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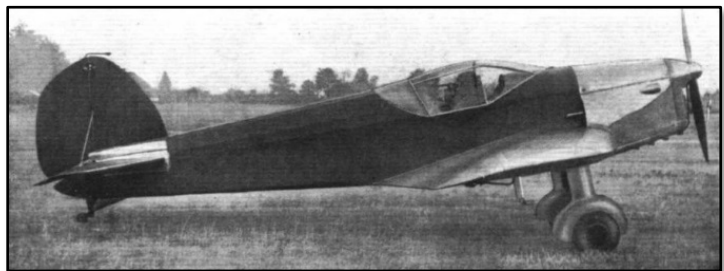
Chair Chat

St. Louis Section Chair- Jim Guglielmo

Welcome to the February issue of the St. Louis AIAA Section newsletter, which will highlight both January and February events, and provide information for programs coming up in the last half of February and in March.

We had a very successful dinner meeting in January that was co-sponsored with the Boeing REACH organization, and included an excellent presentation by Dr. Jim Paunicka on Autonomous Systems. We also welcomed back two Boeing retirees, Don Bingaman and Chris Rice, for a Technical Specialist meeting around the topic of climate change, and an aerospace-related approach to help reduce near-term global temperatures.

Since this is the month of February, I will share some Valentine's Day aircraft-related trivia. According to Wikipedia, the British Aircraft (B.A.) Manufacturing Company followed up on the success of their first aircraft, the Eagle, with the design of a similar but smaller (and slower) version called the B.A. III Cupid. The Cupid was a low-wing, two-seat, single-engine aerobatic aircraft, had a fixed landing gear, and was



<http://aviadejavu.ru/Images6/FT/FT1935/09/271-2.jpg>

powered by a 130 hp de Havilland Gipsy Major inverted inline engine. The aircraft was targeted at the touring and club training market, and first flew in 1935. Unfortunately, only one aircraft was ever built. It was flown in the 1935 King's Cup Jubilee Race by John Armour, and then sold the following year to South Africa. And finally, although he is not an aerospace engineer but instead a physicist and philosopher, one of my favorite quotes from Albert Einstein: "*Gravitation cannot be held responsible for people falling in love.*"

As always, if you have any questions, recommendations, or suggestions for events, please email me at james.j.guglielmo@boeing.com or call 314-452-1271. And if you are interested in either volunteering on the Council or at an event, we welcome your help.

Thanks!

Jim Guglielmo

History in Aviation: January

Historian - Colin Thiele

11 January 1935 - Amelia Earhart becomes the first pilot to fly solo between Hawaii and the United States, with a flight time of 18 hours 15 minutes in a Lockheed Vega 5C.

14 January 1942 - The XR-4 completes its first flight. Developed by Sikorsky, it was the first helicopter to be mass produced and the first helicopter accepted by the U.S. military.



XR-4 by Sikorsky

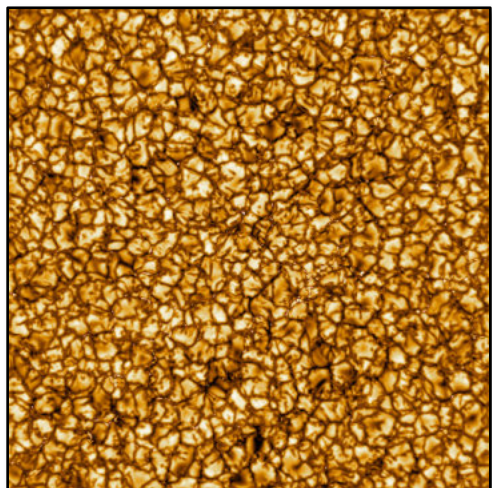


Concorde Supersonic Airliner

21 January 1976 - The first passenger services by the Concorde supersonic airliner are flown with British Airways and Air France flights taking off simultaneously for Bahrain and Rio de Janeiro.

31 January 1958 - Explorer 1, the first United States satellite, is launched into orbit.

Aerospace Link of the Month



New solar telescope produces highest resolution taken ever of the sun's surface! The Daniel K. Inouye Solar Telescope sits on the summit of Haleakala, Maui in Hawaii.

<https://www.sciencedaily.com/releases/2020/01/200129131449.htm>

Featured Council Member of the Month!

YP Council Member – Tyler Brammeier



Tyler Brammeier is a structural design engineer with The Boeing Company. For the past year, he has supported engineering modifications and maintenance design changes for legacy F/A-18, T-45, and AV-8B planes in the global services division. Tyler is currently transitioning to a new role with a defense program.

