



Momentum

News to accelerate the aerospace profession

Member e-Newsletter

September 2011

AIAA News

AIAA Foundation Part of Combined Federal Campaign

Effective 1 September



The [AIAA Foundation](#) is pleased to announce that it has been designated as an official member of the [Combined Federal Campaign](#) (CFC), effective 1 September. This means that you may designate the AIAA Foundation as a recipient of your CFC donation.

Mark Lewis, immediate past president of AIAA, and head of the AIAA Foundation, stated: "The AIAA Foundation is delighted to be included in the Combined Federal Campaign. The Foundation is dedicated to building the next generation of the aerospace workforce through scholarships, grants, and student awards. Being part of the Federal Campaign will make it easier for AIAA members in government service to help us in this vital mission through their direct payroll donations."

The AIAA Foundation offers a wealth of resources to support educators from STEM K-12 through university: scholarships, classroom grants, design competitions, and student conferences, improving scientific literacy and advancing the arts and sciences of aerospace. It seeks to make the aerospace sciences exciting and fun for America's students in grades K-16, while also providing the necessary guidance and support to teachers who are empowering the next generation of the aerospace workforce. For more information on the AIAA Foundation and its programs for students, teachers and professionals, visit www.aiaafoundation.org.

Please show your support for future of aerospace, and designate the AIAA Foundation as a recipient of your contributions on your annual CFC form! Every dollar helps build a brighter future for America's aerospace future!

For more information on the CFC, please visit: www.opm.gov/cfc/index.asp.

AIAA to Livestream from the Centennial of Naval Aviation and New Horizons in Aviation



Tune in to AIAA's Livestream Channel 22–23 September to hear top level keynotes and panels from the [Centennial of Naval Aviation](#), including a Flag Officer Panel and a Top Gun Movie Panel. In addition, NASA Administrator Charles Bolden will address the [New Horizons in Aviation](#). The real-time broadcast will be available at www.livestream.com/aiaa. Visit www.Facebook.com/AIAAfan and www.Twitter.com/aiaa_news, #AIAAAviation, for updates, or visit the AIAA website to see the [Livestream schedule](#).

AIAA President Brian Dailey Addresses Board of Directors and Regional Leadership Conference



AIAA President Dr. Brian D. Dailey addressed a joint luncheon of the AIAA Board of Directors and AIAA Regional Leadership Conference participants at the Double Tree Hotel in Portland, OR, on Thursday, 11 August. Dr. Dailey's comments centered on the current state of AIAA in relation to the overall picture for aerospace in today's troubled economic times.

Dr. Dailey began by focusing on the need for AIAA to continue analyzing its

Honors & Awards

AIAA to Present Awards at SPACE 2011 Conference in Long Beach

Technical Achievement, Program Management and Sustained Service Honored

AIAA will present awards recognizing key achievements in space science and technology, space program management, and sustained service to the Institute, at a noon awards luncheon on September 28 as part of the AIAA SPACE 2011 Conference & Exposition, 27–29 September, at the Long Beach Convention Center, Long Beach, CA.

[Full Story >](#)

AIAA to Present Awards for Technical and Lifetime Achievement

Aircraft Design, Program Management, and Lifetime Achievement Honored

AIAA will present awards for technical and lifetime achievement at an 11:30 a.m. awards luncheon on 21 September as part of the 11th AIAA Aviation Technology, Integration, and Operations (ATIO) Conference, the AIAA Balloon Systems Conference, the 19th AIAA Lighter-Than-Air Systems Technology Conference, and the AIAA Centennial of Naval Aviation Forum, 20–22 September, at the Virginia Beach Convention Center, Virginia Beach, VA.

[Full Story >](#)

AIAA Foundation Announces Winners of 2010–2011 Graduate Team Aircraft Design Competition

The AIAA Foundation is pleased to announce that team "Voltair" from the California Polytechnic State University, San Luis Obispo, CA, has won first prize in the AIAA Foundation's annual Graduate Team Aircraft Design Competition. The 2010–2011 Contest required competing teams to design an electrically powered aircraft.

