



# Momentum

News to accelerate the aerospace profession

Member e-Newsletter

July 2011

## AIAA News

### Less Than 30 Days Remain to Nominate AIAA Board of Directors

The 2011–2012 AIAA Nominating Committee will meet on 11 August 2011 to review nominees and select candidates to participate in the Board of Directors election next year. AIAA members may nominate themselves or other qualified members by submitting a nomination through the AIAA Web site (visit [www.aiaa.org](http://www.aiaa.org), log in, and select "Board of Directors Nomination" from the left-hand navigation, **by 3 August 2011**).

[More Info >](#)

### AIAA Foundation Part of Combined Federal Campaign



The [AIAA Foundation](#) is pleased to announce that it has been designated as an official member of the [Combined Federal Campaign](#) (CFC). This means, that effective 1 September 2011, 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](http://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](http://www.opm.gov/cfc/index.asp).

## Honors & Awards

### AIAA Foundation Graduate Student Technical Paper Competition Winners Announced

The AIAA Foundation is pleased to announce the winners of its 2011 AIAA Regional Graduate Student Conference technical paper competitions.

Each first place winner receives \$500 and an invitation to the AIAA Foundation International Student Conference, held in conjunction with the 50th AIAA Aerospace Sciences Meeting, 9–12 January 2012, at the Gaylord Opryland Resort, Nashville, TN, where they will compete for a prize of \$1,000. Each second place finisher receives \$300, and each third place finisher receives \$250.

[Full Story >](#)

### AIAA Foundation Undergraduate Student and Team Technical Paper Competition Winner Announced

The AIAA Foundation is pleased to announce the winners of its 2011 AIAA Undergraduate Student Conference individual and team technical paper competitions.

Each first place winner receives \$500 and an invitation to the AIAA Foundation International Student Conference, held in conjunction with the 50th AIAA Aerospace Sciences Meeting, 9–12 January 2012, at the Gaylord Opryland Resort, Nashville, TN, where they will compete for a prize of \$1,000. Each second place finisher receives \$300, and each

## AIAA Addresses High School Debaters and Coaches



On Friday, 24 June 2011, two AIAA staffers, and two AIAA members from the AIAA Houston Section spoke in Dallas, Texas, to a gathering of high school speech and debate coaches about the 2011–2012 national policy debate resolution, “Resolved: The United States federal government should substantially increase its exploration and/or development of space beyond the Earth’s mesosphere.” The gathering, part of the National Forensic League (NFL) National Championship Speech and Debate Tournament, was one of the first chances for the national high school debate community to hear from experts on the space debate topic.

AIAA’s panel consisted of: Ross Bell, AIAA Public Policy Space Portfolio Manager; Anita Gale, AIAA-Houston Section, and an Associate Technical Fellow, Space Shuttle Payload & Cargo Integration, The Boeing Company, as well as Chair-Elect of the AIAA Space Colonization Technical Committee; Joseph Mayer, AIAA Houston-Section, and Senior Manager for Business Development and External Relations, Orion Multi-Purpose Crew Vehicle Program, Lockheed Martin Company. The panel was moderated by Duane Hyland, AIAA Communications Specialist, who is also a high school debate coach and member of the NFL.

*(Pictured from left: Joseph Mayer, Anita Gale, and AIAA staff members Ross Bell and Duane Hyland. Click image for larger version.)*

[Full Story >](#)

## AIAA Partners with National Forensics League to Sponsor Space Policy Debates

From September 2011 to June 2012, America’s high school debaters will be focusing their time and talent examining the resolution “Resolved: The United States federal government should substantially increase its exploration and/or development of space beyond the Earth’s mesosphere.” The topic will ask students to analyze the current state of space exploration and development policy within the United States, and then propose changes to those policies, while defending the desirability of the proposed changes. Students will spend many hours researching all facets of space policy and technology, and by the end of the season will be much more knowledgeable about the future of America’s space policy than a substantial majority of their peers.

[Full Story >](#)

## Share Your Shuttle Memories as the Storied Program Nears Its End



The final launch of NASA’s space shuttle program took place today, Friday, 8 July, with the successful liftoff of space shuttle Atlantis ([Read AIAA Statement >](#)). As the program nears its end, the Institute, in coordination with AIAA’s History Technical Committee, is still interested in capturing as many of your shuttle program experiences and insights as possible. Whether you drew up the first blueprints, or saw a single shuttle

launch, we are still very much 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](#). Several recent entries have been published.

