Outlook

A&A 2025 Distinguished Alumni Nomination Form

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Google Forms

Thanks for filling out A&A 2025 Distinguished Alumni Nomination Form

Here's what was received.

Edit response

A&A 2025 Distinguished Alumni Nomination Form

Purpose: To honor an alumni of the William E. Boeing Department of Aeronautics & Astronautics at the University of Washington for substantial contributions to aerospace engineering in a spirit of intellectual curiosity, exploration, integrity, and service.

Eligibility: Nominees must have completed at least one degree from The William E. Boeing Department of Aeronautics & Astronautics (A&A) - bachelor, master, or PhD.

Nomination and Selection Process: Any member of the A&A Department and any alum can nominate an alum through this form. The A&A Community Committee will review all nominations and recommend the top three who most strongly meet the selection criteria. The final honoree will be selected by the Department Chair in consultation with the Department Faculty based on the rubric assessment submitted by the Community Committee.

Selection Criteria: The final honoree will be selected for their sustained contributions in the following categories:

- Recognized for advancing our understanding of the fundamental concepts, technologies, applications of aerospace engineering, and whose work has had a positive impact on society.

- Commitment to the highest ethical standards and professional integrity.
- Inspirational and collaborative leadership.
- Demonstrated commitment to inclusivity and support for marginalized or underrepresented groups in a profession, organization, or community.
- Potential for engagement with our department and extended community.

Please fill out as much as you can. All fields are not required.

Deadline: February 7

Email *

Your Name: *

Alan R. Mullay - UW supporter and retired Boeing Executive Vice-President, President and CEO of Boeing Commercial Airplanes, President of Boeing Defense and Space, and the President and CEO of Ford Motor Company.

Role: *

- ○ Alumni
- ○ Current Student
- ○ Faculty
- ○ Staff
- ◉ Other: Nominators are friends and Boeing coworkers who worked for and with Charlie for years experiencing many examples of his leadership and mentoring capabilities. Many other former Boeing VPs, Directors, managers, engineers benefited from working for and with Charlie.

Name of Nominee: *

Charles R. Higgins, UW BSAA 1971 and retired former Boeing Chief Project Engineer, and multiple Vice President assignments – see following writeup

Relationship to Nominee:

(Friend, Coworker, Mentor, etc)

Nominators are friends and Boeing coworkers who worked for and with Charlie for years experiencing many examples of his leadership and mentoring capabilities. Many other former Boeing VPs, Directors, managers, engineers benefited from working for and with Charlie.

Nominee's A&A degree / graduation year (if known)

UW BSAA 1971

Summary of Nominee's Bio / Experience: *

Charlie led many significant technology, safety and security enhancements over a lengthy career with Boeing Commercial Airplanes. Some examples include: • As Boeing Commercial Airplanes technology leader in the 1980s, Charlie led worldwide working together with industry and government to address significant safety and operational challenges such as “wind shear” and the impact of deicing fluids on 737 takeoff safety. Improvements were made in airplane technology, airplane operations, and support products and training with significant reductions in the number and frequency of aviation accidents from these situations. • Charlie’s work as 777 Chief Project Engineer in the 1990s included leadership of advancements in: o Airplane performance – Aerodynamics, weight, and noise o Integrated airplane test program that included: Comprehensive lab tests involving 70+ labs testing individual components, sub-systems, complete airplane systems. The industry’s first Systems Integration Lab to test full airplane level implementation and integration about 1 year before the first airplane was assembled. Previously these tests were first accomplished on airplanes. Extensive flight tests on 9 airplanes conducting worldwide tests of 777’s powered by Pratt and Whitney, GE and Rolls Royce engines. Resulting airplane maturity supported key program and airline “service ready” objectives. o Airplane certification advancements included the first concurrent FAA/JAA certification, and full airplane certification per FAR 25.1309. o Advancements in approval for Extended Range Operations (ETOPS) with the first full 180-minute ETOPS approval at introduction into airline service. This included lab, ground and flight tests of engines and ETOPS critical systems. The 1000 operational cycle ETOPS airplane flight demonstration programs for each engine type included 90 airplane cycles (~400 flight hours) in conjunction with airline flight and ground personnel. o 777 Service Ready

