

ORBITER NEWS

News, announcements, and more.

Aerospace Celebrates Gerald Guydan's Retirement and 55 Years of Service

September 30, 2021

Aerospace's Launch Systems Division recently hosted a virtual retirement celebration for Gerald P. Guydan, who retired from the company after 55 years of service. Several speakers were on hand to honor Guydan's many years of contributions to Aerospace during the small in-person and virtual event, which was attended by colleagues, friends and his brother David, who attended in person, as well as his children Craig and Alison, who attended remotely.



The ceremony was kicked off by Aerospace President and CEO Steve Isakowitz, who touched upon Guydan's early career before discussing the impact of his tenure at Aerospace, noting that the arc of Guydan's career closely paralleled the growth and development of the entire industry.

"Jerry has always been that steady hand at launch, spanning the entire history of the Titan family. Not only was the vehicle pretty amazing, but more importantly, what it put into space to keep this nation safe and secure," said Isakowitz.

Isakowitz also noted that Guydan was instrumental in the development of numerous other vehicles that have defined the last 50-plus years of launch, and helped usher in a new class of rockets, including the Falcon 9 and Falcon Heavy, that will define the coming decades. In addition, Isakowitz referenced Guydan's

long-time contribution to agile mission assurance practices that allow us to provide the support and expertise our customers rely on in new ways, as well as his contributions to the STARS facility that will live on in our STARS of the Future efforts.

“Your work will have a big impact on this company for many, many years to come, said Isakowitz. “It’s with deep gratitude that I want to thank you on behalf of the entire corporation, from the Board of Trustees and all the other CEOs who’ve had the honor of working with you.”

Following Isakowitz was Akhil Gujral, General Manager of Launch Systems Division, who provided an overview of Guydan’s career, starting with his pre-Aerospace work on the U.S. Air Force’s Dyna-Soar X2 space plane project in 1961, and continuing through the Titan rocket family, Apollo Lunar Surface Drill and other projects.



Aerospace President and CEO Steve Isakowitz (right), Launch Systems Division (LSD) General Manager Akhil Gujral and LSD Principal Director Jeffrey Michlitsch were among the speakers at the ceremony.



Aerospace employees celebrating Guydan’s career and contributions during the post-ceremony reception.

Gujral noted that it was during this timeframe that Guydan established a relationship with Aerospace, which ultimately led to Guydan joining the Aerospace team in 1967 as a member of technical staff in the Missions Requirement office. Gujral went on to describe the over-400 launches Guydan had supported, adding that, “the work he did really laid the foundation for innovation, speed and agility.”

Jeffrey Michlitsch, Principal Director of Launch Systems Division, also lauded the history Guydan brought to the company, noting that “Gerry was always willing and happy to share the lessons learned from that history with the Falcon team and the people working with him and above him, to make sure we were fully successful,” said Michlitsch, who is Guydan’s most recent manager. “Around here we talk about shaping the future and velocity, and Jerry has definitely been the poster child for that.”

Guydan’s successor Slava Ananyev, Systems Director of Launch Systems Operations and Development, and David Cavazos, Senior Project Leader of Launch Systems Operations and Development, spoke of Guydan’s commitment to doing whatever was necessary to get the job done in pursuit of velocity and mission success. Cavazos noted the admiration his team felt for all of Guydan’s accomplishments at Aerospace.



Jerry Guydan (left) with his brother, David, who flew in from the East Coast to attend the event in person.

On behalf of his family, Guydan’s brother David thanked Aerospace for planning this special event and shared an anecdote about his sibling’s early interest in the aerospace industry and first attempt at building a rocket during his senior year of high school.

Guydan’s daughter Alison had the opportunity to speak about her father’s decades-long work ethic and drive. “I can’t say many people would dedicate their whole lives to working the way he has. Fifty-five years is incredibly impressive. I see a lot of hard work and dedication,” she said. “I know engineering and everything he’s done with Aerospace has been something he’s been passionate about and something

he’s been dedicated to.”

The event closed with a heart-felt thanks from Guydan, who thanked his colleagues, friends and family for helping to organize the event, as well as Aerospace for its continued support throughout his career.

Guydan was presented with a commemorative plaque, a montage and a card signed by his colleagues.

Fueled for Space: Aerospace Helps Artemis-Bound Cubesat

September 29, 2021

While the COVID-19 pandemic has introduced a myriad of unique challenges and disruptions across the space enterprise, The Aerospace Corporation continues to find new opportunities to adapt and innovate to deliver on the mission.