There’s still time to share your story and we encourage you to do so. Just submit your stories and/or pictures to Lawrence Garrett, AIAA’s Web Editor. Please limit your stories to 500 words, and include no more than two pictures at

third place finisher receives \$250.

[Full Story >](#)

## AIAA Foundation Announces Winners of 2011 Student Technical Paper Competition in Freshman/Sophomore and Community Outreach Categories

The AIAA Foundation is pleased to announce the winners of its 2011 AIAA Student Technical Paper Competition in the Freshman/Sophomore and Community Outreach divisions. In addition to recognition for their efforts, each first place winner or team received a \$500 award, each second place winner or team received a \$300 award, and each third place winner or team received a \$250 award from the AIAA Foundation.

[Full Story >](#)

## AIAA Foundation Announces Graduate Award Winners

*\$80,000 Awarded to Aerospace Graduate Students*

AIAA and the AIAA Foundation are pleased to announce the recipients of the AIAA Foundation’s twelve Graduate Awards for the 2011–2012 academic year. The winning graduate students will receive a total of \$80,000 in awards.

Each year the AIAA Foundation presents four Orville and Wilbur Wright Graduate Awards. These \$10,000 awards, given in memory of the Wright brothers’ contributions to the evolution of flight, are presented to students completing master’s degree or doctoral thesis work.

[Full Story >](#)

## AIAA Foundation Presents Thirty Undergraduate Scholarships

AIAA and the AIAA Foundation (AIAAF) have awarded thirty AIAAF undergraduate scholarships for the 2011–2012 academic year, totalling

a time as e-mail attachments.

*(Pictured: Space shuttle Atlantis lifts off for final time, as seen from one mile south of the Vehicle Assembly Building. Credit: AIAA member Howard Kanner. Click image for larger version.)*

[Submit Your Story >](#)

## AIAA Participates in Summer STEM Boot Camp



AIAA participated in the second Summer STEM Boot Camp 22–24 June and 27–29 June at the U.S. Air Force Academy in Colorado Springs, CO. The sessions were offered by grade level. The Elementary track was taught by the [National Institute of Aerospace](#). The middle school track was organized by AIAA and its partners: [NASA](#), the [FAA](#), and the [National Defense Education Program](#) (NDEP). The high school track was taught by [Teaching Science and Technology Inc.](#)

Participating teachers learned about rockets and parachutes, robots of all shapes and sizes and air traffic management. In addition, a new NASA curriculum debuted from the [Houston Symphony](#), geared toward incorporating technology into the classroom. To that point, during one of the days of the boot camp, teachers were able to garner over 1,800 followers of their Twitter feed.

Keynote addresses were made by AIAA Distinguished Lecturer Bob Winn, Jamail Larkins, FAA Ambassador, David Suomi, FAA Deputy Regional Director, and Clayton Anderson, NASA astronaut. Teachers received almost \$1,000 of curriculum and materials for use in their classrooms this fall. For more information about STEM K–12 programs like this, please contact Lisa Bacon at [lisab@aiaa.org](mailto:lisab@aiaa.org).

*(Pictured: Teachers fly their parachutes at the USAFA STEM Boot Camp. Photo credit U.S. Air Force Academy. Click image for larger version.)*

## San Diego Conferences to Explore Clean Energy and Efficient Propulsion Systems

Energy conversion technology, advanced energy and power systems, energy conversion engineering, and advanced, reliable and clean propulsion systems will be among the topics discussed at the San Diego Convention Center, San Diego, CA, 31 July–3 August at the [9th International Energy Conversion Engineering Conference](#) (IECEC) and the [47th Joint Propulsion Conference and Exhibit](#) (JPC). IECEC is hosted by AIAA, and JPC is jointly organized by AIAA and the [American Society for Mechanical Engineers](#), [SAE International](#), and the [American Society of Engineering Education](#).

[Full Story >](#)

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

The final six 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

\$61,000 in awards.

The AIAA Foundation presents two \$2,500 Next Century of Flight Scholarships to students pursuing degrees in aeronautical science.

[Full Story >](#)

## View Recent Award Luncheon Photos!

- [Aeroacoustics](#)
- [Fluids Conferences](#)

For more information about the AIAA Honors and Awards program, please contact Carol Stewart at [carols@aiaa.org](mailto:carols@aiaa.org) or at 703.264.7623.

