

Gateway News



American Institute of Aeronautics and Astronautics, St. Louis Section

<http://www.aiaa.org>

<http://www.me.wustl.edu/ME/orgs/aiaastl/>

INSIDE THE SECTION

DECEMBER 2000

CHAIRPERSON'S REMARKS

'Tis the Season ... I hope everyone has a chance to relax and enjoy family and friends throughout the holidays. As such, the council has not scheduled dinner or technical specialist meetings in December.

We had an interesting November dinner meeting with Sandra H. Magnus (Ph.D.), a NASA Mission Specialist Astronaut. This was our first event held at Planet Hollywood in Laclede's Landing. Favorable feedback has been received from several people that attended. Let us know your thoughts on this venue or other places where we could hold meetings.

Do you remember where you were on 28 January 1986 when the space shuttle Challenger accident occurred? What did you think or feel? It is hard to believe that it has been fifteen years. Personally, my wife and I had been visiting her sister in Phoenix, AZ. We were about to leave for the airport when the television news flashes started interrupting the standard programming.

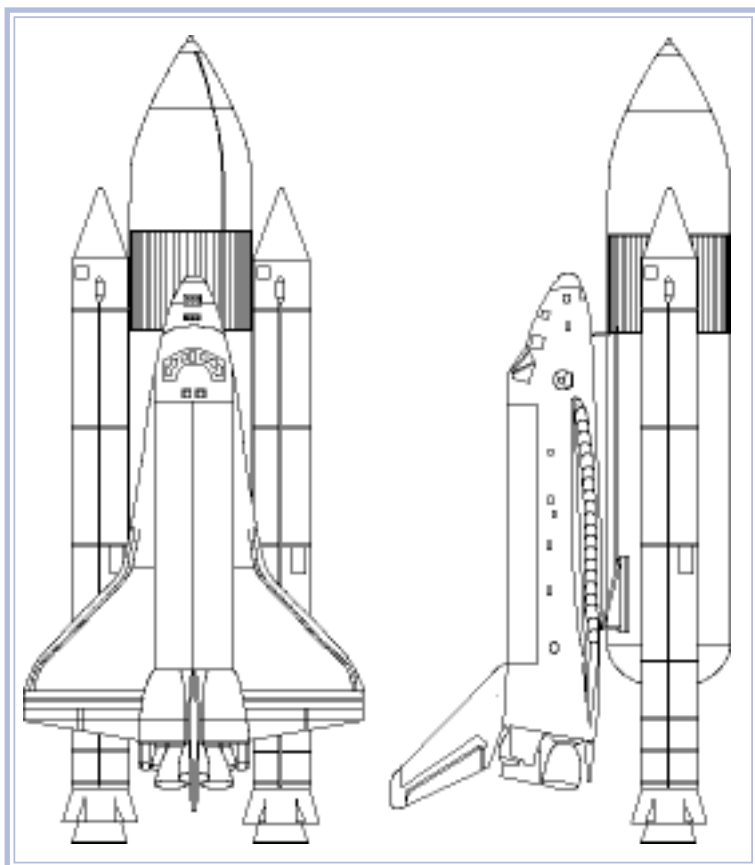
Our next section event is the 18 January 2001 dinner meeting featuring Allan McDonald, an AIAA Distinguished Lecturer. In 1986, Mr. McDonald was a Morton Thiokol director stationed at Cape Kennedy. His presentation entitled the "The Challenger Accident" is an up close and personal account of this national tragedy.

The end of the year is a good time to conduct personal assessments, make development plans, and hold performance appraisals. For many of us, career goals and interests include participation and advancement in professional societies. You can also find this information at <http://www.aiaa.org/information/professional/upgrades-pdf.html>. Please consider upgrading your AIAA membership, and feel free to contact members of the council for questions or references.

Happy Holidays!

Larry Brase

AIAA DINNER MEETING



THE CHALLENGER ACCIDENT

Featuring Mr. Allan J. McDonald, Science and Engineering Deputy and Technical Director with Thiokol Propulsion. Mr. McDonald was the Space Shuttle Solid Rocket Motor Project director at the time of the Challenger accident. He will address the attempts to delay the Challenger launch plus his experiences with the media, Presidential Commission, and Congress in the aftermath.