A recent example is ArgoMoon: one of the CubeSats slated to launch as part of NASA Artemis I's payload from the Kennedy Space Center (KSC) in November. The nanosatellite will perform an autonomous proximity flight inspection operation during the Space Launch System's (SLS) maiden flight to confirm

successful deployment of the payload. Aerospace recently provided critical support in overcoming an unforeseen obstacle to ensure the mission continued without delay.



Operating under a tight deadline, Dr. Andrew Cortopassi and the rest of the Aerospace team in the Propulsion Science Department were able to successfully fill the satellite with the required propellant in time to be delivered to KSC for payload integration. This work occurred in the Propulsion Research Facility.

Adaptability and Responsiveness

ArgoMoon's micropropulsion system utilizes a green ionic liquid-based propellant known as LMP-103S, which requires a license to handle. Under normal circumstances, the nanosatellite's propellant filling operation is completed at the launch facility. However, COVID-19 travel restrictions prevented the prime supplier from traveling. With a pressing timeline, Aerospace was asked to provide assistance.

"There was an urgent need to fill this CubeSat and Aerospace was able to act fast to meet this deadline," said Dr. Andrew Cortopassi, a laboratory manager in the Propulsion Science Department. "We have handled this propellant before, although not typically for pit stop-like operations."

The propellant was loaded into ArgoMoon's micropropulsion system using a custom filling cart developed in Aerospace's Propulsion Research Facility on the El Segundo, Calif. campus. Operating under a tight deadline, the Aerospace team in the Propulsion Science Department was able to successfully fill the satellite with the required propellant in time to be delivered to KSC for payload integration. This event is the first time a CubeSat was filled with LMP-103S prior to shipment to the launch facility.

The successful filling operation of ArgoMoon is indicative of Aerospace's breadth and depth of technical expertise in the field of propulsion technology.

Propelling Space Technologies Forward

Micropropulsion is just one of the areas Aerospace's scientists and engineers focus on. Personnel are experienced in handling and testing different propulsion technologies, including chemical and electrical.

At its Propulsion Research Facility, Aerospace is applying state-of-the-art diagnostics to analyze the interaction between chemistry and physics—conducting evaluations that only a handful of others in the United States can. Besides assessing propellants, typical activities within this building can include investigating rocket engines and operating high-pressure gaseous supply systems.

The Electric Propulsion Lab is dedicated to comprehensive appraisal of electric propulsion thrusters. The space can conduct evaluations, from measuring the amount of thrust to using non-invasive testing methods, on thrusters of various sizes.

"There are a lot of companies that have developed thrusters," Cortopassi said. "But these companies and our traditional customers look to us to understand if these propulsion devices are ready to move out of the laboratory and into operation. Aerospace has the experience to test and make these evaluations."

To learn more about Aerospace's capabilities in propulsion technology, be sure to read **[How Aerospace Propels Spacecraft into the Future](#)**.

Aerospace's ALMA Facilitates Discussion on Cross-Cultural Sensitivity

September 28, 2021

The Aerospace Latino Membership Association (ALMA) continued the celebration of Hispanic Heritage Month with a featured speaker event last Thursday, providing employees an opportunity to engage in a discussion about cross-cultural sensitivity in the workplace. The event is a follow-on to last year's presentation on microaggressions.

Hispanic Heritage Month takes place from Sept. 15 through Oct. 15, and this year's theme is "Esperanza: A Celebration of Hispanic Heritage and Hope." ALMA kicked off this year's festivities earlier with its annual "Taste" Of Hispanic cultural event—showcasing the food and cultures of Colombia, Brazil and Bolivia. ALMA has also partnered with Aerospace Cares on a [giving opportunity](#).



Maria Medrano Armington is a diversity and inclusion specialist.

For this year's guest speaker, ALMA invited Maria Medrano Armington, a diversity and inclusion specialist who hails from Argentina. With over 15 years of experience, Armington has expertise in creating safe spaces and facilitating discussions among employees on cultural differences and their connection to the workplace. She began by sharing an anecdote from her own life.

"When I first came to the U.S., I came as a grad student and had to fill out a form identifying myself ethnically and racially," Armington said. "...My four grandparents were immigrants in Argentina and I'm an immigrant here. I was used to them speaking Italian, German, English ... and so that mix made it more interesting—more fun."

The event included interactive parts, providing participants the opportunity to engage and share their own experiences.

A series of questions were asked, including where one grew up. Attendees' responses ranged widely, demonstrating the unique experiences and diversity among the group. One individual grew up in Texas while another identified Argentina, Brazil and Uruguay as places of home.

Follow-up questions were asked, such as how exposed participants were to diversity and how their parents or grandparents felt about diversity. With a similar degree of variability, one employee shared that their parents were first generation and welcomed everyone into their home, while another responded that their grandparents were suspicious of others.

