AEROSPACE

ORBITER NEWS

News, announcements, and more.

STP-3: Advancing an Agile Space Enterprise

September 29, 2022

Aerospace exercised its industry expertise for the STP-3 mission, providing adaptive and crucial support where it mattered most. (Credit: USSF/Joshua Conti)

The pace of innovation for space is accelerating, driving the need for more agile and responsive solutions to advance the nation's space missions. Staying ahead in this contested environment requires moving faster and evolving how mission success can be achieved, prioritizing mission critical areas of highest need while allocating resources and time for optimal impact while accepting additional risk. The Department of Defense's (DoD) Space Test Program-3 (STP-3) mission demonstrates the value in finding the balance, implementing adaptive support for risk mitigation during development and optimizing opportunities for speed and success throughout the mission lifecycle.

In support of the STP-3 mission, The Aerospace Corporation leveraged its world-class technical expertise and experience to STP, advancing adaptive mission assurance approaches that ensured efficiency and successful delivery within the targeted timeframe.

Taking Challenging Characteristics in Stride

STP started in 1965 as an avenue to test cutting-edge technologies for potential adoption among defense community stakeholders. To date, STP has flown over 600 experiments, each having the possibility to

advance capabilities that enhance national security and the technologies that drive modern society.

The STP-3 mission was launched from Cape Canaveral Space Force Station's Space Launch Complex-41 in December 2021, carrying two payload/spacecraft: STPSat-6 and LDPE-1. STPSat-6 carries several DoD experimental payloads in addition to two co-funding payloads: one for the Department of Energy's Space and Atmospheric Burst Reporting System and NASA's Laser Communications Relay Demonstration payload.

Characteristic of STP missions, STP-3 required moving fast and efficiently to meet tight deadlines, emphasizing the need for effective prioritization of limited time and resources. Aerospace's technical experts supported in identifying and addressing the most critical areas of risk to the mission.

"One of the success stories out of STP-3 was figuring out how to prioritize tasks and lower the highest risks as best we could," said Nicole Fondse, Systems Director in Aerospace's Space Innovation Directorate. "It's a great example of adaptive mission assurance – our ability to change what we look at or adapt to the situation based off of new information and reevaluate what risks we want to look at with our limited resource set."

To learn more about Aerospace leveraged adaptive mission assurance approaches to support to STP-3, read ***the full article on Aerospace.org****.*

NASA Wants to Smash a Spacecraft Into an Asteroid to Protect the Earth

September 26, 2022

NASA has its sights set on a collision course with an asteroid in space. On Sept. 26, the Double Asteroid Redirection Test (DART) spacecraft will intentionally crash into Dimorphos, the moonlet of the primary asteroid Didymos. The purpose of the mission is to test a method of planetary defense that harnesses the kinetic impact of space vehicles to deflect near-Earth objects.

Watch Video Here

Experts at The Aerospace Corporation have been working closely with NASA on the DART mission, including the ion thruster used to propel the spacecraft.

“The spacecraft is going to collide with a smaller member of a binary asteroid. It’s a small asteroid that orbits a bigger one, and it’s going to change the orbital period of the small object from the main object. That is something that will be measurable from the Earth,” said Nahum Melamed, Project Leader at Aerospace. “We can then measure success or lack of success and know where we are on our plans for defense preparedness”

Since 2008, Aerospace’s experts have been supporting the development of the NASA Evolutionary Xenon Thruster (NEXT) engine. The DART mission will be the maiden flight for NEXT.

“It’s very significant for those of us that have worked on that ion engine and it could be very significant when there is an asteroid that’s on a collision course with Earth that we want to deflect,” said Mark Crofton, Senior Scientist at Aerospace. “This is one of the most interesting projects certainly that I’ve ever worked on, so it’s been a privilege to be part of it.”

Press Release: Glenn McKeown Named Aerospace’s New General Counsel

September 26, 2022

EL SEGUNDO, Calif., Sept. 26, 2022 – The Aerospace Corporation (Aerospace) has selected Glenn McKeown as the company’s new senior vice president, general counsel and secretary. From Aerospace’s D.C. area offices, McKeown will serve as an advisor to Aerospace leadership and its Board of Trustees, while also leading the Office of the General Counsel as it carries out its functions spanning legal, ethics, licensing and patents, internal audits and corporate quality management.