[Full Story >](#)

business practices, ensuring that practices meet with our members' expectations, making sure that those practices create an AIAA which is competitive in a crowded association marketplace. Dailey expressed confidence that AIAA will continue growing in positive ways, meeting the needs of members.

[Full Story >](#)

Information About AIAA Events

The AIAA's Technical Activities Committee has been taking a strategic look at our current conferences and events, and thinking about what changes may be necessary in today's climate to better serve our membership and the broader aerospace community.

[Full Story >](#)



AIAA Marks National Aerospace Week

Sunday, 11 September through Saturday, 17 September, is National Aerospace Week. Designated by Congress to honor the importance of the aerospace industry to the nation, it is a time for all of us to remind our Congressional decision makers, and the public at large, about the large role aerospace plays in keeping our nation prosperous and free.

In an effort to celebrate National Aerospace Week, and to help with those important reminders, the Aerospace Industries Association has launched a web page at www.NationalAerospaceWeek.org which includes an "Aerospace Toolkit." The toolkit is full of vital statistics about the community, sample press releases, and practical suggestions for events which call attention to the importance of aerospace. Additionally, the website lists events going on around Washington, DC, and the nation, which celebrate our nation's aerospace heritage and the aerospace industry.

[Full Story >](#)

2011 CanSat Competition Update

The AIAA Foundation, in conjunction with AAS and several corporate sponsors, holds a CanSat competition every year. In 2011 the contest was held in Abilene, TX.

The cansat competition is a design-build-fly competition that provides teams with an opportunity to experience the design life-cycle of an aerospace system. The cansat competition is designed to reflect a typical aerospace program on a small scale. The competition includes all aspects of an aerospace program from the preliminary design review to post mission review. The mission and its requirements are designed to reflect various aspects of real world missions including telemetry requirements, communications, and autonomous operations. Each team is scored throughout the competition on real-world deliverables such as schedules, design reviews, and demonstration flights.

[Full Story >](#)



Share Your Shuttle Memories

Although the space shuttle program has come to an end, the Institute, in coordination with AIAA's History Technical Committee, is still interested in capturing your experiences and insights. Whether you drew up the first blueprints, or saw a single shuttle launch, we are still interested in hearing from you. Your stories and associated images are being shared with the world via the AIAA Web site, with a "[Final Launch" Web page](#). New entries

continue to be posted. There's still time to share your story. Just submit your story and/or pictures to [AIAA's Web Editor](#). Please limit them to 500 words, and include no more than two pictures at a time as e-mail attachments.

(Pictured: Pictured: Space Shuttle Discovery at dusk. Credit: Ben Sarao, Senior Member, AIAA History Technical Committee.)

[Submit Your Story >](#)

Six of Ten New AIAA Space Plug-and-Play Architecture (SPA) Standards Available for Public Review

AIAA Foundation Announces Winners of 2010-2011 Individual Undergraduate Aircraft Design Competition

The AIAA Foundation is pleased to announce that Leo Teeney, of The University of Manchester, Great Britain, has won first prize in the AIAA Foundation's Individual Undergraduate Aircraft Design Competition. The 2010-2011 contest required competitors to design an affordable space booster aircraft.

[Full Story >](#)

AIAA Foundation Announces Winners of 2010-2011 Undergraduate Team Aircraft Design Winners

The AIAA Foundation is pleased to announce that team "Mustang Aerospace" from the California Polytechnic State University, San Luis Obispo, CA, has won first prize in the AIAA Foundation's annual Undergraduate Team Aircraft Design Competition. The 2010-2011 contest required teams to design an innovative heavy-lift hybrid air vehicle.

[Full Story >](#)

View Photos on Flickr!

Photos of recent events and an awards luncheon may be viewed at www.flickr.com/aiaaevents.

Last Chance For Sustained Service Award

Don't miss the opportunity to nominate a colleague for the AIAA sustained service award. Each year, AIAA recognizes 20 members for their dedication and service over a period of time. Download the [nomination form and score sheet](#) or email carols@aiaa.org. Nominations are due to AIAA by 1 October.