The audience's answers provided context for Armington as she delved into the importance and value of greater inclusion. While the presentation was geared towards the goal of incorporating more acceptance and appreciating diversity within the workplace, a variety of subtopics were touched upon: unconscious bias, mental health impact, how to unlearn stereotypes, the importance of fostering inclusion and topics to avoid in workplace conversations. Of particular note was the emphasis on the element of belonging within diversity and inclusion.

"When we talk about inclusion, we say everyone has a seat at the table," Armington said. "For me—beyond bringing your whole self to work—there's an integration piece. And that is [everyone] sitting at the table... [where] everybody's input is more than welcome and needed. It's accepted and heard."

Armington offered examples of existing cultural differences—such as the concept of personal space, the assumptions and stereotypes other people may have, and tips on how to become better practitioners of diversity and inclusion.

"We need to expand our mind, our heart, [and] our working skills to incorporate people who are different," Armington said. "Because in that diversity, there is more potential, there is more solutions, there is more strategies, there is a better product."

Aerospace's Rachel Morford Aspires to Inspire as FY22 President of SWE

September 27, 2021

Aerospace engineer Rachel Morford has been inducted as the FY22 President of the Society of Women Engineers (SWE). Morford, along with the incoming SWE Board of Trustees, was formally installed during a small, in-person ceremony held last month at the Paulikas Mall on Aerospace's El Segundo campus.

Morford, who is a Principal Director in the Capability Integration Division of the Space Systems Group (SSG), joined SWE as a freshman at the University of Southern California and has since held several leadership roles at all levels of the organization.



Aerospace's Rachel Morford (center) was honored for her contributions to the company and the community during the FY22 SWE Installation Ceremony.

Aerospace President and CEO Steve Isakowitz provided opening remarks for the event, recognizing the importance of SWE's work in advancing opportunities for women in the field of engineering, as well commending Morford's significant efforts and dedication through her work at Aerospace and with SWE to inspire and encourage future engineers and scientists.

"I know as an industry, we can and we must do better. Organizations like SWE are critical to making it happen. I love the fact that [they] pursue these talented individuals to make them part of the Society, and that networking is a really important component of it. At the end of the day, [they] bring along STEM and the next generation of leaders," Isakowitz said. "I appreciate the times we're living in, and that we're starting to really recognize the excellence of what women are bringing to the field."



From left to right: Aerospace President and CEO Steve Isakowitz, Principal Director Rachel Morford, Chief Technology Officer David Miller, Executive Vice President Wayne Goodman.

Morford joined Aerospace in 2008 and has held a number of positions of increasing responsibilities. She began as MTS in the Launch Directorate in the National Systems Group (NSG). In 2014, she transferred to the Systems Integration and Test Office in Engineering and Technology Group (ETG) and then joined the Future and International Programs in the MILSATCOM Division, working closely with international partners.

“My theme for this year is ‘aspire to inspire,’” Morford said. “It is something that is incredibly important to me personally. It encompasses what SWE means to me as a member and as a leader of this organization, but it really also means a lot to me about what being a woman in engineering is really all about.”

Morford continues to be very active in community outreach, networking and educating students at science fairs, classrooms and college campuses, as well as mentoring colleagues to support their professional development. At Aerospace, she has served on the Aerospace Diversity Action Committee and as president of the Aerospace Women’s Committee (AWC). She is also a member of multiple Employee Resource Groups (ERG). In 2017, she was among four winners of the AWC Women of the Year (WOTY).



The FY22 SWE Board of Directors and Board of Trustees.

Interestingly, Morford also played a crucial role in uncovering another significant connection between SWE and Aerospace. It turns out, the mother of Aerospace’s Chief Technology Officer David Miller was a founding member of SWE, a fact he was able to confirm thanks to Morford’s help. Miller said he was aware his mother, Phyllis “Sandy” Evans Miller, was heavily involved with SWE but did not know she was actually one of the original organizers.

“I would often speak of my mother’s role in SWE and of her strong influence on my career in aerospace,” Miller said. “I told Rachel of my mom’s story and my uncertainty into the actual role she played. [Rachel] did

some digging and I'm very grateful that she did."

But the ties between SWE and Aerospace employees doesn't end there. Morford herself credits fellow Aerospace employee Marilee Wheaton, who she met through SWE during her days at USC, for inspiring her to join the company.

"The decision was pretty easy to come and be an employee here," said Morford, who also thanked Aerospace's leadership for their support of her efforts with SWE. "I've stayed at Aerospace because there are so many people at this company who are inspirational and who I aspire to be like, and I think who inspire and aspire to be better engineers, and to make the world a better place every day. That culture, that commitment to our people and that development of really broad talent is just an incredible motivator for all of our staff."