Tyler received a bachelor's degree in mechanical engineering from Purdue University in 2014 with a minor in global engineering. He is currently pursuing his master's degree in mechanical engineering at Washington University in St. Louis. Prior to working at Boeing, Tyler spent 5 years at John Deere. There he worked in the global advanced research and development group designing, building, and testing innovative combine harvester technology in environments around the world.

Tyler and his fiancé Sarah are getting married this summer. Tyler enjoys cheering on the Cards, Blues, and Boilermakers. He also spends time helping out on his family's farm in southern Illinois, travelling, and cooking.

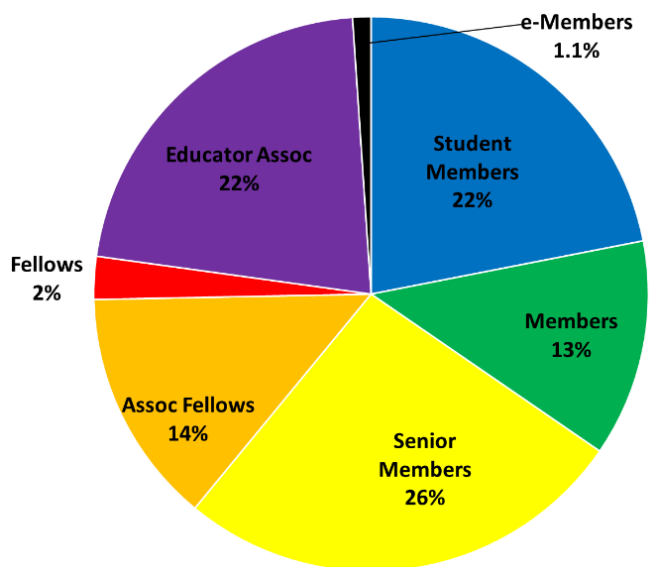
Membership Report

Nic Moffitt, Alex Friedman – Membership Chairs

The Section membership is at 578 members. The distribution breaks down as shown in the table below and the pie chart at the right.

Type	Number
Professional	321
Student	135
Educator Associate	122

If you want to help someone get connected with AIAA events in St Louis, please pass along a couple of social media groups related to our St. Louis Section. We advertise our events on Facebook through the group "[I Fly St Louis](#)" and through the Boeing inSite group "[AIAA – St Louis Section](#)". Both of these groups are free to join and do not require AIAA membership. Please feel free to forward any membership questions to [Nic Moffitt and Alex Friedman](#).



Please Note: AIAA Associate Fellow and Fellow Nominations Due in Three Months

If you are looking to be nominated for Associate Fellow or Fellow, the nominations are due in April 15 and June 15, respectively. The nominations take several weeks to put together, and you will need to find a Nominator and several References. If you are interested in being nominated, please contact Nic Moffitt or Alex Friedman.

Technical Specialist Meetings: Wind Tunnel Series

Technical Specialist Chair- John Schaefer



Don Bingaman, John Schaefer, and Chris Rice

On Tuesday, February 4, the section was joined by Don Bingaman and Chris Rice for this month's Technical Specialist meeting. Their presentation was a more detailed briefing of the recent AIAA SciTech Paper 2020-0618, entitled "A Stratospheric Aerosol Injection Lofted Aircraft Concept: SAIL-01." Don and Chris introduced compelling material about the current state of global climate change and the urgency required to delay (and ultimately reverse) its effects. They also proposed a near-term solution to reduce global temperatures by flying a fleet of high-altitude aircraft which disperse small, inert, and inexpensive particulates into the atmosphere. The physics of this idea – called "Geo Engineering the Atmosphere" – were explained, and an aircraft design was proposed to carry out the mission. Don and Chris have over 80 years of combined experience in aircraft design, and the practicality of their proposed aircraft has received concurrence from other experienced individuals in the field.

AIAA/REACH January 2020 Meeting

Abby Sevier/Bob Dowgwillo- Newsletter/Dinner Meetings Chair

On January 16th, REACH and AIAA hosted their annual dinner meeting at Ferguson Brewery. Over 50 attendees came to see Dr. Jim Paunicka speak on Autonomous Systems. The dinner meeting was a great success, with Dr. Paunicka giving an excellent overview of the current Unmanned Aerial Systems (UAS) in the aerospace industry, future disruptive technologies, and also highlighting the excellent opportunities to get involved with AIAA at both the section and national level. An engaging question and answer session followed the presentation as well as the raffle of the apt door prize, a small drone. The AIAA St. Louis Section and REACH thank Dr. Paunicka for his time and great presentation!