## Call for Nominations

### Award Recognizes AIAA Service

Do you know an AIAA member who has contributed time and effort to AIAA? Someone who is a dedicated AIAA member and has participated in AIAA's many activities and programs over a period of years? If so, AIAA wishes to recognize them!

The **Sustained Service Award** is designed to recognize such service and contributions to AIAA. The nominee must be a member in good standing who has shown continuing dedication to the interests of the Institute over a period of years. A maximum of 20 awards are presented each year.

The Nomination Form and Scoresheet can be downloaded from the [AIAA Web site](#). Submit the nomination package to Carol Stewart, AIAA, 1801 Alexander Bell Dr., Suite 500, Reston, VA 20191-4344, fax to 703.264.7551, or email to [carols@aiaa.org](mailto:carols@aiaa.org) no later than 1 October 2011.

## Featured Products Hot Off the Press

[Introduction to Flight Testing](#)  
Barnes McCormick

An introduction into the art and science of

- 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 an 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 you are 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 >](#)

### **AIAA Guide to the Preparation of Operational Concept Documents Available for Public Review**

An ANSI/AIAA document dealing with preparing operational concept documents has been revised. 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 (INCOSE).

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.

[More Info >](#)

### **Systems Engineering Committee on Standard (SECoS) Now Soliciting Membership for the Development of the "Aerospace Systems Integration (SI) Assessment Guideline"**

The Systems Engineering Committee on Standard (SECoS) is now soliciting membership for the development of the "Aerospace Systems Integration (SI) Assessment Guideline" proposed by Drs. Hernando Jimenez and Mat French. If you are interested in participating, please contact SECoS Chairperson Dr. Satoshi Nagano at [satoshi.nagano@aero.org](mailto:satoshi.nagano@aero.org).

### **Don't Forget: August is for Aerospace!**



The AIAA "August is for Aerospace" program is a great way to showcase the aerospace profession and show members of Congress the value and impact that aerospace has both locally and nationally.

measuring and predicting airplane performance, this text will prove useful to students, homebuilders, pilots and engineers in learning how to collect and analyze data relevant to the take-off, climb, cruise, handling qualities, descent, and landing of an aircraft. It presents a basic and concise analysis of airplane performance, stability, and control including the standard atmosphere; engine and propeller performance; estimation of drag; airplane dynamics; and wing spanwise lift distributions and stall. Other areas of the text focus on experimentally determining airspeed calibration; takeoff performance; climb performance; and static and dynamic stability. Basic algebra, trigonometry and some calculus is used.

[Order your copy](#) today!

### **You Can Look it Up** *The AIAA Electronic Library*

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

- *AIAA Journal*, Vol. 49, Issue No. 7
- *Journal of Aircraft*, Vol. 48, Issue No. 3
- *Journal of Aerospace Computing, Information, and Communication*, Vol. 8, Issue No. 6
- *Journal of Guidance, Control, and Dynamics*, Vol. 34, Issue No. 4
- *Journal of Propulsion and Power*, Vol. 27, Issue No. 3
- *Journal of Spacecraft and Rockets*, Vol. 48, Issue No. 3
- *Journal of Thermophysics and Heat Transfer*, Vol. 25, Issue No. 2

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

### **Quick Takes** **Presentations from the 41st AIAA Fluid Dynamics Conference Now Available on AIAA.org**

Presentations from the 41st AIAA Fluid Dynamics Conference, which took place 27–30 June in Honolulu, Hawaii are now available on AIAA's [Key Speeches, Reports and Presentations page](#).

### **ATIO STEM Initiative Gives**

Every August, members of Congress return to their home districts as part of a summer work period. Without the distraction of endless meetings, votes on legislation, and committee hearings, meeting with your representative in your home district is easy and effective. It enables a continuation of relationships started at AIAA's Congressional Visits Day (CVD) or an opportunity to begin an ongoing dialogue between you and your member of Congress.

(Pictured: the AIAA Phoenix Section and the AIAA Tuscon Section hosts Congressman Trent Franks for a discussion on aerospace policy)

[Full Story >](#)

## Conferences and Events

### Final Chance to Register for ICES 2011 in Portland, Oregon



Join us 17–21 July 2011 for the 41st International Conference on Environmental Systems (ICES) in Portland, OR. Your final chance to save is quickly approaching. **Register by today, 8 July**, to receive a discounted rate on this event. The conference will feature high-level keynote speakers, over 50 quality technical sessions, and multiple opportunities for networking through the receptions, luncheons, and banquet. Register today at [www.aiaa.org/events/ices](http://www.aiaa.org/events/ices)!