A recording of the SWE installation ceremony is [available on YouTube](#).

Please join us in congratulating Rachel!

The Aerospace Corporation UK Ltd Is Awarded £3m Contract by UK Space Agency

September 27, 2021

EL SEGUNDO, Calif., Sept. 27, 2021 – The Aerospace Corporation (Aerospace) announced today that its wholly owned UK subsidiary, The Aerospace Corporation UK Ltd (Aerospace UK), was awarded a two-year, £3 million contract by the UK Space Agency (UKSA) to provide technical and policy support.

Specifically, Aerospace UK will provide UKSA with independent technical expertise and specialist advice in support of policy development and implementation, successful program delivery, strategic decision-making, and international and sector-specific engagement approaches at a critical moment for the UK space enterprise.



“Our strengths in research and development, innovation, and technology place us in a perfect position to take a meaningful role in the new Space Age, and work collaboratively and effectively with our international partners,” said Ian Annett, UKSA deputy CEO for Programme Delivery. “Our partnership with The Aerospace Corporation UK Ltd will allow us to build on our sovereign capabilities and realize our goal of achieving 10 percent of the global space economy by 2030.”

A vital part of UKSA’s work is to ensure it continues to operate in the national interest. The UK space sector contributes £6.6 billion annually to the UK economy and supports £5.8 billion annually in exports. New space trends provide significant opportunities for the UK to realize significant economic and national security ambitions for space, including launching satellites from the UK in 2022. The UK has established a new Cabinet committee dedicated to space, the National Space Council, and is developing a new National Space Strategy. Also, space has been designated part of the UK’s Critical National Infrastructure, given satellites support £360 billion of UK gross domestic product, public services, and key economic sectors ranging from agriculture to finance.

Leveraging Aerospace’s unique specialist skills, technical expertise and capabilities spanning the entire space enterprise will enable UKSA to develop in areas of high value for the UK as it pursues a more robust role in the global space environment. In turn, Aerospace demonstrates its commitment to integrating and elevating the entire space enterprise through this collaboration with a key U.S. ally.

“Space-based technology and infrastructure allows for the smooth functioning of virtually every aspect of our daily lives on Earth. With so much depending on the space domain, the UK is building a cross-government, enterprise approach to space,” said Gina Galasso, managing director for Aerospace UK. “Aerospace is pleased to offer our specialized expertise to support our UK customers as they tackle this vital undertaking.”

About The Aerospace Corporation UK Ltd

The Aerospace Corporation UK Ltd is the wholly owned UK subsidiary of The Aerospace Corporation. Headquartered in Salisbury, Wiltshire, this small-to-medium enterprise is focused on supporting a number of different government organizations in the UK space economy. The company has been established to support UK efforts in a variety of space areas, including launch, space situational awareness, systems acquisition, and program management. For more information, visit www.aerospace.org/uk.

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 4,200 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](https://twitter.com/AerospaceCorp).

Shaping the Future of PNT at the Joint Navigation Conference

September 20, 2021

Aerospace played key leadership and technical roles at the 2021 Institute of Navigation (ION) Joint Navigation Conference (JNC), the largest U.S.-only conference focused on the positioning, navigation, and timing (PNT) needs of the Department of Defense and Department of Homeland Security. Facilitated by ION, the conference attracted over 750 in-person attendees to Covington, Ky, to address the theme of “dominance and resilience for warfighting and homeland security PNT.”



Aerospace ION JNC group, from left to right: David Allen, Alan Choy, John Janeski, Ryan Handzo, John Langer, Thomas Powell, Ravi Madabhushi, Tenny Sharpe, Michael Stantis, Steve Lewis

“The JNC is the ‘Space Symposium’ of PNT,” said Dr. Tom Powell, Principal Director in Aerospace’s Production Division and Plenary Chair of the conference. “Where else do you hear Brig. Gen. Steve Whitney from Air Force headquarters, Maj. Gen. Deanna Burt from US Space Command, Mr. William Nelson from the US Army Futures Command, Dr. Nikki Markiel from the National Geospatial Intelligence Agency, and Dr. Brad Parkinson, the ‘father of GPS,’ sharing their visions for resilient PNT?”

Aerospace experts gave over a dozen technical presentations on topics such as enhancing the integrity and resilience of the current GPS system, exploitation of non-U.S. navigation systems, innovative low-cost LEO augmentations to GPS, and navigation in cislunar space.

“Aerospace has helped organize this conference since at least 2014,” said John Langer, chair of the ION Military Division. “This year, we have by far the strongest program I have seen.” In addition to the technical presentations, Aerospace led a panel discussion on warfighter integration of GPS devices and provided co-chairs for four technical sessions.

