are an important component in the Center's efforts to recognize outstanding technology development and commercialization."

Viterna noted how Glenn's reputation of technological excellence is highlighted by its leadership in the total number of R&D 100 awards Agencywide, including two more awarded this year, as well as NorTech Innovation Awards (formerly EDI), and NASA Government Invention of the Year Awards.

After only 2 months on the job, Hussey said that a common thread he has identified among the many talented scientists and engineers across the Agency is a mindset that undervalues the



Ralph Jansen, 5930, and Ray Beach, 5450 (foreground), give Hussey (center), an overview of advancements in flywheel technology.

contributions of their work. His strategy over the next several months will be to visit all the Centers and encourage even more recognition for NASA science and technology. He also shared that his office will develop a monthly newsletter to highlight and evoke pride in the great achievements reported throughout the Agency.

Researchers interested in learning more about Space Act Awards and the nomination process can contact CTO's Laurie Stauber, award liaison officer, at Laurel.J.Stauber@grc.nasa.gov or visit NASA's Inventions and Contributions Board Web site at <http://icb.nasa.gov/>. ♦

National Aeronautics and
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