“Glenn’s extensive experience with national laboratories and research organizations, along with his broad legal background, make him an excellent fit for Aerospace,” said Steve Isakowitz, Aerospace’s president and CEO. “At a time of great change across the space domain, Glenn will help ensure Aerospace is well positioned to deliver on our critical mission while upholding our legal and ethical responsibilities to our government partners.”

McKeown served as general counsel at Argonne National Laboratory, a Department of Energy laboratory operated by The University of Chicago, beginning in 2017, providing legal counsel and management across intellectual property; labor and employment; procurement; and environmental, safety, security, and health. Prior to that, he served as associate general counsel at the University of Chicago for 15 years, and supported the University's role as manager and operator of two national laboratories.

In additional officer news, senior vice president Ed Swallow will take on additional responsibilities at Aerospace, expanding his duties as CFO to also become Chief Operating Officer of the organization. This change takes effect Oct. 1.

ABOUT THE AEROSPACE CORPORATION

The Aerospace Corporation is a national nonprofit corporation that operates a federally funded research and development center and has more than 4,841 employees. With major locations in El Segundo, California; Albuquerque, New Mexico; Colorado Springs, Colorado; and the Washington, D.C. region, Aerospace addresses complex problems across the space enterprise and other areas of national and international significance through agility, innovation, and objective technical leadership. For more information, visit www.aerospace.org. Follow us on Twitter: @AerospaceCorp.

Aerospace Employees Celebrate Atlas V and SBIRS

September 22, 2022

Written by Jeff Emdee, General Manager of Space Based Sensing Division

With the successful Atlas V launch of SBIRS GEO-6 on Aug. 4, completing the SBIRS constellation, Space Systems Group recently hosted a celebration of the Atlas V and SBIRS teams in the Paulikas Mall of Aerospace's El Segundo campus. The success of Atlas V SBIRS stems all the way back to the first launch of SBIRS GEO-1 in May 2011 on an Atlas V.

Space Systems Group hosted a celebration of the Atlas V and SBIRS teams on Sept. 1 in the Paulikas Mall of Aerospace's El Segundo campus.

Over a period of approximately 11 years, three Atlas V 401s were used for SBIRS GEO-1 through GEO-3, followed by an Atlas V 411 for SBIRS GEO-4, and finally two Atlas V 421s for SBIRS GEO-5 and GEO-6. These successful launches and spacecraft operations were a result of the dedication of many Aerospace team members, past and present.

“SBIRS is a critical element of the NC3 Nuclear Command, Control and Communication system, and the Atlas V and SBIRS teams were amazing in executing the mission,” said Kevin Bell, Senior Vice President of Space Systems Group.

From left to right: Craig Larson, General Manager of Launch Operations Division; Jeff Emdee, General Manager of Space Based Sensing Division; Steve Isakowitz, President and CEO; Wayne Goodman, Executive Vice President; Kevin Bell, Senior Vice President of SSG; Col Daniel Walter, Senior Material Leader, Survivable OPIR, SSC Space Sensing Directorate; and Col Erin Gulden, Senior Material Leader, Launch Execution, SSC Assured Access to Space.

The event was hosted by Jeff Emdee, General Manager of Space Based Sensing Division, and Craig Larson, General Manager of Launch Operations Division. Aerospace attendees included President and CEO Steve Isakowitz, and Executive Vice President Wayne Goodman. Customer leadership joining the celebration included Col Daniel Walter, Senior Material Leader, Survivable OPIR, SSC Space Sensing Directorate; and Col Erin Gulden, Senior Material Leader, Launch Execution, SSC Assured Access to Space. Both customers shared their appreciation of the Aerospace contributions.

The celebration enabled employees and customer partners to recognize the dedication of many Aerospace team members, past and present.

“Aerospace brings unprecedented talent to solve the hard problems,” Col Walter said.

As one example of the Atlas V and SBIRS teamwork, the two teams recommended and implemented an alternate launch mission profile for SBIRS GEO-6 that resulted in additional spacecraft fuel available after final orbit insertion, which improved the GEO-6 spacecraft life and resiliency. This additional capability directly improves warfighter capability.

“I would like to thank all of you for a job well done,” Larson said to the ETG and Program Office attendees. “Our leadership, our customer, and our nation appreciate your support and dedication”

SBIRS GEO-6 was the last SBIRS payload to be delivered to space and will ensure non-stop missile warning and tracking capability.