The Aerospace PNT Hub funded several JNC attendees and their work on topics such as resilient cislunar PNT and all-source sensor data fusion for alternative and resilient PNT.

“The topics of the primary presentations comprise a large part of the PNT Hub’s strategic focus areas, as collectively we look to advance PNT capabilities ranging from space architectures and systems to user equipment and the emerging synergies with advanced communication technologies,” said Dr. David Tralli, Senior Project Leader in the Science and Technology Strategy and Development Department. “PNT is critical to defense and civilian applications and embracing the developments in the commercial sector is key to our work across the space enterprise.”

An annual highlight of JNC is the Warfighter Panel, where operational users of GPS from multiple Services provide firsthand accounts of using PNT technology and the effects of navigation warfare in the field.

“ION JNC 2021 offered a very welcome in-person opportunity to re-connect with our nation’s PNT community across both civil and defense,” said Dr. John Janeski, Director in Digital Communication Implementation and Hub Deputy. “It was extremely well-attended and allowed Aerospace to survey the state-of-the-art in our field and fully engage with our customers through technical presentations, warfighter panels, and senior leadership panels and presentations.”

Aerospace-Authored Papers Featured at the 2021 ION JNC:

- Establishing Integrity for GNSS Signals from Assured GPS Signals: User Equipment Techniques in the Measurement Domain; (Tenny Sharpe, Thomas Powell)
- Very Inexpensive Navigation Enhancement Layer; (Alberto Arredondo, Ron Trerotola, James Bardeen, Tiange Fan, Andrew Takano, Alexander Utter, Richard Welle, David Allen)
- Resilient Cislunar Positioning, Navigation, and Timing; (David Allen, Steve Lewis, Blair Thompson, Andrew Takano)
- Out-of-Band Global Positioning Systems (GPS) Navigation Message Authentication (NMA); (Michael Cole, Ranwa Haddad, Karl Kovach)
- Software Radio Prototype of a Frequency Hop Acquisition Using Secure Transec (FAST) Receiver; (Philip Dafesh, Eugene Grayver)
- Multi-GNSS Applications of Codeless Processing of Binary Offset Carrier Signals; (Alan Choy, John Langer, Andrew Lin, Mark Kubiak, Herwin Chan, John Janeski)
- Space-based GPS Interference Monitoring and Detection with Proliferated LEO; (Steve Lewis, Blair Thompson, Tanner Stevens, Rebecca Bishop)
- Assessment of NTS-3 Acquisition Aiding Signals: Benefits to Military GPS Receiver Performance, Spectrum Compatibility, and Use Cases (Philip Dafesh, Alex Eapen) (selected, but cancelled)

Aerospace Co-Authored Papers:

- NTS-3 Signals Experiments – Overview; (Jim Gillis, Phil Dafesh)
- NTS-3 Signals Assurance Experiments; (Jim Gillis)
- Tracking Phase through the Polarization Efficiency Factor with application to Precision Guided Munitions; (Scott Boughton)
- An Exchange Format for M-code Navigation Message Data; (Cliff Harris)

Aerospace's Board of Trustees Elects Three Distinguished Leaders

September 15, 2021

EL SEGUNDO, Calif., Sept. 15, 2021

– Three leaders with expertise that spans national security, cybersecurity, and early stage investments were elected to The Aerospace Corporation (Aerospace) Board of Trustees: The Honorable William A. LaPlante, president and chief executive officer of Draper Laboratory and former assistant secretary of the Air Force (Acquisition); Patricia J. Zarodkiewicz, former administrative assistant to the secretary of the U.S. Air Force and currently president of PatZconsulting; and Ray A. Rothrock, venture capitalist and cybersecurity expert.



The Honorable William A. LaPlante (left), president and chief executive officer of Draper Laboratory and former assistant secretary of the Air Force (Acquisition); Patricia J. Zarodkiewicz (center), former administrative assistant to the secretary of the U.S. Air Force and currently president of PatZconsulting; and Ray A. Rothrock (right), venture capitalist and cybersecurity expert.

"Our new board members have backgrounds that mirror the breadth and depth of Aerospace's work across the space enterprise," said Steve Isakowitz, Aerospace president and CEO.

"From leading technology and cybersecurity expertise to deep understanding of national security space, these new members bring the knowledge of our customers, insights on emerging industry innovations, and vital experience critical to our mission."