(L) Dr. Jim Paunicka presenting on current Unmanned Aerial Systems (UAS); (R) Bob Dowgwillo (Programs Chair), Jim Guglielmo (Section President), Dr. Jim Paunicka (Speaker), Molly Kaufman, Matt Poetting, Abby Sevier (REACH)

Upcoming Events – 2020

- **February 19th:** AIAA Table at Engineer's Week Boeing Opportunity Fair
 - **February 21st:** AIAA Table at the Engineer's Club of St. Louis Career Fair
 - **February 27th:** Dinner Meeting / Student Branch Engagement, Washington University
 - **March 17th:** Technical Specialist Meeting, Co-Axial Rotorcraft Presentation by Cory Seidel
 - **March 19th:** Dinner Meeting/Educator Associates Recognition, Challenger Center Tour
 - **March 20th:** Young Professionals Networking Social
 - **April 23rd:** Dinner Meeting – Hypersonics
 - **April 28th:** Technical Specialist Meeting, Active Flow Control / Shape Memory Alloys Lecture (Part 1)
 - **April 29th:** Judging at the St. Louis Science Fair
 - **April 29th:** Spring into STEAM
 - **April 30th:** Aviation Day for Teachers
 - **May 14th:** Technical Specialist Meeting, Tour of the Boeing Active Flow Control Lab (Part 2)
 - **May 21st:** Annual Honors and Awards Dinner – Orlando's
 - **End of May:** Young Professional's Tech Presentation Fair
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2020 Academy of Science - St. Louis Science Fair

The 2020 Academy of Science - St. Louis Science Fair is quickly approaching, with judging for the student projects to be held on Wednesday, April 29th, at the Queeny Park Greensfelder Recreation Complex from 10:00 am to 11:30 am. Please see the following website for more information: <https://www.sciencefairstl.org/>

For the last 10+ years, the St Louis AIAA Section's Service Projects Committee has been proud to review aerospace related projects from students from K-12, and provide nominal monetary awards to those students who have demonstrated thoughtful originality combined with the rigors of proving their aerospace related hypotheses.

If you would like to serve as a judge for this event, please contact Brad Sexton at 314-232-7826 or bradley.w.sexton@boeing.com. Previous experience is not needed, and as you can see from the pictures below, you'll be part of putting a smile on a future aerospace engineer!



Images Courtesy of the National Academy of Science

Making a Change?

Are you graduating and moving? Planning to retire soon? Making a career move? If you are leaving the St. Louis Section area, please update your AIAA profile, so you will continue to receive accurate AIAA correspondence.

Go to "My AIAA" (<http://www.aiaa.org/myAIAA>) and, upon logging in, go to "My Account" and select "Edit Contact Info."

AIAA St. Louis Section Website & Twitter Account

Please see the AIAA St. Louis Section website for more information about upcoming events, announcements, and discussions: <https://engage.aiaa.org/stlouis/home>

The AIAA St. Louis Section now has a Twitter account! Please follow us at [@StLAIAA](https://twitter.com/StLAIAA)



*Come with me and you shall see, my
pretty one,*

*The wonders of the moon and stars
and of the sun;*

We'll sail above the world, my love,

*Into the blue in my aeroplane that's
built for two,*

Just me and you.

Doherty, E. Jay, "Of Planes They Sang!", Flying and Popular Aviation, February 1942, page 100.

<https://www.sil.si.edu/ondisplay/music/images/SIL7-10-028.jpg>

AIAA St. Louis Section Council

Office	Officeholder	Telephone	Email
Chair	Jim Guglielmo	314-452-1271	james.j.guglielmo@boeing.com
Vice Chair	Mark Kammeyer	314-234-9497	mark.e.kammeyer@boeing.com
Secretary	Ben Reuter	314-542-2490	benjamin.j.reuter@boeing.com
Treasurer	Alec Herzog	314-545-5219	alec.n.herzog@boeing.com
Advisor	Bob Dowgwillo	314-234-1013	robert.m.dowgwillo@boeing.com
Advisor	Srikanth Gururajan	314-977-8355	srikanth.gururajan@slu.edu
Advisor	Dave Peters	314-935-4337	dap@wustl.edu
Advisor	Chris Tavares	314-777-4663	christopher.m.tavares@boeing.com
Region V Rep.	Thomas Rehmeier	314-232-2986	thomas.r.rehmeier@boeing.com