“Your dedication to the mission has resulted in delivery of unprecedented missile warning capability keeping our nation safe, with a 24/7 watch over the globe,” Emdee said.

In parallel to the SBIRS program, Aerospace is supporting the Space Force as it prepares to deliver even more resilient capability with Next Gen OPIR and MEO and LEO missile warning and tracking systems for the future.

Aerospace Celebrates Willard D. Downs III's Retirement: 55 Years and a Legacy

September 20, 2022

Across the corporation, employees gathered last week to celebrate the career and upcoming retirement of Willard D. Downs III and his 55 years at Aerospace. Downs, who currently works as a technical fellow in the Integrated Data and Applications subdivision, will be retiring at the end of September.

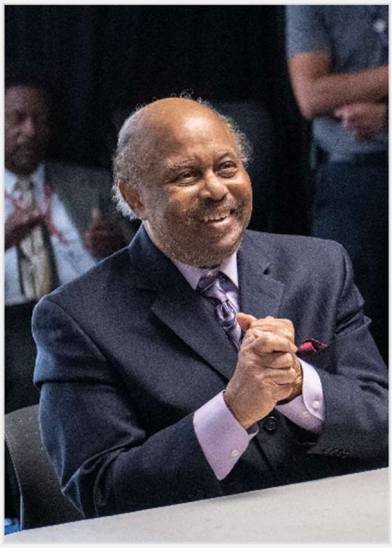
Colleagues gathered in person in El Segundo and virtually from across the country to recognize and celebrate Downs for his many contributions at Aerospace and the impact he's had on them.

Colleagues across Aerospace joined Downs (center) at his retirement celebration.

Attendees shared stories about their time working with Downs and his commitment to mentorship was often highlighted. His colleagues talked about how Downs served as a mentor since they were interns and how they felt his advice was meaningful in helping them shape their careers at Aerospace.

"You always shared your wisdom freely with everybody," said Mike Tanzillo, General Manager in the Engineering and Technology Group. "You mentored people who knew their path and you mentored people who were lost. You shared your wisdom with people who were CEOs all the way down to interns. You spent your time so freely willing to help others."

Aerospace President and CEO Steve Isakowitz and Executive Vice President Dr. Wayne Goodman both shared that Downs mentored them and was always available to help everyone – from interns to senior executives.



Downs' colleagues gathered to share fond memories and celebrate all that he has accomplished.

"On behalf of the corporation, everyone here and myself, thank you for everything you have done," said Isakowitz. "You will be missed, but your legacy lives on and you've very much made the culture that has allowed us to be this successful. Thank you."

Downs began his journey at Aerospace in 1967 in the Flight Mechanics department, Mathematical and Computational Center. In 1977, he helped establish the Robert H. Herndon Memorial science competition and in 1979, he was promoted to Director of the Orbit Systems Programming department. One year later, he became the Director of the Signal Processing Department. From 1988 to 2007, Downs worked as the Director of the Computer Systems Engineering department, in the Computers and Software Division. In 2007, Downs was promoted to Principal Engineer/Scientist, and Technical Fellow in 2020.

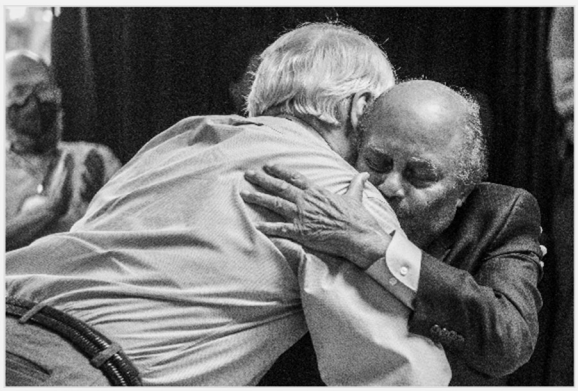
Aerospace Executive Vice President Dr. Wayne Goodman thanking Downs for his dedication to Aerospace.

"It is really hard to put a value on what you have been able to provide to the company," said Goodman. "The corporate culture and how we grow that, what we have done and who we've become are really because of people like you. You've devoted your career not only to the technology, but really to the people."