LaPlante is the president and chief executive officer of Draper Laboratory, a research and development corporation that provides advanced technology solutions in national security, space exploration, health care, and energy. Previous to this position, he was a senior vice president and general manager at MITRE National Security, where he oversaw the operation of two federally funded research and development centers, and the U.S. Department of Commerce's National Institute of Standards and Technology. Prior to MITRE, LaPlante was the assistant secretary of the Air Force (Acquisition), in Washington, D.C. where he brought the \$43 billion Air Force acquisition enterprise budget into alignment with the Air Force vision and strategy.

Zarodkiewicz is the president of PatZconsulting, a consulting firm based in Washington, D.C., and previously served as the administrative assistant to the secretary of the U.S. Air Force. As the Air Force's senior career civilian adviser to the secretary and the USAF senior security official, she was responsible for performing a variety of high-level assignments to achieve policies, goals, and objectives. She administratively managed and supported the Office of the Secretary of the Air Force and its Secretariat and field operating agencies.

Rothrock is a venture capitalist, cyber expert, clean energy advocate, and philanthropist. He founded and serves on the board of FiftySix Investments LLC, an investment firm that focuses on seed-stage, early-stage, and later-stage companies. He is also the executive chairman of RedSeal Inc., an enterprise cybersecurity firm. Previously, Rothrock was a partner and management committee member at the venture capital firm Venrock, where he led Internet and energy investment programs, including nine initial public offerings with multiple listings on the *Forbes Midas* list.

About The Aerospace Corporation

The Aerospace Corporation is a U.S.-based national nonprofit corporation that operates a federally funded research and development center and has approximately 4,200 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 through agility, innovation, and objective technical leadership. For more information, visit www.aerospace.org. Follow us on Twitter: [@AerospaceCorp](https://twitter.com/AerospaceCorp).

Never Forget: Aerospace Employees Reflect on 20 Years After 9/11

September 09, 2021



It has been two decades since the terrorist attacks of Sept. 11, 2001, claimed the lives of 2,977 victims at the World Trade Center in New York, the Pentagon and United Airlines Flight 93. The nation vowed to “never forget” the events of that tragic day.

Ahead of the 20th anniversary of 9/11, the Aerospace Military Veterans (AMV) and Aerospace Cares hosted a special virtual event to provide Aerospace employees an opportunity to pause and reflect. The discussion featured a panel of Aerospace employees, including survivors who shared their first-hand accounts and service members who were deployed to Afghanistan.

“September 11, 2001 was one of the darkest days in our nation’s history. In an instant, our sense of safety was shattered and countless lives were altered forever. But in the days, months and years that followed, we witnessed profound acts of courage and found renewed strength in our common bond as countrymen and women,” said DSG Vice President Jay Santee, who provided opening remarks. “20 years later, let us hold on to the hope, resilience and unity we found in the aftermath of Sept. 11, and uphold our promise to never forget.”

AMV President Chuck Allen then introduced Aerospace employees Tony Porzio, a native New Yorker who was there on 9/11, and George Vogen, who worked at the Pentagon, to share their memories from the day of the attacks.

"The first emotion of the day of course was helplessness. There was nothing you could do as an individual about this," said Porzio, Project Engineer in DSG. "Forces greater than yourself were at play, and all you could do was sit back and watch your hometown being taken apart piece by piece. Fortunately, a relative who was in the World Trade Center did get out. Everyone in my family either had at least a summer job or a whole career down in the Financial District in Manhattan. We knew that place intimately and we had to deal with the loss that came from that, as well as knowing there were a number of people in the neighborhood who wouldn't be coming home that night."

Vogen, who at the time served on the Pentagon's Crisis Action Team, also discussed the opportunity to teach the next generation about 9/11 when his nieces and nephew visited.

"The kids were good," said Vogen, Senior Project Engineer in DSG. "You sometimes don't think they're taking it all in. But when they went to school and 9/11 came up that year, there was a discussion and their teacher was surprised they knew so much. They were able to share with their classmates."

The War in Afghanistan was a direct result of 9/11, and recently came to an end with the United States completing its withdrawal efforts. Aerospace Navy CAPT Mary Ponce and Air Force Lt. Col Lance Jones reflected on their experience while deployed there defending the nation against further terrorist attacks and helping the Afghan people.

"So many people were lost in the attacks and so many people were lost in Afghanistan. It was hard in that regard, but on the flip side, you met so many great people in the U.S. services and foreign services coming together to do good," said Ponce, Senior Engineer Specialist in ETG. "We were trying to eradicate the Al Qaeda and Taliban leadership and hoping to topple it, and at the same time, trying to train the Afghan forces to be able to run their own country. We thought about 9/11 quite a bit because that's something we never want to happen again. We wanted to make sure we do our part to stop that."