program objectives were met ensuring airplane, support products and training programs helped airlines achieve high schedule reliability at initial delivery and introduction into revenue service. • Charlie's work as Vice President for airplane and aviation safety – late 1990s included examples such as: o Charlie led Boeing work with government and industry to investigate and improve aviation safety in response to worldwide accidents such as US Air Flight 427, Birgenair 301, TWA 800, Korean Air 801, Silk Air 185, and Egyptair 990. o Charlie led development of pro-active government/industry aviation safety risk management working together processes that was formalized in programs such as the 2008 Collier trophy winning Commercial Aviation Safety Team (CAST) – see https://icao.usmission.gov/fact-sheet-commercial-aviation-safety-team/ □ Under Charlies leadership support teams such as the following worked within CAST: • Boeing co-led "Joint Safety Analysis Teams" (JSAT) to identify lessons learned from aviation accidents and incidents. • Boeing participated in "Joint Safety Implementation Teams" (JSIT) to develop and coordinate implementation of safety enhancements • Boeing airplanes and support programs incorporated many improvements resulting from CAST. o Charlie led government and industry working together for the IICAO Global Aviation Safety Plan (GASP) – see https://www.icao.int/safety/GASP/Pages/Home.aspx □ GASP participants work to "…continually reduce fatalities, and the risk of fatalities…including … a risk-based approach to managing safety…a framework in which regional and national aviation safety plans…are developed and implemented." o Charlie's work as Vice President for Aviation safety and security – post 9-11-2001 included examples such as: □ Charlie led Boeing working together with government and industry in response to the 9-11 terrorist attacks. Key results included: • Rapid design, development, manufacture, test, certication and implementation of responses to the attack including: o Participation in the US DOT sponsored "Rapid Response Team" o Coordination of worldwide enhancements of flight deck security – examples incorporated and made available for Boeing products included flight deck doors, enhanced video surveillance, transponder upgrades, increased crew communication, and improved airline training. □ Charlie led government/industry working together to apply risk management for US and worldwide aviation security. Examples of these classified Secret programs include: • The Risk Management Working Group chartered under the DHS Aviation Sector Coordinating Council to "…work together to evaluate risk reduction potential and operational/economic impacts of potential aviation security measures." • US Commercial Aviation Partnership (USCAP) to provide operational and economic impact assessments on commercial aviation for aviation security decision makers. Boeing developed and operated the analysis methodology and evaluation results for this effort at no cost to the government or industry. • Risk Management Analysis Process (RMAP) analysis methodology/tools were developed and operated by Boeing at no cost to government or industry to work together to conduct classified secret analyses of risk reduction potential of potential aviation security measures. o Charlie's work as Vice President Advanced Programs and Technology – Charlie led working together in the 2000's with all elements of the Boeing Company and government/industry to develop and implement improved operations/economics and safety/security of in service, new production and future products and services.

Why should your nominee be awarded as an A&A Distinguished Alum?

His career long contributions are extraordinary and provide worldwide operations/economic, technology, safety, and security benefits for people, and for current and future aviation products and services. Recognition of Charlie's years of unique contributions to advancement of aviation technology, safety and security; and an example to students of how working together with industry and government can make a significant difference in the lives of people worldwide.

How has your nominee been recognized for advancing our understanding of the fundamental concepts, technologies, applications of aerospace engineering? How has your nominee's work had a positive impact on society? (optional)

Charlie's accomplishments have been recognized within Boeing and by multiple industry and government organizations. Some examples include: • Charlie's leadership on wind shear was recognized by: o Boeing "Presidents Award for Contributions to Aviation Safety… through participation in development of the FAA Windshear Training Aid…" o Congressional testimony on Oct 20, 1988 by Norman Minetta with "…evidence that new windshear training techniques…have been instrumental in avoiding hazardous wind-shear conditions…the windshear training aid team… Boeing: Charles R. Higgins, program manager…" o Charlies' wind shear contributions were recognized by multiple SAE International technical papers – see http://profiles.sae.org/c._r._higgins/; see https://www.sae.org/publications/technical-papers/content/861699/#:~:text=Charles%20R.%20Higgins,%20Edward%20L.%20Baker; see https://www.sae.org/publications/technical-papers/content/872441/; • Charlie's leadership capabilities were recognized by Boeing sponsorship for his participation in the Sloan Executive Management Program. Charlie graduated with an MIT Masters in Management from the Sloan program in 1991. Charlie was then promoted to multiple key engineering and executive responsibilities. • Charlie's "…"distinguished service in achieving safer utilization of aircraft…" was recognized by the 1991 Aviation Week & Space Technology Distinguished Service Award – see https://flightsafety.org/foundation/aviation-awards/archived-aviation-awards/aviation-week-space-technology-distinguished-service-award/ • Charlie's 777 contributions were significant in Boeing receiving the 1995 Collier trophy for "…design, manufacturing and introducing into service the world's most advanced commercial transport – the Boeing 777." • Charlie's leadership helped CAST achieve the 2008 Collier Trophy for "…achieving unprecedented safety level in US commercial airline operations by reduction risk of a fatal airline accident by 83 percent, resulting in two consecutive years of no scheduled commercial airline fatalities." • Charlie's leadership was recognized by many positions on government and industry advisory boards. Charlie's work has measurably improved worldwide commercial aviation operations, economics, safety and security. See examples included in this application.

How has your nominee been committed to the highest ethical standards and

professional integrity? (optional)

Charlie has always been driven by his “moral compass” and inspires others to work toward the objectives of what is right, and implementing “working together” practices and processes.

How has your nominee contributed to inspirational and collaborative leadership? (optional)

Charlie helped Boeing, government and industry personnel understand the importance of motivations and objectives, and working together teams, plans and processes that support effective and efficient achievements. Many of these projects involved thousands of people around the world.

How has your nominee demonstrated commitment to inclusivity and support for marginalized or underrepresented groups in a profession, organization, or community? (optional)

Charlie worked effectively with people of all nationalities, groups, heritages, ethnic backgrounds, etc. to help achieve common objectives for improvement. Many of these efforts involved thousands of people around the world.