Through his time at Aerospace, Downs has been recognized on numerous occasions for his outstanding contributions. He was awarded the Engineering Technology Group Achievement Award in 1980, the Robert H. Herndon Award in 1983, the Excellence in Diversity Award in 2004, the President's Distinguished Achievement Award in 2008, the Commitment to Our People for Leadership/Mentorship Award in 2019, and the Black Engineer of the Year (BEYA) Award in 2020.

"You have had such a massive impact on individuals here, on the corporation and quite frankly, our national security," said Daniel P. McDonald, Associate Principal Director of the Integrated Data and Applications Subdivision. "It has truly been a remarkable career."

Congratulations to Willard D. Downs III and thank you for 55 great years at Aerospace.



Downs' support and mentorship is appreciated by many throughout the corporation.

Aerospace Celebrates Ribbon Cutting of The Space Warfighting Center

September 14, 2022

Aerospace celebrated the ribbon cutting for the Space Warfighting Center (SWC) in Colorado Springs, Colorado last week. The new state-of-the-art facility will increase Aerospace's program office and technical staff capabilities and can accommodate an additional 250 technical employees in support of growing customer needs of the U.S. Space Force, U.S. Space Command, and other key DoD partners.

Aerospace leaders and employees joined guests, including military customers, local civic and industry leaders, in recognizing the significance of SWC's role in enabling the space enterprise to advance future capabilities to outpace the threat and support the nation's warfighters across multiple domains.

"The Space Warfighting Center is, in its own way, a part of that enterprise-wide response, representing a significant piece of infrastructure whose impact will be felt far beyond its four walls," said Steve Isakowitz, Aerospace President and CEO. "As the pace of development to space accelerates, this facility will allow the Aerospace team and our many partners to make use of cutting-edge technologies — like AI, machine learning and digital engineering — to provide the innovation, resiliency and speed that this new era requires, bringing in ever-accelerating commercial space capabilities as well. It takes what was in the past limited to the realm of science fiction and makes it a reality."

The 90,000-square-foot building is designed to provide critical laboratory space to further Aerospace's innovative technical work. The facility will support virtual design activities across company locations

nationwide, enabling unique digital environments that aid government partners for design, development, training, and testing for space programs.

“The warfighting that we will do in domain to protect our space assets are critical to this nation,” said Maj Gen Shawn Bratton, Commander of the Space Force’s Space Training and Readiness Command (STARCOM). “But as part of the Joint Force, to protect soldiers, sailors and airmen in their respective domains is what we’re here about. STARCOM is at the forefront of that. We are preparing guardians everyday for conflict and competition, and we have partners in Aerospace that are critical to our success. We are up against adversaries with legitimate capabilities and they’re coming after us. We have to solve those problems, and this is a place that will do it–in the Space Warfighting Center.”

The new facility also deepens Aerospace’s impact to the Colorado Springs community, boosting the local economic impact to a total of $100 million by the end of 2023.

“For about as long as space has been a mission, The Aerospace Corporation has been supporting that mission right here in Colorado Springs,” said John Suthers, Mayor of Colorado Springs. “I’m so proud to see Aerospace Corporation reinvesting in Colorado Springs. Ours’ is a partnership that has benefitted our national representation, our national security and our local economy.”

In addition, Aerospace employees contribute to strengthening the communities where they work and live, inspiring and mentoring the next generations of space leaders through efforts like STEM outreach and volunteerism.

“[SWC] represents investment in all of our futures,” said Stephanie O’Sullivan, Chair of Aerospace’s Board of Trustees. “It’s an investment in our nation’s space mission; in our government customers’, organizations’ and partners’ critical capability to defend the nation’s space systems. It’s an investment in this community and our commitment to Aerospace’s continued presence in Colorado Springs; and in Aerospace’s talented workforce, who for 60 years have responded to new challenges, new threats and new opportunities in space. So, this is indeed, a great day for all of us.”

Star Trek Day: Inspiring New Possibilities for Space and Beyond

September 08, 2022

On Sept. 8, 1966, Star Trek: The Original Series appeared on televisions across the country for the first time.

Today, Star Trek Day is celebrated across the world to recognize the

series and all the entertainment and inspiration it has brought to millions of people spanning multiple generations. Nearly 60 years later — boasting 12 different TV series, 13 movies, five shows currently in production and more than 850 books, video games and soundtracks – one might say Star Trek is still living long and prospering.