Committee	Chair	Telephone	Email
Career Workforce Development	Paul Bent	314-712-0660	Paul.Bent@boeing.com
Education & College Outreach	Charles Svoboda	314-545-2363	charles.svoboda@boeing.com
History	Colin Thiele	----	Colin.thiele@slu.edu
Honors & Awards	Chelsea Fuller	314-232-9349	chelsea.m.fuller@boeing.com
Membership	Nic Moffitt Alex Friedman	314-234-3864 636-206-9196	nicholas.j.moffitt@boeing.com alexander.friedman@boeing.com
Newsletter	Abby Sevier	314-563-6542	abigail.e.sevier@boeing.com
Programs – Dinner Meetings	Bob Dowgwillo	314-234-1013	robert.m.dowgwillo@boeing.com
Programs – Tech Specialist	John Schaefer	314-232-9331	John.a.schaefer3@boeing.com
Public Policy	Frank Youkhana	314-234-4811	frank.w.youkhana@boeing.com
Publicity	Andrea Martinez	314-232-3062	andrea.martinez3@boeing.com
Retirees	Ray Cosner	----	ray.cosner@outlook.com
Service Projects	Brad Sexton	314-232-7826	bradley.w.sexton@boeing.com
STEM	Jackie Blumer	----	jblumer@bccu2.org
Strategic Planning	Larry Brase	314-234-4907	lawrence.o.brase-jr@boeing.com
Webmaster	Jim Guglielmo	314-452-1271	james.j.guglielmo@boeing.com
Young Professionals	Stephen Clark	314-545-9509	stephen.f.clark3@boeing.com

If you are interested in joining one of the committees, please contact the AIAA St. Louis Section Chair, Jim Guglielmo, or the committee chairperson.



THE AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS (AIAA) & THE AIAA
SPACE SYSTEMS TECHNICAL COMMITTEE (SSTC)

INVITE YOU TO PARTICIPATE IN THE

2020 SSTC STUDENT ESSAY CONTEST



THEME:

"How advanced can you envision space technology and exploration through the next 50 years? What do we need to do NOW to achieve that?"

REQUIREMENTS:

- Typewritten essay, double-spaced, Times New Roman, 12 pt. font, in 1,000 words or less
- Include student name, teacher's name, grade, and school name printed at the top of the essay
- Submit essay to your local section via email, with student **and** teacher's: name, phone, email, and mailing address for notification and awards in the body of the email

JUDGING CRITERIA:

1. Originality of ideas presented
2. Soundness of logic used to develop ideas
3. Realism of ideas presented
4. Quality of composition and clarity of expression

NATIONAL PRIZES:

1st place will be awarded \$125, 2nd place will be awarded \$75, and 3rd place will be awarded \$50. Winners are publicly announced in the September issue of Aerospace America magazine.

ELIGIBILITY:

Any seventh or eighth grader (or equivalent).

DEADLINE:

Final submission deadline to local AIAA section officers is March 31, 2020. Local winners and their teachers will be notified in April. National winners and their teachers will be notified in May.

QUESTIONS:

Email Jackie Blumer jblumer@bccu2.org



American Institute of Aeronautics and Astronautics
St. Louis Section

Wednesday, February 12, 2020

Boeing Building 100 Auditorium
6300 James S McDonnell Blvd,
Berkeley, MO 63134

Young Professionals Career Development Panel



Ed Gerding
VP & Senior Chief Engineer
*BDS Structures &
Mechanical Systems*



GJ Miller
Air Vehicle Director
*T-7A Advanced Pilot
Training System*

Come learn from some of the top leaders in the aerospace industry! Our panelists account for many years of aerospace research, development and design, with experience in:

- engineering management
- technical leadership
- academia

Panelists will provide perspectives on their career paths, lessons learned and thoughts on the industry's future. Come ready with questions!



Laurette Lahey
Senior Director
*BR&T Flight and
Vehicle Technology*



Ramesh Agarwal
William Palm Professor
of Engineering
Washington University

Schedule

5:00-5:30 Social/ Networking
5:30-7:00 Panel discussion / Q&A

Menu

Snacks/Drinks

Tickets

Free

Reservation by 12 noon Monday, Feb 10

Send reservation by email*: stlaiaa@gmail.com

Contact [Steve Clark](#) for questions

* In RSVP email, please include names and # of non-Boeing attendees