How does your nominee have potential for engagement with our department and extended community? Do they participate in other comparable communities? (optional)

Charlie’s examples of accomplishments provide incentive for students and graduates to work together to make significant impacts on people worldwide. Improvements in aeronautical technology, methods, and processes can continue to enhance operations, safety, security and quality of life around the world. Charlie’s health imposes limitations on how he can personally engage with UW AA department/community, but he has engaged recently via Zoom with UW students. In addition, the people listed as sponsors of this nomination (Lars, Alan, Chet, and Ron) can provide personal support if helpful. See following note from Alan Mulally: Amy Sprague UW Aero and Astronautics Subject: My support for Nomination of Charles R. Higgins for A&A Distinguished Alum I worked closely with Charlie Higgins for many years at Boeing, and strongly support his nomination for UW A&A Distinguished Alum. Examples of the work Charlie and I accomplished by working together are described very well in the attached nomination word file. I would be happy to engage with the A&A department and extended community to share some of our accomplishments, work experiences, and how Charlie’s extraordinary leadership has produced worldwide benefits for aviation, engineering, safety and security. Please let me

know if/how I can help. Thank you for you continuing wonderful Aeronautics and Astronautics education! Alan R Mulally

From: Linda and Ron Robinson
Sent: Friday, February 7, 2025 11:02 AM
To: UW Aero & Astro
Cc: Lars Andersen, Chet and Kathy Ekstrand, Alan Mulally
Subject: Re: Reminder! By Friday: Nominate our next A&A Distinguished Alum!

Amy,

Sorry to provide late input, but i just received copies of several of the award certificates for Charlie Higgins' nomination for UW AA distinguished alumni.

Attached to this email are the following additions to the previously submitted materials:

- 1986 Aviation Week and Space Technology Laurels page recognizing - "Charles R. Higgins, Alan R. Mulally and Simon P. Scott of the Boeing wind shear team for establishing a base for wind shear study and effective pilot training."
- 1995 American Institute of Aeronautics and Astronautics (AIAA) Edward C. Wells Technical Management Achievement Award for 1995 to Charles R. Higgins Chief Project Engineer, 777 Aircraft Design Boeing Commercial Airplane Group "For leading the Boeing certification effort which resulted in the achievement of 777 concurrent FAA/JAA certification and FAA approval for 777 extended range twin-engine operations at service entry."
- 1997 Boeing Commercial Airplane Group "President's Award for Contributions to Aviation Safety" to Charlie. Higgins "... In recognition of your outstanding contribution to aviation safety through participation in development of the FAA Windshear Training Aid...have resulted in a very significant ten-year reduction in windshear-related accidents and saving of many lives. The entire aviation industry and the traveling public are grateful for your efforts in improving aviation safety..."

Thanks again for you patience with the multiple communications, and consideration of Charlie for this important recognition.

Have a great day,
Ron Robinson

Laurels for 1986

The following individuals have been nominated by the editors of AVIATION WEEK & SPACE TECHNOLOGY for their contributions to aerospace in 1986:

Homage is paid to the crew of the space shuttle Challenger, who died because elements of their support team grew complacent about the unforgiving realities of space flight. The deaths of astronauts **Dick Scobee, Mike Smith, Judy Resnik, Ellison Onizuka, Ron McNair, Gregory Jarvis** and **Christa McAuliffe** remind us that progress can still extract a heavy toll.

William P. Rogers, chairman, and his 12-member Presidential Commission for their investigation of the space shuttle Challenger accident. The diverse group of professors and airline managers, a newsman, a general and two astronauts developed an intelligent and unprejudiced account of the Challenger accident and recommendations to prevent a recurrence.

Jeff McCoy, area supervisor, Tracon, Chicago O'Hare International, for directing **USAF Capt. Vincent Amato** as he skillfully piloted his flamed-out F-16C through overcast to a safe landing at Glenview Naval Air Station.

Charles R. Higgins, Alan R. Mulally and **Simon P. Scott** of the Boeing wind shear team, for establishing a base for wind shear study and effective pilot training.

Peter Levene, Chief of Defense Procurement for the British Ministry of Defense, for revising the ministry's contracting procedures to accentuate competitive procurement.

Robin Beard, assistant secretary general of NATO, for leadership in multinational cooperation on arms procurement.

William F. Ballhaus, Jr., Victor L. Peterson and **F. Ron Bailey,** of NASA's Ames Research Center, for spearheading the Numerical Aerodynamic Simulator, which uses supercomputers for advanced computational fluid dynamics.

To the memories of **Marcel Dassault, Claudius Dornier, Charles "Chuck" Sewell, Robert F. Six, Rene Ravaud** and **Edward C. Wells** for lifetimes of aviation accomplishments and the legacies they leave to the aviation community.

British Aerospace Experimental Aircraft Program team including **John Vincent, John Lowery, Eddie Daley, Colin Bagwell** and **Peter Orme,** for designing, building and starting flight tests of the EAP demonstrator in less than four years.