For many Aerospace employees, the show captivated their imaginations early on and propelled them toward a path of pushing the boundaries of what's possible.

"In Star Trek, there is a test called the Kobayashi Maru. It is an unwinnable scenario, and Kirk is the only person to have won that because he didn't believe in the unwinnable situation," said Mark Jelonek, General Manager in Advanced Development and Planning. "When you think about that, at Aerospace, we figure out how to solve problems no one else knows how to solve. We tackle our Kobayashi Marus as part of our job every single day and it is really cool to be part of an organization that solves things that nobody else can solve."

Star Trek has managed to resonate with audiences by exploring strange worlds and fantastic future technologies. But not only has the show shaped pop culture, it's also made a lasting impact on the real-life space industry itself.

Inspiring Generations of Space Leaders

In 1976, NASA unveiled its first space shuttle: Space Shuttle Enterprise (OV-101), named after Star Trek's U.S.S. Enterprise (NCC-1701). Fans joined together in a letter-writing campaign to name NASA's shuttle after the starship of their beloved series. When the shuttle was unveiled at the Rockwell plant in Palmdale, California, Star Trek creator Gene Roddenberry attended along with many of the stars of the show.

A year later, NASA recruited Nichelle Nichols, who played Star Trek's Lt. Nyota Uhura, to star in a video for one of their recruiting campaigns. Since then, many in the industry, including astronauts, have cited Star Trek and Nichols' character as inspiration. Three astronauts — Mae C. Jemison, Michael Fincke and Terry W. Virts — also made appearances on the show as guest actors.

"Star Trek made science cool," said Michael Martino, an engineering specialist in the Advanced Sensor Engineering Department who grew up watching the original series.

Star Trek's presence has been felt even beyond Earth. While in space, NASA and European Space Agency astronauts made the Vulcan salute, which was often accompanied in the show with the phrase "live long and prosper," to show their appreciation for the series and the impact it made. In 2021, actor William Shatner, who played Capt. James T. Kirk on Star Trek, briefly flew to the edge of space aboard Blue Origin's NS-18. Blue Origin founder Jeff Bezos has been a Star Trek fan since childhood and stated that the show served as an inspiration of his for decades.

Sparking Imagination That Drives Innovation

As one of the most popular series of its time about space exploration, Star Trek unveiled a universe of possibilities and helped get people excited about space.

Not only has the series made an impact on many in the industry, but it's also predicted and inspired a variety of modern technologies in use and in development today.

"Science fiction sometimes points the way. You see something, you want to make it real and sometimes you end up making it better than it was in the fiction. That's part of the reward of doing it and why I got into this field," said Martino.

Throughout Star Trek, characters can be seen using a Personal Access Display Device (PADD), handheld devices with touchscreen displays that act like a computer storing libraries of information and allowing for communication between individuals. While used in Star Trek, PADDs did not become standard issue until the 22nd century; today, tablets are commonly used, some of which feature more sleek designs than the then "futuristic" PADDs that appeared on the show in the 1960s.

Another device frequently used throughout the series is the "communicator." This handheld device featured a few buttons and acted like a cellphone. While modern cellphones are significantly more advanced than the communicators in the Original Series, in the 1960s, they were dreams of a distant future.

Turning Ideas into Reality

Throughout all the Star Trek series, the mission of "boldly going where no one has gone before" stays key. Aerospace certainly embodies that spirit, pioneering innovation for critical technologies like small satellites and GPS — something most people use daily on many of the applications in their smartphones.

"It's really exciting to be a part of the team that is bringing some of the technologies from science fiction into reality," said Mark Looper, a research scientist with the Space Sciences Department at Aerospace who grew up watching Star Trek reruns and is still a fan of Star Trek: The Original Series, Next Generation and Deep Space Nine.

One Aerospace employee who said they were inspired by Star Trek early in life to join the aerospace industry shared some of the Star Trek memorabilia they keep by their work desk.

Aerospace continues to advance new technologies to solve the hardest problems in space. Who knows, maybe one day the corporation and its experts could work on breakthroughs that enable warp drives and transporters to support the nation's space missions. As Star Trek: The Next Generation's Capt. Jean-Luc Picard once said, "Things are only impossible until they're not."

"That's why we are scientists and engineers," said Looper. "To make the impossible possible and to make what was once only dreamed about a reality."