### Register Now for the JPC and IECEC in San Diego



AIAA, ASME, SAE, ASEE, and their industry partners invite you to San Diego, CA, for the 47th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit (JPC) and the 9th Annual International Energy Conversion Engineering Conference (IECEC), 31 July–3 August. **Attention Attendees: Marriott hotel rooms are still available at the AIAA group rate for arrival on Sunday, 31 July; departure on Thursday, 4**

**August.**

Visit the [Conference Web site](#) and register today!

### Jason Ryan Dorsey, The Gen Y Guy®, to Give Special Keynote Address at GNC/AFM/MST Conference in Portland, OR

*Crossing the Generational Divide: Leveraging the Power of Generations™ for Your Strategic Advantage*



Jason Ryan Dorsey will present a keynote session at the [AIAA Guidance, Navigation, and Control Conference](#); AIAA Atmospheric Flight Mechanics Conference; and AIAA Modeling and Simulation Technologies Conference, on 8 August 2011, at 1700 hrs, in the Oregon Ballroom, Oregon Convention Center, Portland, Oregon. [More information can be found here.](#)

Crossing the Generational Divide: Leveraging the Power of Generations™ for Your Strategic Advantage. Ever felt like another generation doesn't "get it"? They act like they are from a completely different time—because they are. The frustration caused by generational disconnects is not new, but the costs have never been higher. Hidden within this generational challenge is a tremendous opportunity to move your company and career forward.

In Crossing the Generational Divide, Jason Ryan Dorsey shows you exactly how to turn cross-generational pain into breakthrough performance. You will leave

### Back to the Local Community

Each year, the ATIO Education Committee plans a local event to share their passion of aeronautics with the local community. This year, they will be participating in the Virginia Beach Public Schools STEM Career Conference, organized by the National Institute of Aerospace, NASA, and NOAA. Presenters are being invited to share their career in a 40-minute session which combines a presentation and simple hands-on activities. If you are interested in participating, please contact Lisa Bacon at [lisab@aiaa.org](mailto:lisab@aiaa.org).

### Members May Now Enjoy Savings on Auto and Home Insurance



AIAA has teamed up with Liberty Mutual to offer our members Group Savings Plus®. This unique program allows members to purchase high-quality auto, home and renters insurance at low group rates through the convenience of automatic checking account deductions and direct home billing. You can contact Liberty Mutual directly at 1.800.524.9400 and provide client #8357, for a free, no-obligation quote, or you can [visit them online.](#)

### July–August Issue of Aerospace America Now Available Online

The combined July–August 2011 issue of *Aerospace America* is now available online for AIAA members. Don't miss the feature article, "Aircraft and the Environment: Flying Farther On Less," in which author Jim Banke discusses how after more than a century of flight, it might seem that advances in aerodynamics have reached their practical limits, except that researchers at NASA believe ambitious goals in areas such as reducing fuel consumption may still be achieved in tandem with limiting noise and pollution effects. As the author states, "From exotic new materials to greener manufacturing methods, intensified efforts are leading NASA into some futuristic

this action-packed program with the insight and tools necessary to bring out the best in every generation you lead—whether they text, tweet, or actually talk on a mobile phone.

Jason Ryan Dorsey knows the generation gap firsthand. His Boomer mom keeps checking on him. His Gen Y sister won't be his Facebook friend. His Traditionalist grandfather calls every Sunday—from a landline. Most important, his generational strategies have created significant breakthroughs for companies and individuals around the world.

The thought leader on generational dynamics in the workplace and marketplace, he's been featured on 60 Minutes, 20/20, The Today Show, and in Fortune Magazine. His talent is teaching specific strategies that drive quick results. A bestselling author, Jason shares 50 cross-generational best practices in *Y-Size Your Business*.

Watch Jason talk generations at [www.JasonDorsey.com](http://www.JasonDorsey.com).

**This keynote session is organized by the AIAA Young Professional Committee with sponsorship by Lockheed Martin.**

[Register today](#) for this Conference! Early bird rates valid thru 11 July.