Dassault-Breguet's Rafale A team, including **Bruno Revellin-Falcon, Jean-Claude Hironde** and **Guy Mitaux-Maurouard** for their rapid-paced development and flight testing of the Rafale A demonstrator aircraft.

Prof. Matthew Kabrisky and his Air Force Institute of Technology electrical engineering graduate students for researching pattern recognition in support of Air Force Wright Aeronautical Laboratories programs in expert systems.

Jean-Jacques Dordain, for advancing Europe's space technology as coordinator of space activities at France's Onera research agency, leading the Ariane V15 accident investigation and heading ESA's Microgravity Promotion and Utilization Dept.

Sir John Cuckney, chairman of Britain's Westland helicopter company, who led it through a fierce political dispute, bringing it from near-bankruptcy to profitability in just over a year.

Frederic d'Allest, head of the French CNES space agency, for leadership in integrating the Hermes manned spaceplane program as a European Space Agency cooperative project.

The Interagency Consultative Group, led by **Roger M. Bonnet,** European Space Agency; **Roald Z. Sagdeev,** Intercosmos; **Minoru Oda,** Japan's Institute of Space and Astronautical Science, and **Burton I. Edelson,** NASA, for the international Halley's Comet mission and for expanding the group's activities into new joint science missions. Also, the **ESA Giotto team,** led by **Ruedeger Reinhard,** for Giotto's flyby of Halley's Comet and the images achieved by principal investigator **H. U. Keller.**

Thomas V. Jones, chairman and chief executive officer of Northrop Corp., for persevering with the company-funded F-20 Tigershark program until the Air Force rejected it in the Air Defense Fighter competition.

Col. Albert C. Piccirillo, USAF, former program manager of the advanced tactical fighter (ATF) for setting, explaining and meeting the goals of the new fighter development effort.

Christopher Podsiadly, 3M director of science research laboratory, for persistence in getting a 62-flight, 10-year agreement with NASA for commercial research on shuttle and for keeping senior 3M managers enthused about commercial space.

Steven G. Rothmeier, chairman and chief executive officer, Northwest Airlines, for buying Republic Airlines, a half interest in Trans World Airlines' Pars computer reservation service and Airbus Industrie A320s in moves to revitalize Northwest.

Air Force Secretary Pete Aldridge for outspoken leadership and aggressive initiatives that will help recover both the U.S. civil and military space programs.

Richard P. Laeser, former Voyager spacecraft project manager at Jet Propulsion Laboratory; **Edward C. Stone,** project scientist and their **support teams** for the successful flyby of the planet Uranus.

USAF Lt. Col. Mike Rendine of the Strategic Defense Initiative Delta booster managers **Bill Russell,** NASA, and **Louis Rubera,** McDonnell Douglas, and **Mike Griffin** and **John Dassoulas** of the Johns Hopkins Applied Physics Lab for execution of the highly successful SDI Delta booster mission.

The **Soviet Mir team** for developing the world's first truly modular space station and cosmonauts **Leonid Kizim** and **Vladimir Solovyev** for their Soyuz T-15 mission, the first to demonstrate crew transfer between two stations, the Mir and Salyut 7.

Lew Allen of Jet Propulsion Laboratory, **Pete Smith** and **Sam Keller** of NASA and **Mike Michaud** of the U.S. State Dept. for helping achieve a new U.S./Soviet space agreement that could lead to joint exploration of Mars.

For years of diligent work and leadership, culminating in the landmark military reform legislation of 1986, **David Packard, Sens. Barry Goldwater, Sam Nunn, William S. Cohen** and **Carl Levin** and **Reps. Nicholas Mavroules, Bill Nichols, Les Aspin** and **Charles E. Bennett** and **their staffs.**

Lawrence H. Westerlund, vice president for engineering and operations at Comsat Communications Service Div., for the Comsat Maneuver control technique that can double communications satellite life.

Anthony J. DeLuca, competition advocate for the Air Force Systems Command, for doubling the dollar amount of contracts competitively awarded by Air Force Systems Command.

Tulinda Deegan, Regional Airline Assn. vice president, for efforts in behalf of handicapped airline passengers.

USAF Capt. Marc Felman, KC-10 commander, **USMC Capt. Jerry Chase,** KC-130 commander and **their flight and ground crews,** for launching in near zero-zero weather to refuel USMC A-4M Skyhawks caught with minimum fuel in deteriorating weather over the Azores.

Don Latham, assistant secretary of Defense for command, control, communications and intelligence, for energetic efforts to carry out President Reagan's early mandate to modernize the nation's vital C-Cubed facilities and capabilities.

—DONALD E. FINK/New York

CHARLES R. HIGGINS

American Institute of Aeronautics and Astronautics
Pacific Northwest Section

presents the

Edward C. Wells
Technical Management Achievement Award

for 1995 to

Charles R. Higgins
Chief Project Engineer, 777 Airplane Design
Boeing Commercial Airplane Group

For leading the Boeing certification effort which resulted in the achievement of 777 concurrent FAA/JAA certification and FAA approval for 777 extended-range twin-engine operations at service entry.

Presented on this 21st day of June, 1995.