AIAA Seeking Nominations for the Speas Airport Award

The AIAA/AAAE/ACC Jay Hollingsworth Speas Airport Award recognizes individuals who have contributed toward achieving compatible relationships between airports and/or heliports and their surrounding environment. Examples might be in airport land use, airport noise reduction, protection of critical environmental resources, architecture, landscaping, or other design considerations to improve compatibility of airports and their communities, etc. The recipient receives a \$10,000 honorarium and certificate.

Six remaining new AIAA Standards dealing with space plug-and-play architecture are currently available for public review and comment. The documents were developed by the AIAA SPA Committee on Standards. The first four documents are currently posted for public review and included SPA Physical Interfaces, SPA Systems Timing, SPA Test Bypass, and SPA Systems Capabilities (a Guide). The final six documents in the series include the following:

- Networking
- Logical Interface
- Power Service
- Ontology
- Space Wire Subnet Adaptation
- Guidebook

The adaptation of terrestrial plug-and-play technologies to the space environment requires more than a simple IT protocol adaptation. While SPA primarily deals with data structure and movement, examination of other aspects of the spacecraft architecture are also necessary. These standards and the guide describe necessary form factors ("plug" factors) and discovery/operation factors ("play" factors) for a SPA system. Reviewing the SPA Guidebook first is recommended to get oriented.

The public review period for all the documents will be open so all documents can be reviewed at the same time. If interested in reviewing any of the AIAA Standards Documents currently open for public comment, please click the "more info" link below. Please note the review instructions on the page.

[More info>](#)

Public Review for AIAA Guide to the Preparation of Operational Concept Documents to Close 12 September

Public review of an ANSI/AIAA document dealing with preparing operational concept documents is in its final stages. It is an update and extension of the original ANSI/AIAA Guide (ANSI/AIAA G-043-1992), incorporating new insights, knowledge, and experience that have been recognized since the Guide's original publication. This edition of the Guide has been prepared by the AIAA Systems Engineering Committee on Standards, the AIAA Software Engineering Technical Committee, and the Requirements Working Group of the International Council on Systems Engineering.

The current *Guide for the Preparation of Operational Concept Documents*, in addition to including new information, has been broadened to encompass the development of all system types, including software-intensive systems, and to reflect technological advances of the last decade. Development of the current Guide has benefited from the cooperative effort between the AIAA and INCOSE by providing a broad systems-level viewpoint and inclusion of international knowledge, information and experience.

The Guide describes a time-tested process for operational concept development-which types of information are most relevant, their purpose, and who should participate in the operational concept development effort. Second, it is intended to recommend how to compile the information developed during operational concept development into one or more Operational Concept Documents (OCDs) encompassing the full range of the product lifecycle. For the purposes of this document, operational concept will be taken to mean an abstract model of the operations of a specific system or group of systems, usually developed as part of the acquisition process and used throughout the system life cycle.

If interested in reviewing this document, or any of the other AIAA Standards Documents currently open for public comment, please click the "more info" link below. Please note the review instructions on the page.

[More Info >](#)

IARPA Invites AIAA Members to Participate in Important Research Project

AIAA members are invited to participate in an important research project to develop improved methods for predicting future events and outcomes. The specific goal is to develop methods for aggregating many individual judgments in a manner that yields more accurate predictions than any one person or small group alone could provide.

This research is funded by the Intelligence Advanced Research Project Activity (IARPA, www.iarpa.gov), but its application will extend far beyond intelligence to such areas as business forecasting or medical diagnosis. The team consists of researchers at ARA, a private company; as well as researchers at the University of Maryland-College Park, University of Michigan, Ohio State University, Fordham University, University of California-Irvine, Wake Forest University, and the University of Missouri.

Nominations are due 1 October 2011. Visit the [AIAA Web site](#) to learn more about the award and download the [nomination form](#).