If you are a fan of Star Trek, please share your favorite characters, quotes or episodes in the comments below; we'd also like to hear from those who are fans of another sci-fi series that supported your passion for space, science or technology.

Liang Awards Celebrate Three Aerospace Employees and a Legacy

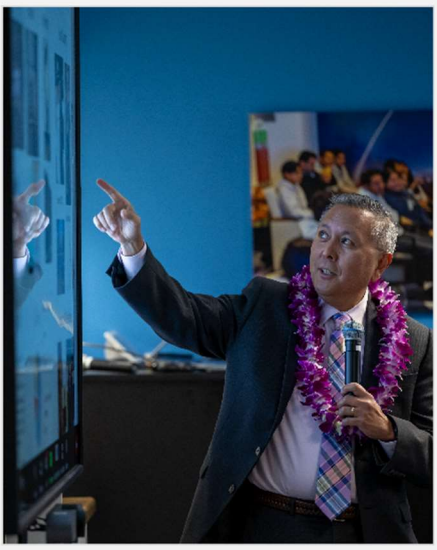
September 07, 2022

The Aerospace Asian Pacific American Association (AAPAA) recognized three Aerospace employees with the 2022 Dr. Alexander C. Liang Achievement Award last week. The ceremony also celebrated AAPAA's 50th anniversary, highlighting the employee resource group's impact at Aerospace through the sharing of its cultures, advocating for its members and giving back to the community. The Liang Awards recognize the achievements of Aerospace employees who have gone above and beyond and provide an opportunity for colleagues to gather and celebrate all that they have accomplished.

AAPAA members from across the country gathered in person and tuned in online to celebrate the 2022 Dr. Alexander C. Liang Achievement Award winners.

This year, Dr. Joanna Cardema, Dr. Curtis Iwata and Kien Le received the award for their leadership and initiative, career and professional achievements, mentoring, knowledge sharing and community involvement.

Since 1979, AAPAA has been recognizing Asian American and Pacific Islander employees who make significant achievements and contributions to both the corporate mission and the greater community. In 2010, the award was renamed to honor Dr. Alexander C. Liang, former General Manager of the Vehicle Systems Division in ETG after his passing in 2009. Liang made a great impact at Aerospace and was a strong supporter and champion for Asian and Pacific Islander employees. Under his leadership, AAPAA strengthened its unity across the corporation helping to shape it into the ERG it is today.



Keynote speaker Cordell DeLaPena, Jr. spoke about the impacts of the AAPI community on the nation and the aerospace industry.

"AAPAA is proud to support The Aerospace Corporation's goal of fostering a work environment where unique ideas and diverse perspectives are valued and regarded as a cornerstone for innovative work," said Stacy Shimizu, AAPAA National Vice President.

This year, two in-person ceremonies were held, one in El Segundo and one in Crystal City. Aerospace employees from across the country joined in to celebrate the awardees' achievements by attending in-

person and tuning in for the livestream. The event featured keynote speaker Cordell DeLaPena, Jr., Program Executive Officer for Military Communications and Positioning, Navigation and Timing, and Space Systems Command.

DeLaPena spoke about his family, background and the impact the Asian American Pacific Islander (AAPI) community has made in the aerospace industry. He also spoke about the perseverance of the AAPI community and the many ways it has shaped and added to the United States and its culture.

“Asian Americans have such a rich history and have been a key part of American history and culture for generations,” said DeLaPena. “Our ancestors and our community have gone through so much and worked so hard for what we have today. Asian Americans, along with all the other minorities, built this country and we should be proud of that.”

Meet the Award Recipients

Dr. Joanna Cardema is a subject matter expert (SME) on battery technology for space applications at Aerospace who currently works as an Associate Director in the Energy Technology Department. Before joining Aerospace, she received a B.S. in Chemical Engineering from Caltech, an M.S in Biomedical Engineering from UCLA, and an M.S. and a Ph.D. in Materials Science from Caltech before joining Aerospace.

Since joining the corporation, Cardema has published more than 40 papers on battery materials and their applications, has six patents and is a respected SME having shared her knowledge at more than 20 conferences. She has also been a session organizer for the Space Power Workshop for more than a decade and has served as both the General Co-Chair and the General Chair for the workshop.

Aerospace Chief Information Officer Tammy Choy presents Dr. Joanna Cardema with the Liang Award.