D. T. Nelson
Chairman,
Honors and Awards Committee

D. M. Elgenfritz
Chairman,
Pacific Northwest Section

The Boeing Commercial Airplane Group

President's Award for Contributions to Aviation Safety

Is Proudly Presented to

Charlie Higgins

In recognition of your outstanding contribution to aviation safety through participation in development of the FAA Windshear Training Aid. The contributions of you and others in developing this training aid have resulted in a very significant ten-year reduction in windshear-related accidents, and the saving of many lives.

The entire aviation industry and the traveling public are grateful for your efforts in improving aviation safety.

Ron Woodard
President
Boeing Commercial Airplane Group

July 29, 1997

BOEING

From: Linda and Ron Robinson
Sent: Thursday, February 6, 2025 4:11 PM
To: UW Aero & Astro
Cc: Lars Andersen, Chet and Kathy Ekstrand, Alan Mulally
Subject: Re: Reminder! By Friday: Nominate our next A&A Distinguished Alum!

Amy,

I am enclosing copies of the word file and background information used to input the nomination documents for Charlie Higgins cosponsored by Lars, Chet, Alan and myself. Since the online web site only allowed a single nominator name entry, i made 4 separate entries - one for each of us. i hope this isn't too much confusion, work, etc. for you and UW.

I am attaching the word file nomination coordinated with the nominators, a copy of the Congressional record testimony on wind shear recognizing Charlie's contributions, Charlies Sloan Management certificate, a copy of the Boeing presidents award (although this certificate is for Chet, a similar was given to Charlie), and 2 working together summary files.

in addition, Charlies contributions are recognized in the email Alan sent previously - see

- Alan Mulally - Engineer of the Year, Design News)

Please let any of us know if/how we can help consideration of Charlie for this well - deserved recognition.

Thanks and have a great evening,
Ron Robinson

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

UPON THE RECOMMENDATION OF THE FACULTY
HEREBY CONFERS ON

Charles Raymond Higgins

THE DEGREE OF

MASTER OF SCIENCE
IN
MANAGEMENT

IN RECOGNITION OF PROFICIENCY IN THE GENERAL AND THE SPECIAL STUDIES AND EXERCISES PRESCRIBED BY SAID INSTITUTE FOR SUCH DEGREE GIVEN THIS DAY UNDER THE SEAL OF THE INSTITUTE AT CAMBRIDGE IN THE COMMONWEALTH OF MASSACHUSETTS

JUNE 3, 1991

SECRETARY

PRESIDENT

A&A 2025 Distinguished Alumni Nomination Form

Purpose: To honor an alumni of the William E. Boeing Department of Aeronautics & Astronautics at the University of Washington for substantial contributions to aerospace engineering in a spirit of intellectual curiosity, exploration, integrity, and service.

Your Name:*

Lars Q. Andersen - UW BSAA 1968 grad, 2011 UW AA distinguished alumni award and retired former Boeing Vice President

Chester L. Ekstrand - Retired former Boeing VP and Director Flight Crew Operations

Alan R. Mullay - UW supporter and retired Boeing Executive Vice-President, President and CEO of Boeing Commercial Airplanes, President of Boeing Defense and Space, and the President and CEO of Ford Motor Company.

Ronald H. Robinson - UW BSAA 1968 grad and retired former Boeing Director.

Name of Nominee:*

Charles R. Higgins, UW BSAA 1971 and retired former Boeing Chief Project Engineer, and multiple Vice President assignments – see following writeup

Relationship to Nominee:

Nominators are friends and Boeing coworkers who worked for and with Charlie for years experiencing many examples of his leadership and mentoring capabilities. Many other former Boeing VPs, Directors, managers, engineers benefited from working for and with Charlie.

Nominee's A&A degree / graduation year (if known)

UW BSAA 1971

Summary of Nominee's Bio / Experience: *

Charlie led many significant technology, safety and security enhancements over a lengthy career with Boeing Commercial Airplanes. Some examples include:

- As Boeing Commercial Airplanes technology leader in the 1980s, Charlie led worldwide working together with industry and government to address significant safety and operational challenges such as “wind shear” and the impact of deicing fluids on 737 takeoff safety. Improvements were made in airplane technology, airplane operations,

and support products and training with significant reductions in the number and frequency of aviation accidents from these situations.