Ponce and Jones also spoke about the sacrifices their families made while they were deployed overseas, which is a particular challenge that often gets overlooked. Jones talked about getting the notice of his deployment just a few months of getting married. His wife, Sheila Banister, also spoke of having to step away from her career to maintain the family while Jones was overseas.

"When I reflect from 9/11 and on, the idea that we gave them 20 years of an opportunity to have children grow up without the oppressive regime," said Jones, Senior Project Engineer in DSG. "We helped them out as much as we could."

2021 Dr. Liang Awards Honor 3 Aerospace Employees

September 02, 2021

Three Aerospace employees were recognized as this year's recipients of The Dr. Alexander C. Liang Asian Pacific American Achievement Award. The award, sponsored by the Aerospace Asian Pacific American Association (AAPAA), is in memory of Dr. Liang—a highly respected technical leader and former general manager of the Vehicle Systems Division—and recognizes Asian American employees who have made noteworthy contributions to Aerospace's mission and the broader community.



James Liao (left), Michael AuYeung (center), and Ryan Noguchi (right) are this year's recipients of the Dr. Alexander C. Liang Asian Pacific American Achievement Award.

This year's awardees were Michael AuYeung, Enterprise Information Services (EIS) Director; Ryan Noguchi, Director of the Space Architecture Department; and James Liao, Associate Principal Director of the Guidance and Control Subdivision.

AAPAA National Secretary Andrew Hsu kicked off the virtual ceremony, while Vice President and Chief Information Officer Tammy Choy delivered the welcome remarks that included her recollections of Dr. Liang.

"The most important thing about Alex—and this was true for everyone who met him—was by the time you finished that first meeting...you knew you were a part of his team, his extended family and part of the Aerospace company," Choy said. "That was something universal that he shared all the time."

Deidra Eberhardt, Deputy Director for the Space System Command's (SSC) Portfolio Architect Directorate, was featured as the keynote speaker. Previous AAPAA executive sponsor Dr. Malina Hills, who retired earlier this year as Space Systems Group Vice President, was in attendance along with Dr. Liang's daughters, Allyson Weston and Jennifer Macha.

In her speech, Eberhardt identified similarities between Dr. Liang and her own father, including emigrating from China to the United States, pursuing higher education and facing the challenges they may have encountered as Asian Americans throughout their lives.

"[These men] paved the way for generations to come, and really helped give us a foundation for not only being in STEM-related careers...[but also] making sure we maintain our individual heritage," Eberhardt said. "...These awesome gentlemen didn't even realize [this] at the time that they were inspiring others. And yet, that legacy has lived on to the folks that we're coming to honor today."

Meet this year's awardees:

Michael AuYeung began his Aerospace career in the Computer Systems Research Department of ETG. Throughout his tenure, AuYeung has applied his expertise in high-performance technical computing. He currently serves as Director of Enterprise IT Engineering with EIS, leading efforts in innovative practices and other company-wide projects.

Within the workplace, AuYeung has served as one of the original Executive Diversity Council (EDC) members, led the diversity metrics team, and been an active supporter and mentor for the corporate intern program. Beyond Aerospace, AuYeung has served as a capstone advisor to University of California, Santa Barbara students and is actively involved in the fountain pen community—leading relevant clubs and volunteering as an exhibitor and guide at pen shows. He is a proud University of Southern California graduate.

"As with many, I'm proud of Aerospace and its role in national security space. But I'm even more proud that Aerospace is a place where I feel empowered to bring my whole self to work," said AuYeung in his acceptance speech. "...It is a place that encourages me to apply the same diligence to human interaction as I do to technical matters. People here care for the mission, but more importantly, as shown through the pandemic, people here care for each other."

Ryan Noguchi joined Aerospace in 1997 as a senior member of the technical staff in the Flight Mechanics Department, under the division leadership of Dr. Liang. Today, he is considered an expert in the digital and model-based systems engineering fields. At present, Noguchi is Director of the Space Architecture Department in ETG. In this role, he imparts subject matter expertise and guidance to multiple enterprise-level systems engineering customers. Additionally, Noguchi supports major programmatic decisions by leading the development of analysis, design and decision support capabilities.

A Princeton University and University of California, Berkeley graduate, Noguchi is an active member in the AEA Amateur Radio Club and has taught Aerospace University courses. Off campus, he applies his technical background to the STEM focus at his daughter's grade school.

"I am truly honored to receive this award today, to have been chosen this year to represent the Asian Pacific American community here at Aerospace with the Dr. Alexander C. Liang Achievement Award," Noguchi said. "I feel very humbled to be recognized and to join the esteemed group of amazing recipients of this award over the years. I am particularly moved by the fact that the award bears Dr. Liang's name, and I hope I can live up to the standard that he set as a leader and a mentor."