Featured Products September Book Signing

[Fundamentals of Aircraft and Airship Design: Volume I - Aircraft Design](#)
Leland Nicolai and Grant Carichner

**Wednesday, 21 September 2011
1800-1930 hrs
Virginia Beach Convention Center
Virginia Beach, VA**

This book signing will take place in the exhibit hall during the [11th AIAA Aviation Technology, Integration, and Operations \(ATIO\) Conference, including the AIAA Balloon Systems Conference and 19th AIAA Lighter-Than-Air Technology Conference.](#)

You Can Look it Up The AIAA Electronic Library

Now Available in the [AIAA Electronic Library](#)

- *AIAA Journal, Vol. 49, Issue No. 9*
- *Journal of Aircraft, Vol. 48, Issue No. 4*
- *Journal of Aerospace Computing, Information, and Communication, Vol. 8, Issue No. 8*
- *Journal of Guidance, Control, and Dynamics, Vol. 34, Issue No. 5*
- *Journal of Propulsion and Power, Vol. 27, Issue No. 4*
- *Journal of Spacecraft and Rockets, Vol. 48, Issue No. 4*
- *Journal of Thermophysics and Heat Transfer, Vol. 25, Issue No. 3*

[Visit the AIAA Electronic Library Today!](#)

Quick Takes JPC/IECEC 2011 Videos Available on www.aiaa.org

Elon Musk, Elizabeth "Liz" Porter, Lt Gen John T. "Tom" Sheridan, and other high level leaders from government, industry and academia gathered to discuss the future of energy systems, the large-scale implementation of renewable energy systems

IARPA is looking to recruit individuals who have an interest (and/or expertise) in any of a wide range of current affairs, including but not limited to politics, economics, technology, military affairs, social trends, and science and technology. The overall time commitment will be minimal, 10-15 minutes initially, and no more than a few minutes at any one time, spread out over months, or possibly even a few years. Participants may withdraw at any time. All notifications will be via email, and all other interactions will take place anonymously via the IARPA website at the convenience of participants. The research has been approved by each university's and by ARA's Institutional Review Boards. The study asks participants to provide judgments on a variety of subjects. Privacy will be ensured and anonymity guaranteed.

Please visit www.forecastingace.com for further information and to register. If you have any additional questions, please contact Dr. Thomas S. Wallsten (tswallst@umd.edu), Professor and Chair, University of Maryland Department of Psychology.

Further details can be found at forecastingace.com/.

Conferences and Events

Three Aviation Events Taking Place in Virginia Beach in September

[11th AIAA Aviation Technology, Integration, and Operations \(ATIO\) Conference](#)
20–22 September

[The Centennial of Naval Aviation Forum \(CoNA\)](#)
100 Years of Achievement and Progress
21–22 September

[New Horizons in Aviation Forum](#)
22–23 September

In addition:
[NAS Oceana Air Show](#)
24–25 September



STS-135 Crew to Appear at AIAA SPACE 2011 Conference & Exposition

AIAA is pleased to announce that the STS-135/final Atlantis space shuttle crew members will be participating in the AIAA SPACE 2011 Conference & Exposition in Long Beach, CA! Attending will be Commander Christopher J. Ferguson, Pilot Douglas G. Hurlley, Mission Specialist Sandra H. Magnus, and Mission Specialist Rex J. Walheim.

The AIAA SPACE 2011 Conference & Exposition, set for 27–29 September, brings together key government and industry leaders, engineers, and scientists to discuss the important issues, challenges, business aspects, and synergies we face as a nation. Nowhere else will you get the breadth of information-sharing on space technology, policy, programs, management, and education.

(Pictured: The STS-135 crew. NASA astronauts Chris Ferguson (center right), commander; Doug Hurlley (center left), pilot; Rex Walheim and Sandy Magnus. Credit: NASA)
Register for this event at www.aiaa.org/events/space.