## AIAA and Navy Join to Celebrate the Centennial of Naval Aviation

20–23 September 2011



The AIAA Aviation Technology, Integration and Operations (ATIO) Conference will collaborate with the Centennial of Naval Aviation Forum from 20–23 September 2011 in Virginia Beach. This unique technical forum will celebrate the Centennial of Naval aviation in appropriate style, by bringing together the technical and operational sides of Naval Aviation in an integrated event. The event will include the New Horizons in Aviation Forum with high-level speakers and panelists discussing business operations and technology trends in the

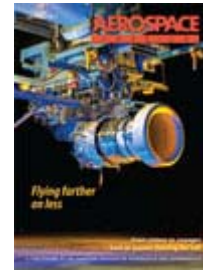
nation's aviation enterprise. You will have the chance to network and share ideas during interactive panel sessions, luncheons, networking breaks, and receptions. You will also have the chance to enhance your skills as expert engineers, researchers, and scientists share their latest research and development findings for the future of Naval Aviation Enterprise. You will not want to miss this must attend event. Register today at [www.aiaa.org/events/atio](http://www.aiaa.org/events/atio) or [www.aiaa.org/events/navy2011](http://www.aiaa.org/events/navy2011).

## Engineers as Educators Workshops

**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. Workshops will be taught at the [Joint Propulsion Conference](#) in San Diego, CA on 2 August; at the [Guidance, Navigation, Control Conference](#) in Portland, OR on 11 August; and at the [11th AIAA Aviation Technology, Integration, and Operations \(ATIO\) Conference](#), including the AIAA Balloon Systems Conference and the 19th AIAA Lighter-Than-Air Technology Conference in Virginia Beach, VA on 21 September. Registration forms are available for [San Diego, 2 August](#), [Portland, 11 August](#), and [Virginia Beach, 21 September](#). If you have questions about any of the workshops, please contact

technologies.”



To access the July–August issue of *Aerospace America* please visit [www.aiaa.org/myaiaa](http://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](mailto: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!

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](http://www.twitter.com/aiaa_news), get connected with other AIAA members via [AIAA's Facebook page](#), or view AIAA videos on [AIAA's YouTube](#)

Lisa Bacon at [LisaB@aiaa.org](mailto:LisaB@aiaa.org).

[channel](#).

## Education Alley Returns to Long Beach, CA

27–29 September 2011



Education Alley returns to Long Beach for the [AIAA SPACE 2011 Conference & Exposition](#), giving students and teachers an opportunity to learn more about space. Known as the “ultimate field trip,” Education Alley will inspire Long Beach area students about math and science as the foundation for exciting careers in the space industry. Students will learn how space impacts their everyday lives by meeting with astronauts and the

people who work with satellites, GPS technology...and much more. Each day, students will be part of a press conference or NASA live event and will then tour a specially built exhibit, and participate in presentations that will leave them talking on the bus back to school!

[More Info >](#)

## SDM 2012 Update



The Call for Papers is now open for the [53rd Structures, Structural Dynamics, and Materials Conference \(SDM\)](#) and co-located conferences scheduled for 23–26 April 2012 in Honolulu, Hawaii. This established annual conference provides a unique forum dedicated to the latest developments in the collective disciplines of structures, structural dynamics, materials, design engineering, and survivability. The 53rd Conference will also host the 20th AIAA/ASME/AHS Adaptive Structures Conference, the 14th AIAA Non-Deterministic

Approaches Conference, the 13th AIAA Gossamer Systems Forum, and the 8th AIAA Multidisciplinary Design Optimization Specialist Conference. Plenary presentations, given by recognized, forward-thinking invited speakers, will be a special feature of the conference. This year’s presentations will address strategies and techniques for shortening the time required to bring new aircraft and spacecraft structures and materials technologies to flight readiness.

Visit the [conference Web site](#) and submit your paper today. Abstract deadline is 10 August.

## Event Preview: AIAA SPACE 2011 Conference & Exposition

The [AIAA SPACE 2011 Conference and Exposition](#), set for 27–29 September in Long Beach, CA, 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. Together we will explore solutions that will enhance today and inspire tomorrow. Together we will explore solutions that will enhance today and inspire tomorrow.

[Download the AIAA SPACE 2011 Event Preview >](#)

## Attending a Conference? Attend a Course!

Registration is open for following courses co-located with the AIAA Fluid

## Member Spotlight AIAA Congratulates Dr. Martin Vincent Lowson



AIAA has selected Dr. Martin Vincent Lowson for its Member Spotlight for July, 2011.

Dr. Lowson is an AIAA Fellow, Senior Fellow at the University of Bristol and the President of ULTra PRT, Bristol, U.K. He received the AIAA Aeroacoustics Award in June, and he previously has won awards from the Royal Aeronautical Society, The British Wind Energy Association, NESTA (UK), The Worshipful Company of Carmen, and others.