AIAA Dinner Meeting	Airport Marriott Hotel
Thursday	Social 5:00 - 6:00PM
January 18, 2001	Dinner 6:00 - 7:00PM
	Program 7:00 - 9:00PM

Purchase tickets prior to Jan. 15, add \$5.00 after.

Ticket Prices:

Members:	\$20.00	Non-members:	\$25.00
Students	\$15.00		

Ticket Sellers

John Mohr	567-3398	Public and Retirees
Mike Swartwout	935-6077	Washington University
Kay Bopp	977-8240	Parks College of St. Louis University
Fred Nelson	341-4613	University of Missouri-Rolla

International Space Station: The World's Project

Astronaut, Dr. Sandra Magnus, addressed a joint professional society meeting of 130+ members and guests at Planet Hollywood on the St. Louis Riverfront. Dr. Magnus grew up in Belleville Illinois and worked at McDonnell Douglas before joining the astronaut corps. She briefed the audience on current Space Station Alpha status and near term activities. Details of the additional Station elements and involvement of various nations were supplemented with a video.



Participating countries and elements are;
 United States and Russia are providing the central building blocks of the International space station plus truss structure and solar panels.

Canada will provide the next generation robotic arm that has the capability of moving to various external locations like a caterpillar.

European Space Agency provides the Columbus Orbital facility and automated transfer vehicle. The Columbus Orbital facility carries refrigerator size experiment packages while the automated transfer vehicle will be dedicated to logistics and propellant resupply.



Japan will provide a linked module that consists of a pressurized laboratory plus an unpressurized experiment platform

Italy is providing multipurpose logistics modules for delivery of pressurized payloads via the Space Shuttle

Brazil is planning to provide long-term space exposure platforms and remote sensing platforms.

Dr. Magnus wrapped up the briefing with questions from the audience.





U.S. Department
of Transportation
Federal Aviation
Administration

SELCE03FS63

FAA Aviation Safety Program Aviation Safety-Education Seminar

www.faa.gov/fsdo/stlfsdo

26th ANNUAL, ST. LOUIS AND SOUTHERN ILLINOIS SUPER SAFETY SEMINAR

SATURDAY, JANUARY 20, 2001

BOEING BUILDING 33, CORNER OF LINDBERGH AND McDONNELL BLVDS., HAZELWOOD, MO.

PROGRAM

0730-0800	DOORS OPEN - REFRESHMENTS
0800-0815	WELCOME and AWARDS
0815-0915	LISTENING TO YOU JOHN E. TURNER, FAA CENTRAL REGION ADMINISTRATOR, AND DIVISION MANAGERS.
0915-0930	CENTRAL REGION RUNWAY SAFETY PROGRAM DENNY LAWSON, CENTRAL REGION RUNWAY SAFETY PROGRAM MANAGER.
0930-0945	BREAK
0945-1045	MISSOURI AVIATION UPDATE BRIAN WEILER, MISSOURI DEPARTMENT OF TRANSPORTATION, ADMINISTRATOR OF AVIATION
1045-1145	BUMBLING ON BOTH SIDES OF ATC PAUL BERGE, EDITOR, IFR MAGAZINE
1145-1200	BREAK
1200-1300	LITTLE KNOWN FACTS ABOUT AERONAUTICAL CHARTS RICHARD NEHER, FAA AERONAUTICAL CHARTING OFFICE.

This program qualifies for safety meeting requirement of the FAA Pilot Proficiency Program - WINGS. Pilots who successfully qualify for a phase of Wings, need not accomplish a flight review (BFR). For additional information, contact the St. Louis Flight Standards District Office, 800-322-8876 extension 4835.

— sponsored by —

Acknowledgment of the sponsor is not an FAA endorsement of products or services
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GREATER ST. LOUIS FLIGHT INSTRUCTORS ASSOCIATION
MID COAST AVIATION THUNDER AVIATION
TRANS WORLD AIRLINES
BOEING AIRCRAFT CORPORATION

AIAA

“Evolution of Flight”

Trivia Night

31 March 2001

Doors Open 6:30 p.m.

Round 1 Begins 7:00 p.m. Sharp!

Hazelwood Community Center

**White Birch Park
1186 Teson Road
Hazelwood, MO**

The St. Louis Section of the American Institute of Aeronautics and Astronautics is sponsoring the program “Evolution of Flight” to inform, inspire and celebrate with high school students the wonders of flight. This fund-raiser will help pay for programs and field trips for the participating students.