- Charlie's work as 777 Chief Project Engineer in the 1990s included leadership of advancements in:
    - Airplane performance – Aerodynamics, weight, and noise
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        - Extensive flight tests on 9 airplanes conducting worldwide tests of 777's powered by Pratt and Whitney, GE and Rolls Royce engines. Resulting airplane maturity supported key program and airline "service ready" objectives.
    - Airplane certification advancements included the first concurrent FAA/JAA certification, and full airplane certification per FAR 25.1309.
    - Advancements in approval for Extended Range Operations (ETOPS) with the first full 180-minute ETOPS approval at introduction into airline service. This included lab, ground and flight tests of engines and ETOPS critical systems. The 1000 operational cycle ETOPS airplane flight demonstration programs for each engine type included 90 airplane cycles (~400 flight hours) in conjunction with airline flight and ground personnel.
    - 777 Service Ready program objectives were met ensuring airplane, support products and training programs helped airlines achieve high schedule reliability at initial delivery and introduction into revenue service.
- Charlie's work as Vice President for airplane and aviation safety – late 1990s included examples such as:
    - Charlie led Boeing work with government and industry to investigate and improve aviation safety in response to worldwide accidents such as US Air Flight 427, Birgenair 301, TWA 800, Korean Air 801, Silk Air 185, and Egyptair 990.
    - Charlie led development of pro-active government/industry aviation safety risk management working together processes that was formalized in programs such as the 2008 Collier trophy winning Commercial Aviation Safety Team (CAST) – see https://icao.usmission.gov/fact-sheet-commercial-aviation-safety-team/
        - Under Charlies leadership support teams such as the following worked within CAST:

- Boeing co-led “Joint Safety Analysis Teams” (JSAT) to identify lessons learned from aviation accidents and incidents.
- Boeing participated in “Joint Safety Implementation Teams” (JSIT) to develop and coordinate implementation of safety enhancements
- Boeing airplanes and support programs incorporated many improvements resulting from CAST.

- Charlie led government and industry working together for the IICAO Global Aviation Safety Plan (GASP) – see https://www.icao.int/safety/GASP/Pages/Home.aspx
  - GASP participants work to “…continually reduce fatalities, and the risk of fatalities…including … a risk-based approach to managing safety…a framework in which regional and national aviation safety plans…are developed and implemented.”
- Charlie’s work as Vice President for Aviation safety and security – post 9-11-2001 included examples such as:
  - Charlie led Boeing working together with government and industry in response to the 9-11 terrorist attacks. Key results included:
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and operated the analysis methodology and evaluation results for this effort at no cost to the government or industry.

- Risk Management Analysis Process (RMAP) analysis methodology/tools were developed and operated by Boeing at no cost to government or industry to work together to conduct classified secret analyses of risk reduction potential of potential aviation security measures.

- Charlie's work as Vice President Advanced Programs and Technology – Charlie led working together in the 2000's with all elements of the Boeing Company and government/industry to develop and implement improved operations/economics and safety/security of in service, new production and future products and services.

Why should your nominee be awarded as an A&A Distinguished Alum?

His career long contributions are extraordinary and provide worldwide operations/economic, technology, safety, and security benefits for people, and for current and future aviation products and services.

Recognition of Charlie's years of unique contributions to advancement of aviation technology, safety and security; and an example to students of how working together with industry and government can make a significant difference in the lives of people worldwide.

How has your nominee been recognized for advancing our understanding of the fundamental concepts, technologies, applications of aerospace engineering?

Charlie's accomplishments have been recognized within Boeing and by multiple industry and government organizations. Some examples include:

- Charlie's leadership on wind shear was recognized by:
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  - Charlies' wind shear contributions were recognized by multiple SAE International technical papers – see http://profiles.sae.org/c._r._higgins/; see https://www.sae.org/publications/technical-papers/content/861699/#:~:text=Charles%20R.%20Higgins,%20Edward%20L.%2

0Baker; see https://www.sae.org/publications/technical-papers/content/872441/;

- Charlie's leadership capabilities were recognized by Boeing sponsorship for his participation in the Sloan Executive Management Program. Charlie graduated with an MIT Masters in Management from the Sloan program in 1991. Charlie was then promoted to multiple key engineering and executive responsibilities.
- Charlie's "…"distinguished service in achieving safer utilization of aircraft…" was recognized by the 1991 Aviation Week & Space Technology Distinguished Service Award – see https://flightsafety.org/foundation/aviation-awards/archived-aviation-awards/aviation-week-space-technology-distinguished-service-award/
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- Charlie's leadership was recognized by many positions on government and industry advisory boards.

How has your nominee's work had a positive impact on society? (optional)

Charlie's work has measurably improved worldwide commercial aviation operations, economics, safety and security. See examples included in this application.

How has your nominee been committed to the highest ethical standards and professional integrity? (optional)

Charlie has always been driven by his "moral compass" and inspires others to work toward the objectives of what is right, and implementing "working together" practices and processes.

How has your nominee contributed to inspirational and collaborative leadership? (optional)

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How has your nominee demonstrated commitment to inclusivity and support for marginalized or underrepresented groups in a profession, organization, or community? (optional)

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Charlie's examples of accomplishments provide incentive for students and graduates to work together to make significant impacts on people worldwide. Improvements in aeronautical technology, methods, and processes can continue to enhance operations, safety, security and quality of life around the world.