Outside of Aerospace, Cardema serves as an intern buddy, as well as a mentor and host of other Aerospace programs. She also volunteers in the classroom for her three kids and is part of the leadership team for her daughter’s Girl Scout troop.

Dr. Curtis Iwata joined Aerospace in 2014 in the Modeling and Simulation Department, Systems Engineering Division. He currently works as a senior project engineer in the Air Force Programs organization of the National Space Systems Engineering Division in DSG. Iwata received his B.S. in Mechanical and Aerospace Engineering from the University of California, Irvine, an M.S. in Space Management from the International Space University in Strasbourg, France, and a Ph.D. in Aerospace Engineering from Georgia Tech.

Aerospace Senior Vice President Marty Whelan presents Dr. Curtis Iwata with the Liang Award in Crystal City.

Since joining the corporation, Iwata co-founded the Aerospace Career Development Club to provide opportunities for networking and career development for early career professionals. He also mentors an Air Force cadet supporting the Aerospace Pentagon team and students for the Zed Factor Fellowship program. Iwata served on the steering committee for the Los Angeles chapter of the Aerospace & Defense Forum, co-founded the organization Spaceport L.A., and coordinates sponsorship of the Space Generation Fusion Forum.

Choy presents Kien Le with the Liang Award.

Kien Le joined Aerospace after 16 years with Caltech and NASA Jet Propulsion Laboratory. He earned a B.S. in Electrical Engineering from California State Polytechnic University, Pomona, a J.D. degree from Southwestern University School of Law, and is a registered United States patent attorney and member of the California Bar Association. He currently works as the Assistant General Counsel, ensuring Aerospace's values of objectivity and integrity are followed across the enterprise and serves as the chair of the Organizational Conflict of Interest subcommittee.

Le has worked as a mentor to those in the Office of General counsel for years and has been responsible for the organization, guidance of committee members and operations of the four Aerospace patent review committees for the past 11 years. Over the 5-year period, FY15 – FY20, Aerospace had 234 invention disclosures, filed 163 patent applications and was granted 151 patents thanks to Le's efforts.

Le is also dedicated to giving back to the community. He is a long-time member and former president of his church's Knights of Columbus chapter, and he also volunteers on the Aerospace Federal Credit Union's Board of Directors.

Congratulations to Dr. Joanna Cardema, Dr. Curtis Iwata and Kien Le for all you have accomplished and to AAPAA for 50 years at Aerospace!

The Aerospace Asian Pacific American Association (AAPAA) is an Aerospace employee resource group (ERG). Membership and participation in all ERGs are open to all employees, regardless of identity.

September 2022 Obituaries

September 01, 2022

Sincere sympathy is extended to the families of:

- **Russell Coons**, member of technical staff, hired Oct. 27, 1986, retired Feb. 1, 1994, died Aug. 8, 2022
- **Ford Cox**, office of technical support, hired Jan. 22, 1962, retired July 1, 1986, died July 17, 2022
- **Linda Drew**, member of administrative staff, hired March 21, 1977, retired Dec. 1, 2014, died Aug. 8, 2022
- **Gerald Hansen**, member of technical staff, hired June 18, 1962, retired Dec. 1, 1994, died May 10, 2022
- **William Hayden**, member of technical staff, hired April 27, 1961, retired Oct. 1, 1988, died Aug. 6, 2022
- **Louis Herman**, member of technical staff, hired Jan. 10, 1961, retired July 1, 1994, died July 20, 2022
- **Thomas Koegel**, member of technical staff, hired June 26, 1989, retired Nov. 1, 1998, died July 31, 2022
- **James La Frieda**, member of technical staff, hired Sept. 10, 1973, retired July 1, 1999, died July 27, 2022
- **Donald Mac Elroy**, member of administrative staff, hired March 19, 1963, retired Oct. 1, 1996, died July 26, 2022
- **Patricia Mac Elroy**, office of technical support, hired Nov. 26, 1962, retired Feb. 1, 2000, died June 12, 2022
- **James Michaels**, member of technical staff, hired Jan. 15, 1962, retired Oct. 1, 1988, died May 24, 2022
- **Martin Milden**, member of technical staff, hired April 27, 1981, retired Oct. 1, 1996, died July 10, 2022

To notify Aerospace of a death and have it included in the Orbiter, please contact People Operations at (310) 336-5107.

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