Trivia Game

\$80 / Table

Maximum of 8 people per table

10 Rounds / 10 Questions

First Place Team wins \$160

Second Place Team wins \$80

**Gather your Team & Challenge
your Colleagues!!**

Reserve your table today!

Call Karen at (636) 272-6340 or

(314) 234-5742

e-mail at kkcopper@aol.com

Lightning Bonus Game

\$5 / Person (Purchase Night of Event)

3 Rounds / 10 Questions

Individual with most points wins 25% of

Lightning Bonus Game Jackpot!

Send \$80 check payable to AIAA to:

AIAA

c/o Karen Copper

1 Shaker Leg Court

O’Fallon, MO 63366-8480

**Terrific Attendance
Prizes!!!**

Volunteer Opportunities - 2001

January 20, 2001

AIAA/FAA General Aviation Pilot Safety Seminar
Contact: Jeff Larrick, 314-232.3455,
jeffery.c.larrick@boeing.com

February 18, 2001

Engineering Weekend at the St. Louis Science Center
Contact: Dave Morgan, 314-234.1919,
david.e.morgan@boeing.com

March 31, 2001

Evolution of Flight Trivia Night
Contact: Karen Copper, 314-234.5742,
kkcopper@aol.com

April 2001

St. Louis Science Fair Judging
Contact: Gary White, 636-925.4247,
gary.p.white@boeing.com

Behind the Scenes

As the year ends we thank the dedicated teammates behind the scenes that help produce this newsletter and program flyers.

Electronic publishing by Bob Sczesniak and Keith Wheeler

Flyer Graphics and pasteup by Steve Ratkowski

Proofreader Ed Jeude

Duplication and packaging by Tom Fleming and Crew

Internal & external mail distribution by Sue Hennessy and Jerry Schulte

The dedication and talents of these team members makes newsletter production possible.

Thanks for efforts and support!



Tom Fleming



Sue Hennessy and Jerry Schulte

Student Chapter News

Many local college students had the opportunity to visit the Boeing Flight Simulator facilities in October. Each attendee had a chance at flying some of the local aerospace products in various mission scenarios. All desired more "Stick-Time."

Parks College,

Ms. Becky Brocato, Chapter Chairperson

- About 10 student are working on papers for the Student Paper Conference in April. Professor Marty Ferman is shepherding students in this effort. Industry evaluators and critique are desired. If you can spare some time to assist in this effort, contact Marty Ferman, 314-542.0703.

- A group of senior design students are working on the AIAA Spacecraft Design Competition for the Mission to Venus. This challenging project will define the Venus Sample Return (VSR) architecture which is part of the NASA Discovery program. The objective is to define a mission architecture for collection and return of Venus soil samples. Read the project RFP at <http://www.aiaa.org/images/pdf/UgradSpaceRFP.pdf>. The midyear progress presentations took place 21 November. Dr. David Manor is looking for industry evaluators to assist with the year-end presentations in May 2001. If you could assist with project evaluations, contact: Dr. David Manor, 314-977-8441, <http://www.manord@slu.edu>.

Washington University,

Dr. Michael Swartwout, Faculty Advisor

- Student and AIAA members are supporting the NASA Connect (<http://connect.larc.nasa.gov/>) televised space science lesson. NASA Connect establishes the "connection" between the mathematics, science, and technology taught in the classroom and NASA research.

- AIAA student members assisted in filming some science web segments for the St. Louis Science Center aimed at middle school students. Students were on hand to answer questions about electricity and magnetism.

- The Washington University Chapter is actively seeking meeting speakers. If you have meeting ideas, suggestions, or have a topic in search of an audience, contact: Michael Swartwout, 314-935-6077, <http://www.mas@me.wustl.edu>.

Region V Candidate for Regional Director*

Laura Richard (Associate Fellow)

The Regional level of AIAA serves as an important transition between the members, the Sections, National, and Industry. The role of the Regional Director is to act as a conduit of information from National, to the sections, to the members and then back to National. In addition, the Regional Director must increase the value of AIAA membership to the Aerospace Professionals and to Industry.