Adm. Craig E. Steidle, USN (Ret.) to Speak at the Commercial Space Group Meeting

The AIAA Commercial Space Group is pleased to welcome Adm. Craig E. Steidle USN (Ret.) as a guest speaker during their annual meeting, set for Tuesday, 27 September at 7:00 p.m. in Long Beach, CA. The meeting will take place as part of the [2011 AIAA SPACE Conference and Exposition](#). As NASA's first Associate Administrator for Exploration Systems, from 2004-2005, Adm. Steidle built the NASA Directorate from the ground up into a \$3 billion a year organization, personally initiating several innovative programs including efforts to foster commercial space transportation to the International Space Station. Adm. Steidle is the recently named President of the [Commercial Spaceflight Federation](#). Plan to attend the meeting and take part in this important discussion. Refreshments will be provided during the meeting. If you have any questions, please contact [Eleanor Aldrich](#), of the AIAA Commercial Space Group.

Engineers as Educators Workshop

alternative fuels, and evolving aircraft and spacecraft propulsion systems at the 9th International Energy Conversion Engineering Conference (IECEC) and 47th AIAA/ASME/SAE/ASEE Joint Propulsion Conference (JPC), which took place in San Diego, CA, 31 July–3 August. Livestream feeds were provided during the conference.

[Watch the Videos >](#)

September Issue of *Aerospace America* Now Available Online

The September 2011 issue of *Aerospace America* is now available online for AIAA members. Don't miss this month's feature article, "Wings of Gold: One hundred years of U.S. Navy air power," in which author Edward Goldstein provides a comprehensive review of the first 100 years of Naval aviation. As the author states, "Less than a decade after powered flight was achieved, U.S. Navy aviation came into being, opening new possibilities for extending the nation's air power. In its first 100 years it has made advances unimaginable to those who pioneered it."



To access the September issue of *Aerospace America* please visit www.aiaa.org/myaiaa and log in.

Have an Opinion on a Current Aerospace Topic? Want to Raise an Issue?

Send a note to elainec@aiaa.org and see it posted on *Aerospace America's* [Virtual Town Hall](#). Check it out and [join in on the discussion](#).

AIAA Career Center

AIAA is pleased to provide members with a Career Center, with extensive lists of resumes and available positions. A powerful and user-friendly search tool allows you to find the ideal job or candidate.

[More Info >](#)

[Link up Through LinkedIn!](#)

Limited Space Remaining – Reserve Your Spot Now!

AIAA has trained over 400 members to work with students and teachers in both formal and informal settings. These members have gone into classrooms, taught after-school enrichment programs, and worked with Scout groups. If you want to feel more comfortable working with K–12 students and learn how to construct grade-level appropriate presentations and do low-cost activities that will dazzle and inspire, these workshops are for you. Space is limited and registration is required for **the last workshop on the 2011 calendar**. It will be taught at the [11th AIAA Aviation Technology, Integration, and Operations \(ATIO\) Conference](#), including the AIAA Balloon Systems Conference and the 19th AIAA Lighter-Than-Air Systems Technology Conference in Virginia Beach, VA on 21 September. Registration forms are available for [Virginia Beach, 21 September](#). If you have questions about the workshop, please contact Lisa Bacon at LisaB@aiaa.org.



Education Alley Returns to Long Beach, CA

27–29 September 2011

AIAA Education Alley, the ultimate field trip, will excite your students about math and science. Through engaging activities, demonstrations, interviews, and exhibits, students learn how space impacts their everyday lives.

Our school day field trips are full, but there is still limited space for students Tuesday, 27 September, from 3:00 p.m. – 6:30 p.m. Please download the [informal registration form](#) and fax to Lisa Bacon at 703.264.7551, or email it as an attachment to lisab@aiaa.org.

On Wednesday, 28 September, from 4:30 p.m. – 7:00 p.m., we will be open for a teacher event, which still has openings. We invite pre-service and current teachers to register for this event using the [Preservice registration form](#).

[More Info >](#)

ANERS 2011 to Take Place in October 2011 in France

The Association Aéronautique et Astronautique de France (3AF) and the American Institute of Aeronautics and Astronautics (AIAA) are pleased to announce that the 3AF/AIAA Aircraft Noise and Emissions Reduction Symposium (ANERS) will take place in Marseille, France from 25–27 October 2011. This high-level, multidisciplinary technical Symposium will bring together leading engineers, scientists, researchers, government and civil aviation officials, industry, and policy makers from Europe and the United States as well as other regions of the world to discuss the topics and issues of aircraft emissions and noise reduction. For more information visit www.aners2011.com.