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> *UW Aero and Astronautics*
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> *Subject: My support for Nomination of Charles R. Higgins for A&A Distinguished Alum*
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> *I worked closely with Charlie Higgins for many years at Boeing, and strongly support his nomination for UW A&A Distinguished Alum.*
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> *Please let me know if/how I can help.*
>
> *Thank you for you continuing wonderful Aeronautics and Astronautics education!*
> *Alan R Mulally*

CONGRESSIONAL RECORD

FAA WINDSHEAR TRAINING AID

HON. NORMAN Y. MINETA
OF CALIFORNIA
IN THE HOUSE OF REPRESENTATIVES

Thursday, October 20, 1988

Mr. MINETA. Mr. Speaker, 3 years ago, on October 30, 1985, the Subcommittee on Aviation held a hearing on the status of Federal programs to improve the detection of hazardous aviation weather. The hearing also focused on the need for improved training of flight crews and procedures to avoid windshear conditions. We now have evidence that new windshear training techniques recently developed by a government/industry team have been instrumental in avoiding hazardous windshear conditions and preventing possible accidents. Several organizations and individuals were involved in this successful program, known as the FAA windshear training aid, and they are identified later in this tribute to the cooperation between government and industry to prevent accidents.

In July of this year, FAA controllers provided timely windshear information derived from terminal Doppler weather radars at Denver Stapleton Airport to five United Airlines flight crews. Each flight crew was able to use this unique information to immediately apply the procedures they had learned from the new FAA windshear training aid to avoid the windshear hazards.

As chairman of Subcommittee on Aviation, I am pleased that the FAA and industry have developed and implemented this national program. The international aviation community is also adopting the new training program for windshear avoidance.

The development of the FAA windshear training aid represents an excellent example of timely and effective government/industry cooperation in tackling a major aviation safety issue. The windshear training aid was developed by a consortium of aviation experts following an extensive industry review process which produced an industrywide consensus on all technical, piloting, and training issues. In addition, all recommendations were substantiated by extensive technical evaluations. The windshear training aid development process is widely regarded as a model for use in tacking other aviation safety issues, including human factors and collision avoidance.

Microburst windshear is the primary, single contributing factor in air carrier accidents that have occurred during the takeoff and landing phases of flight. Congressional concern following a 1982 accident in New Orleans resulted in a National Academy of Sciences-commissioned study by the National Research Council [NRC] which assessed the hazards of low-altitude windshear on flight takeoffs and landings. One of the primary recommendations of the NRC study was to establish an integrated windshear program. The group specifically recommended in its final report, "Low-Altitude Windshear and Its Hazard to Aviation," that the FAA and the industry should prepare and disseminate as widely as possible updated and authoritative information on windshear to better educate pilots and controllers.

In response to the NRC recommendations and the needs of the aviation industry, the Boeing Co., entered into discussions with the FAA resulting in a Boeing proposal for a program to develop a windshear training aid. In November 1985, the FAA contracted with Boeing as primary contractor; and McDonnell Douglas, Lockheed, United Airlines, Aviation Weather Associates, and Helliwell Inc. as subcontractors, to produce the windshear training aid. The 15-mongth project was completed in February 1987, on schedule and within budget and provided the FAA with four documents and two videotapes which provide the basic resources for a comprehensive windshear training program.

The windshear training aid is an effective means of training flight crews to minimize the windshear threat through avoidance and the use of cockpit recognition and recovery techniques. It is applicable to all current Boeing commerical jet transport models as well as those manufactured by McDonnel Douglas and Lockheed. Furthermore, it represents an industrywide consensus on all major training, piloting, and technical issues as a result of its extensive review process that included representatives from the airlines, the pilot community, research organizations, as well as Government regulatory and safety agencies. Extensive technical evaluations were conducted to substantiate all recommendations. Other transport aircraft manufacturers, including Airbus, British Aerospace, and Fokker, have also endorsed the training aid and are currently in the process of incorporating their own unique airplane recommendations.

I am pleased to pay tribute to the windshear training aid development team which was comprised of the following individuals:

FAA: George C. "Cliff" Hay, contract manager; and Herbert Schlickenmaier, assistant contract manager.

Boeing: Charles R. Higgins, program manager; Chester L. Ekstrand, chief training pilot; and Edgars A. Kupcis, principal investigator.

Douglas: J. Samuel Clauzel, chief pilot, standards and safety; and David A. Williams, Assistant chief pilot.

Lockheed: Ralph C. Cokeley, pilot, operations; and David Gill, manager, aerodynamics.

United Airlines: David A. Simmon, director of safety; Robert P. Smith, 727 flight manager; and Robert L. Ireland, technical projects manager.

Aviation Weather Associates: Dr John McCarthy, meteorologist.

Helliwell: James D. Helliwell, video producer.

I applaud their dedication, expertise and hard work.

From: Alan Mulally
Sent: Tuesday, February 4, 2025 9:59 PM
To: UW Aero & Astro
Cc: Linda and Ron Robinson, Lars Andersen, Chet and Kathy Ekstrand
Subject: Re: Reminder! By Friday: Nominate our next A&A Distinguished Alum!

Hello Amy!

Would just like to share with you our excitement for supporting the UW and Charlie Higgins as expressed so well by Ron Robinson as follows!

"We are in final coordination of an updated nomination for recognition for Charlie Higgins (BSAA 1971) as UW AA Distinguished alum for the significant aviation, technology and safety/security impacts Charlie made within Boeing and his worldwide impacts from working together with government and industry."

Also note, in the attached Engineer of the Year article, the inclusion Charlie Higgins as a key engineering and program manager on the development our Boeing 777 commercial airplane family, which is considered the very best safe and efficient airplane family in the world! And Charlie was a key leader contributor!