My goal as Region 5 Director will be to promote communication among all membership levels. Enhanced communication will include the membership, regional Directors, section officers, and Industry. It is important that companies realize how membership in AIAA creates networking opportunities to enhance careers, leadership and management skills. As we transition into the 21st century it is imperative that AIAA continues to provide a framework for our membership.



Biography

-Senior Flight Analysts Lockheed Martin Titan Centaur Program

-Rehearsal Simulation Supervisor, Launch System Integration, responsible for the training, Contractor, for all Titan/Centaur launch vehicles. This role involves the coordination of over 300 people on both the East Coast and West Coast for all launch rehearsals. Responsible for the management and coordination of all Titan II and Centaur Vehicles Postflight Reviews.

BS Aerospace Engineering, San Diego State University, BA Environmental Science, University of California, Berkeley

AIAA Activities: Associate Fellow, Young Professional Committee: Chair, Institute Development Committee Liaison, Membership Committee Liaison, Deputy Director Region 5 (1997-present). San Diego Section: Chair, RAC 6 Representative, Vice Chair Planning, Vice Chair Technical, Treasurer, Young Professional.

* Disclaimer: This article is provided as a member service and information only. It does not constitute an endorsement of any candidate. Other AIAA office candidates are welcome and encouraged to display their credentials in this newsletter.

Congratulations to our AIAA Young Professional Award Winner.

Tom Mroczkowski of The Boeing Company, received the AIAA Young Professional Award, during the October dinner meeting. He was recognized for improvements in the Low Observable areas of Infrared (IR) signature design and analyses. His contributions to IR signature analyses have introduced a higher order of IR signature into the IRIMAGE design code and positioned it as the premier IR analysis tool in the community. Code enhancements include advanced IR materials and sophisticated optimization techniques. In addition, his team efforts to transition signature codes from a mainframe to the PC environment has resulted in considerable cost savings. A fine example of effective Lean Engineering applied to design analyses.



Do you think that Orville and Wilbur Wright imagined that in less than 100 years from their first flight, man would fly faster than sound? Airlines would span the globe and millions of passenger would travel to distant cities and lands? Man would walk on the moon or live in space?

AIAA is celebrating the advancements of aerospace since the Wright Brothers first flight December 17, 1903.

“Evolution of Flight” is a series of activities and events directed toward youth, our future visionaries in the flight sciences. Activities will include guest speakers, museum tours, flight contests and more. To learn more about “Evolution of Flight” visit the AIAA website at <http://www.flight100.org/index.cfm>.

Over the next three years many volunteer opportunities for AIAA members will be available to organize or participate in fund-raisers, activities and events. A Trivia Night is currently being planned for March of 2001. If you are interested in participating in the “Evolution of Flight” program, please notify Karen Copper, 314-234-5742 or e-mail her at kkcopper@aol.com.

Interesting Web Sites

<http://www.spaceflight.com/news/>
Spaceflight news, astronomy, and science.

<http://www.bester.com/satpasses.html>
Satellite, shuttle, Mir, and international space station observation times and azimuth for various U.S. cities.

<http://www.johnstark.com/publs>
Discount engineering books for Boeing employees through the intranet

<http://www.spacefuture.com/vehicles/designs.shtml>
Early space vehicle concepts plus X-prize entries

<http://www.webcreations.com/ptm/apr/apr.htm>
Aerospace Projects Review: A Journal Devoted to the Untold Tales of Aerospacecraft Design.

<http://www.t3magazine.com>
Magazine of new technology and gadgets

<http://www.fas.org/irp/mystery/>
Federation of American Scientist, secret project watch

<http://www.ae.gatech.edu/research/windtunnel/classes/dci01.html#Mission>
Design & Systems classes + lecture notes. Design centered engineering

<http://ae-www.usc.edu/bio/mikeg/spacecra/spacecra.html>
Spacecraft design resources & links to worldwide space agencies

<http://www.launchspace.com>
A magazine dedicated to the commercial space launch industry

Newsletter and meeting

announcements late?? The St. Louis section is working to cost-effectively speed announcements to our members. If you have an external Boeing e-mail address, please forward that to : dianne.chong@boeing.com and david.e.morgan@boeing.com. We are compiling an e-mail list for timely meeting announcements.