James Liao started at Aerospace in 1999 as a member of the technical staff in the Guidance Analysis Department. Over time, he has steadily obtained increasing levels of responsibility due to his excellent contributions to Aerospace and its customers. Liao is now the Associate Principal Director of the Guidance and Control Subdivision in ETG's Vehicle Systems Division, leading over 100 engineers and advocating for the subdivision's talent. Throughout his time at Aerospace, Liao has been recognized with several certificates and letters of appreciation for his outstanding support to Aerospace programs.

Liao has been an AAPAA member since 2006, serving as AAPAA National President in 2018-2019. Furthermore, he is a key figure in Aerospace's engagement with the Society of Asian Scientists and Engineers, an Aerospace liaison to the University of California, Irvine, and a teacher's assistant at his local Chinese school—a role in which he has annually accumulated 120 volunteer hours during the last several years. Liao is a University of California, Los Angeles graduate.

"The Liang Award is very special to me and I'm very honored to be sharing this prestigious award with Michael and Ryan today. I know both of them well and am grateful to be in the same group," said Liao. "...I am very proud to be receiving this award and knowing that I will be contributing to [Dr. Liang's] legacy and passing on his teachings to the next generation of Asian Pacific American employees."

September 2021 Obituaries

September 01, 2021

Sincere sympathy is extended to the families of:

- **Art Arcand**, member of technical staff, hired June 27, 1968, retired Nov. 1, 1991, died Aug. 13, 2021
- **Johnnie Barber**, member of administrative staff, hired Jan. 15, 1979, retired Nov. 1, 1997, died July 27, 2021
- **James Beardall**, member of technical staff, hired Sept. 14, 1989, retired March 1, 1998, died Aug. 2, 2021
- **John Crawford**, member of technical staff, hired Oct. 19, 1981, retired March 1, 2008, died June 9, 2021
- **James Curtis**, member of technical staff, hired July 31, 1962, retired Oct. 1, 1993, died Aug. 9, 2021
- **Richard Donnelly**, member of technical staff, hired July 29, 1985, retired Sept. 1, 2014, died June 28, 2021
- **Penelope Gamble**, office of technical support, hired Oct. 3, 1988, retired Sept. 1, 1995, died July 27, 2021
- **William Gerhardt Jr.**, member of technical staff, hired Oct. 28, 1963, retired Jan. 1, 1998, died May 30, 2021
- **Gary Glass**, office of technical support, hired April 10, 2006, retired April 1, 2019, died July 29, 2021
- **Edwin Goldberg**, member of technical staff, hired Aug. 15, 1960, retired March 1, 1990, died June 21, 2021
- **Alan Groendycke**, member of technical staff, hired Nov. 6, 1978, retired Dec. 1, 1994, died Jan. 11, 2021
- **Pauline Kammer**, office of technical support, hired Oct. 15, 1960, retired Dec. 1, 1990, died Aug. 3, 2021
- **Carol Kinhead**, member of technical staff, hired July 21, 1980, retired Oct. 1, 2007, died Feb. 9, 2021
- **Joan Larsen**, office of technical support, hired April 23, 1979, retired March 1, 2008, died July 13, 2021
- **Roy Lee**, member of administrative staff, hired Oct. 28, 1960, retired April 1, 2004, died July 27, 2021
- **Albert Linquiti**, member of technical staff, hired Feb. 11, 1963, retired June 1, 1992, died Aug. 28, 2021
- **Malcolm Lock**, member of technical staff, hired Oct. 15, 1962, retired Feb. 1, 2001, died July 1, 2021
- **John Lubberke**, office of technical support, hired April 21, 1980, retired Feb. 1, 1994, died July 11, 2021
- **Michael Lyons**, office of technical support, hired Oct. 5, 1981, retired Feb. 1, 2008, died July 25, 2021
- **Wallace Mason**, office of technical support, hired April 16, 1987, retired Feb. 1, 2012, died Jan. 14, 2021
- **Roberta Moore**, member of technical staff, hired March 28, 1977, retired May 1, 1999, died March 5, 2021
- **Wade Rice Jr.**, member of technical staff, hired Sept. 24, 1962, retired June 1, 1985, died March 25, 2021

- **Mihkel Ruetmann**, member of technical staff, hired Sept. 3, 1963, retired Aug. 1, 1999, died May 18, 2021
- **Peter Soule**, member of technical staff, hired Oct. 9, 1972, retired March 1, 1994, died May 13, 2021
- **Shawn Toumodge**, member of technical staff, hired Aug. 19, 1985, retired Nov. 1, 2007, died Nov. 3, 2020

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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