Thank you so much for your and the UW consideration of Charlie!

Am ready to support you as you wish!

We all thank you Amy!

Alan Mulally

Amy Sprague
UW Aero and Astronautics

Subject: My support for Nomination of Charles R. Higgins for A&A Distinguished Alum

I worked closely with Charlie Higgins for many years at Boeing, and strongly support his nomination for UW A&A Distinguished Alum.

Examples of the work Charlie and I accomplished by working together are described very well in the attached nomination word file.

I would be happy to engage with the A&A department and extended community to share some of our accomplishments, work experiences, and how Charlie's extraordinary leadership has produced worldwide benefits for aviation, engineering, safety and security.

Please let me know if/how I can help.

Thank you for you continuing wonderful Aeronautics and Astronautics education!
Alan R Mulally

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We all thank you Amy!

Alan Mulally

From: Linda and Ron Robinson
Date: Tuesday, February 4, 2025 at 11:23 AM
To: UW Aero & Astro
Cc: Lars Andersen, Alan Mulally, Chet and Kathy Ekstrand
Subject: Re: Reminder! By Friday: Nominate our next A&A Distinguished Alum!

Amy,

Lars Andersen and I are UW AA alums who graduated in 1968 with BSAA.

We both had long Boeing careers that benefited from our time at UW.

Lars was selected as the 2011 UW distinguished alum, and a recipient of the 2024 MOF pathfinders award - see https://www.aa.washington.edu/news/article/2024-10-11/alum-lars-andersen-receives-prestigious-museum-flight-pathfinder-award

We are in final coordination of an updated nomination for recognition for Charlie Higgins (BSAA 1971) as UW AA Distinguished alum for the significant aviation, technology and safety/security impacts Charlie made within Boeing and his worldwide impacts from working together with government and industry.

Lars and I both worked for, and with Charlie Higgins. Charlie helped us (and others within Boeing, government and industry) in many ways. He is an excellent mentor - many other former Boeing VP's and Directors benefitted from working with and for Charlie.

Examples of recognition of Charlie's contributions by some others is reflected in endorsements of Charlie's nomination from Alan Mulally and Chet Ekstrand.

I am sure you know of Alan's support of UW AA and his accomplishments including retired Boeing Executive Vice-President, President and CEO of Boeing Commercial Airplanes, and President of Boeing Defense and Space, and the President and CEO of Ford Motor Company.

Chet Ekstrand is one example of other execs within Boeing who worked closely with Charlie. Chet retired as a former Boeing VP and Director of Flight Crew Operations.

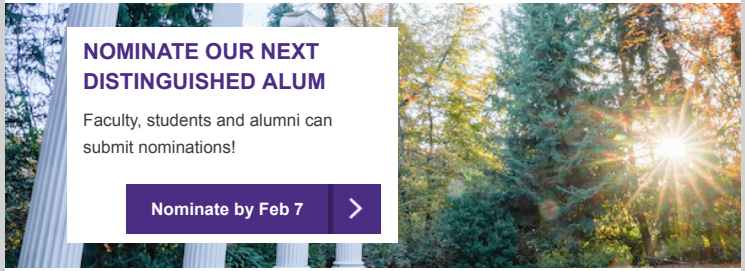
Fyi - Charlie is ill but has interacted recently (by Zoom i believe) with at least one UW class/students. Those of us submitting and/or endorsing the nomination for Charlie can provide additional support for UW if needed. See attached note from Alan Mulally.

I will attempt to enter the fully coordinated package of information into the online portal but I am not sure it will properly include pertinent information. If OK with you, i will attempt to use the input form and send by email to you the larger package we have developed.

Thanks for you help and sorry for inconvenience for you,
Ron Robinson

UNIVERSITY of WASHINGTON

WILLIAM E. BOEING DEPARTMENT OF AERONAUTICS & ASTRONAUTICS



We are now accepting YOUR nominations for the 2025 Distinguished Alum!
Do you know an extraordinary UW Aero & Astro alum who has shaped our field through innovation, leadership, and service? Someone whose achievements make you proud to be part of our aerospace community? Now is your chance to recognize their impact.

We're seeking nominations for alumni who exemplify substantial contributions to aerospace engineering through intellectual curiosity, exploration, integrity, and service. Your nomination could shine a spotlight on their remarkable journey and inspire the next generation of aerospace leaders.

Meet A&A's 2024 Distinguished Alum: Lt. Gen. John Shaw

Lt. Gen. John Shaw, U.S. Space Force, Retired (M.S. '91) was the 2024 A&A Distinguished Alum. His impressive career spans over three decades in the U.S. Air Force and U.S. Space Force, where he emerged as a thought leader in national security and space policy.

Shaw rose through the ranks, ultimately serving as the Commander of 14th Air Force and the Combined Force Space Component Command at Vandenberg Space Force Base. In this pivotal role, he was responsible for providing space capabilities to combatant commands worldwide, ensuring the nation's space superiority.

READ OUR Q&A WITH LT. GEN. SHAW