New address?? Forward newsletter address corrections to; David E. Morgan, Boeing m/c S106-7250, 314-234-1919, david.e.morgan@boeing.com

Meeting Topics and Ideas

Forward to Ray Cosner, 233-6481, raymond.r.cosner@boeing.com

American Institute of Aeronautics and Astronautics St. Louis Section 2000 - 2001 Council Roster

Office	Incumbent	Address	Telephone / Fax	E-Mail
Chairman	Larry Brase	MC S064-1092**	777-5586 / 777-5161	lawrence.o.braser-jr@boeing.com
Vice Chairman	Peggy Holly	MC S276-1009**	234-3513 / 234-5010	margaret.a.holly@boeing.com
Secretary	Mark Johnson	MC S064 1092 **	234-2692 / 232-7774	mark.j.johnson2@boeing.com
Treasurer	Karen Copper	MC S001 2700**	234-5742 / 234-2369	karen.k.copper@boeing.com
Advisors	John L. Mohr	11638 Summerhaven Dr. St. Louis MO 63146	567-3398	JLMohr@aol.com
	David A. Peters	Campus Box 1130 One Brookings Dr., St. Louis MO 63130	935-4337	dap@mecf.wustl.edu
	Walter J. Reschke	MC S064-3449	777-4038	walter.j.reschke-jr@boeing.com
	Charles R. Saff	MC S102-1322	233-8623 / 777-1171	charles.r.saff@boeing.com
Region V Rep.	Dianne Chong	MC S001 2700 **	232-9719/ 234-2369	dianne.chong@boeing.com
Committee	Chair	Address	Telephone / Fax	E-Mail
Arrangements	Karen Copper	MC S001 2700**	234-5742/ 234-2369	karen.k.copper@boeing.com
Attendance	Andrew Cary	MC S106-7126	234-1830	andrew.w.cary@boeing.com
Career Enhancement	Steve D'Urso	MC S064 2809 **	233-5441	steven.j.durso@boeing.com
Education	Marty Ferman	1452 Old Farm Dr. St. Louis, MO 63146	542-0703 / 997-8437	fermanma@slu.edu
Education	Rich Andres	4943 Crownover Dr. St. Louis, MO 63128	892-5117	andresm@aol.com
Historian	Fred Roos	MC S102 1431 **	234-9935 / 233-2918	frederick.w.roos@boeing.com
Honors & Awards	Catherine Sabinash	MC S270 4360 **	233-5113 / 234-0241	catherine.m.sabinash@boeing.com
Membership				
Newsletter	Dave Morgan	MC S106 7250 **	234-1919 / 777-1977	david.e.morgan@boeing.com
Pilot Education	Jeff Larrick	MC S102-2272	232-3455	jeffrey.c.larrick@boeing.com
Pre-College Outreach	Bill Bernzott	MC S064 2807 **	234-6271 / 234-0510	william.j.bernzott@boeing.com
Programs	Ray Cosner	MC S1067126 **	233-6481 / 777-1328	raymond.r.cosner@boeing.com
Public Policy	Dick Pinckert	MC S034 1126 **	234-0623	richard.e.pinckert@boeing.com
Publicity - Internal	Bruce Scheidhauer	MC S270 4360 **	233-0759 / 234-0241	bruce.r.scheidhauer@boeing.com
Service Projects	Gary White	MC S500 2025 **	925-4247 / 925-5853	gary.p.white@boeing.com
Tech. Specialist Mtg.	Joe Stemler	MC S106 7250	232-3362 / 232-3820	joseph.n.stemler@boeing.com
Webmaster	John Donigan	MC S064 1426 **	234-4103 / 777-1139	jdonigan@swbell.net
Young Members				
Young Professional Awards	Ron Smith	MC S106 2103 **	232-4671/ 232-1454	ronald.e.smith@boeing.com

** Boeing Address: The Boeing Company, P.O. Box 516, St. Louis, MO 63166

December 2000

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AIAA FUTURE EVENTS

JANUARY DINNER MEETING

THE CHALLENGER ACCIDENT



Featuring
Allan McDonald

Thursday
January 18, 2001

Airport Marriott Hotel

Social 5:00 - 6:00PM
Dinner 6:00 - 7:00PM
Program 7:00 - 9:00PM

GENERAL AVIATION SAFETY SEMINAR



Saturday, January 20, 2001
Time: 0730 to 1400

Boeing Building 33,
Lindbergh & McDonnell Blvd.
Main Cafeteria