Attending a Conference? Attend a Course!

Professional Development Short Courses

25–26 September 2011

[AIAA SPACE 2011 Conference & Exposition](#)
Long Beach, CA

- Introduction to Space Systems
- Systems Engineering Verification and Validation

[More Info >](#) about these courses.

Follow AIAA Professional Development on Twitter - @AIAACourses.

To learn more about these courses or to register visit www.aiaa.org/courses. Remember - When you register for a professional development course, you will receive a FREE Conference Registration (sessions only) to the conference where your course is scheduled!

Registration Now Open for ISPCS 2011

A great way to make connections with other members of the aerospace community is through AIAA's LinkedIn group. The group, available only to active AIAA members, is your "one-stop" forum for networking with other AIAA members, gaining insight into the day's aerospace headlines, discovering employment opportunities within the community, and learning new information about AIAA events. [Link up with AIAA LinkedIn](#) today!

You may also follow AIAA News on www.twitter.com/aiaa_news, get connected with other AIAA members via [AIAA's Facebook page](#), or view AIAA videos on [AIAA's YouTube channel](#).

Member Spotlight

**AIAA
Congratulates
William P.
"Billy" Crisler**



AIAA has selected Dr. William P. "Billy" Crisler, Lt. Col. United States Air Force (Retired) for its Member Spotlight

for September 2011. Dr. Crisler is a professor in the Aeronautics Department of the United States Air Force Academy, Colorado Springs, Colo., and director of the Academy's Science, Technology, Engineering and Math (STEM) Outreach Center. In recognition of his efforts to promote STEM education, Crisler was the recipient of the 2011 Federal Laboratory Consortium's Mid-Continent Region's STEM Mentorship Award.

In an article written by David Edwards of the United States Air Force public affairs division, Col. Brent Richert, the Air Force Academy's Chief Scientist, praised Crisler, "calling Crisler the 'driving force behind establishing a funded outreach (STEM) outreach program at the Academy.' Richert went on to say, in Edwards' article, that Crisler's "enterprise level planning and coordination (have) brought government, industry, and education partners together to kindle the fire of interest...for elementary through high school students in Southern Colorado." According to Edwards, under Crisler's direction the Academy's STEM Outreach Center has received over "\$600,000 in federal funding to support projects that inspire interest in STEM subjects at the grass-roots level." Among those projects, according to Crisler, are "STEM boot camps for local teachers, and a plethora of other activities like the Academy's 'in demand Chemistry Magic Show, which has made rock stars out of Professor Ron Furstenuau and his colleagues."

(Pictured: Dr. William P. "Billy" Crisler, Lt. Col. United States Air Force (Retired))
[Full Story >](#)

Contact Us

AIAA is proud to sponsor the International Symposium for Personal and Commercial Spaceflight (ISPCS), the premier conference for leaders of the commercial spaceflight industry to join together to learn, network, and collaborate to innovate. ISPCS is set for 19–20 October 2011 in Las Cruces, New Mexico. [Registration is now open. www.ispcs.com/](http://www.ispcs.com/)

[Contact the Editor](#) of **AIAA Momentum**—*News to Accelerate the Aerospace Profession*. [Submit](#) story ideas.

Still Time to Register for the Digital Avionics Systems Conference (DASC)

The Digital Avionics Systems Conference (DASC) will feature over 225 technical presentations, Q/A panels, an interactive workshop, professional tutorials, networking events, and a special tour of the Boeing Everett factory (home of 787, 777, 767, and 747). Visit the [DASC Web site](#) for more information and registration.

30th Digital Avionics Systems Conference
Closing the Generation Gap Increasing capability for flight operations among legacy, modern and uninhabited aircraft
16–20 October 2011
Renaissance Seattle Hotel, Seattle, WA
<http://www.dasconline.org/>

The American Institute of Aeronautics and Astronautics (AIAA) is the world's largest technical society dedicated to the global aerospace profession.

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