He says “I have always enjoyed being an engineer. After all, as Von Karman said, scientists discover the world that exists; engineers create a world that never was.” Lowson has been a member of AIAA for forty-seven years, and has worked on civil aircraft, rockets, jet engines, and helicopters, and more recently on sustainable urban transport systems. Lowson’s areas of special expertise are aeroacoustics and aerodynamics. Among Lowson’s many contributions to the field of aeroacoustics are his 1965 paper “The Sound Field for Singularities in Motion,” in which the basic theory for accelerated sources was derived. His 1969 papers “A Theoretical Study of Helicopter Rotor Noise,” and “Theoretical Analysis of Compressor Noise,” gave the first fundamental understanding of helicopter noise and also provided a variety of new insights into compressor noise. He was Chief Engineer on the design of the new BERP rotor system used on the Westland Lynx Helicopter, which set the present world speed record for helicopters back in 1986. Lowson says “The work Dave Hawkings and I did on this started with the intention of minimizing the radiated noise field from the high Mach number advancing blade, but we realized that the geometric blade design we

Dynamics Conference (and co-located conferences) in Honolulu, HI; the 41st International Conference on Environmental Systems in Portland, OR; the 47th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit in San Diego, CA, and the AIAA GNC/AFM/MST in Portland, OR.

#### 16–17 July 2011

##### [41st International Conference on Environmental Systems](#)

Portland, Oregon

- Space Environment and Its Effects on Space Systems

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

#### 4–5 August 2011

##### [AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit and the 9th Annual International Energy Conversion Engineering Conference](#)

San Diego, CA

- Electric Propulsion for Space Systems
- Hybrid Rocket Propulsion
- Liquid Propulsion Systems – Evolution and Advancements
- Pressure Vessel Design Requirements and Verification Guidelines
- A Practical Introduction to Preliminary Design of Air Breathing Engines

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

#### 6–7 August 2011

##### [AIAA Guidance, Navigation, and Control Conference](#)

##### [AIAA Atmospheric Flight Mechanics Conference](#)

##### [AIAA Modeling and Simulation Technologies Conference](#)

Portland, Oregon

- Aircraft and Rotorcraft System Identification: Engineering Methods and Hands-on Training using CIFER®
- Aircraft Handling Qualities
- Mathematical Introduction to Integrated Navigation Systems with Applications
- Modeling Flight Dynamics with Tensors
- Modern Missile Guidance
- Vision-Based Control for Autonomous Vehicles

[More Info](#) about these courses.

#### 18–19 September 2011

##### [11th AIAA Aviation Technology, Integration, and Operations \(ATIO\) Conference, including the AIAA Balloon Systems Conference and 19th AIAA Lighter-Than-Air Technology Conference](#)

Virginia Beach, VA

- [Missile Design and System Engineering](#) (18–19 September)
- [Fundamentals of Lighter-Than-Air Systems](#) (19 September)

#### 25–26 September 2011

##### [AIAA SPACE 2011 Conference & Exposition](#)

Long Beach, CA

- Introduction to Space Systems
- Systems Engineering Verification and Validation
- The Space Environment: Implications for Spacecraft Design

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

used to minimize the noise was simultaneously minimizing the transonic drag. This was certainly one of the crucial keys to winning the world speed record – and to a very effective rotor.”

His first job was as an apprentice at Vickers Armstrong’s Weybridge, where his first task on his first day in the factory was to assemble a beam for the Valiant bomb door rack. He says “starting at the bottom on the shop floor gave me unique insights into the aerospace business and engineering as a whole which have been really valuable over the years.” As a Post Graduate student he was part of the team from Southampton University, UK, which achieved the world’s first authenticated instance of human powered aircraft flight, when the team’s plane, the Southampton University Man Powered Aircraft (SUMPAC) took off at Lasham Airfield in November, 1961. Lowson says “driving the chase car with the whole team aboard as the aircraft took off for the first time was an incredible thrill.”

*(Pictured: Aeroacoustics Award recipient Martin Lowson (left) with Brian Testor (right) at the 17th AIAA/CEAS Aeroacoustics Conference in Portland, Oregon. Click image for larger version.)*

[Full Story >](#)

## Contact Us

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To learn more about these courses or to register visit [www.aiaa.org/courses](http://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!

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