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Chair Chat

St. Louis Section Chair- Jim Guglielmo

Welcome to the December issue of the St. Louis AIAA Section newsletter. Late November and December were busy months for our section with multiple Technical Specialist and Dinner Meetings. The Technical Specialist meetings featured a two-part series format, with a technical presentation on wind tunnel testing followed a few weeks later with a tour of the Boeing Polysonic Wind Tunnel. The two-part presentation / tour format was extremely successful, and we are looking at duplicating this format in the spring with another presentation and tour of a lab facility at Boeing. The Member Appreciation Event was also well attended, and featured several retired McDonnell Douglas / Boeing employees who shared stories and lessons-learned from their careers. All of these events require a lot of time and effort to plan and execute, so your attendance is always appreciated.



With the holiday season upon us, this time of the year can mean different things to different people. For me, it is a time to be thankful for all the blessings in my life, and for the friends and family that have been there through the good times and the difficult times. It is a time to watch black and white movies with Fred Astaire, Ginger Rogers, and Bing Crosby, and listen to holiday music by a warm fire with a cup of hot cocoa. It is a time to share with family, remember those who are no longer with us, and to help those less fortunate and in need. It is a time for giving rather than receiving, but also a time for hope.

I wish you all the best for a safe and healthy holiday. 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!

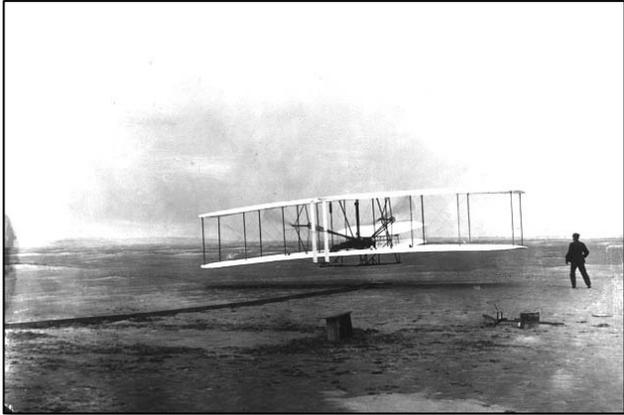
Jim Guglielmo

History in Aviation: December

Historian - Colin Thiele

1 December 2001 - TWA flight 220 is the ceremonial last flight of TWA. The flight was from Kansas City to St. Louis, with CEO Captain William Compton at the controls of a MD-80.

4 December 1991 - Pan Am World Airways goes out of business after 64 years of service.



17 December 1903 - Orville and Wilbur Wright became the first to demonstrate that sustained flight of a heavier-than-air, aircraft under control of a pilot is possible. Orville piloted the first flight, for a time of 12 seconds and covered a distance of 120 feet.



Christmas Eve 1968 - The crew of Apollo 8, Frank Borman, Jim Lovell and Bill Anders enter into orbit around the Moon, becoming the first humans to do so. This was televised on what is famously referred to as “The Christmas Eve Broadcast to Earth.”

Aerospace Link of the Month



Electric ACCEL Aircraft:

Rolls Royce unveils new electric aircraft demonstrator with YASA and Electroflight.

<https://aviationweek.com/business-aviation/rolls-royce-unveils-all-electric-accel-aircraft>

Featured Council Member of the Month!
Section Vice President – Dr. Mark Kammeyer

Dr. Mark Kammeyer is an Associate Technical Fellow with The Boeing Company. As part of the Test & Evaluation organization in St. Louis, Mark supports company wind-tunnel tests at both company and external facilities. Over his 30-year career, Mark has tested in Boeing, NASA, USAF, USN, and international facilities covering the low-speed, transonic, supersonic, and hypersonic flow regimes.

Mark received a bachelor's degree in Aerospace Engineering from the University of Oklahoma in 1984. He then obtained a master's degree from the University of Maryland in 1986. While his master's degree emphasized rotorcraft, upon graduation he accepted a job at the Naval Surface Weapons Center in their hypersonic wind tunnel and has worked in wind tunnels ever since. While at NSWC, Mark performed test engineering in their hypersonic wind tunnel. He also earned his PhD in Mechanical Engineering at The Catholic University of America; his dissertation studied correlations between wall-pressure and velocity fluctuations in turbulent boundary layers.



After ten years working for the Navy, in 1996 Mark joined McDonnell Douglas and moved to St. Louis. In his 23 years with McDonnell and Boeing, Mark’s interests have centered on wind-tunnel data quality and uncertainty analysis, statistical methods, force-measurement instrumentation, and test methods development. Says Mark, “I like working in a wind tunnel because I can see shock waves almost every day.” Mark joined AIAA as a student in college. A long-time member of the AIAA Ground Testing Technical Committee, Mark assisted with the publication of several standards documents related to wind-tunnel testing and uncertainty quantification.

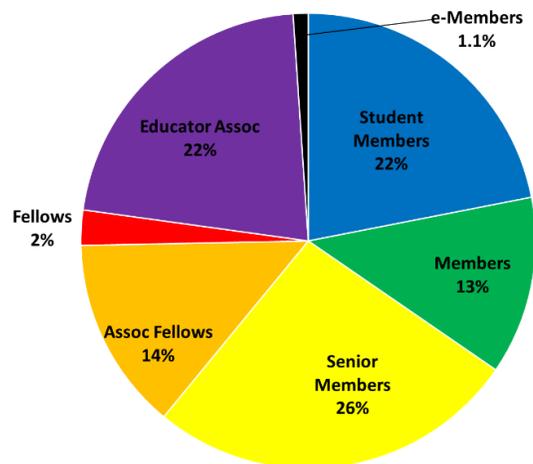
Mark and his wife Janet have three children, sons Paul and Michael and daughter Elise. He likes to camp, hike, and play cribbage.

Membership Report

Nic Moffitt – Membership Chair

The Section membership is at 561 members. The distribution breaks down as shown in the table below and the pie chart at the right.

Type	Number
Professional	316
Student	123
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](#).

Congratulations to the 2020 AIAA Associate Fellow Class!

AIAA has elected 133 members as the Associate Fellow class of 2020. We would like to congratulate the two members from the St Louis Section who have been elected to the grade of Associate Fellows in the Institute. Associate Fellows must be a Senior Member when nominated, but Associate Fellow is not given purely for years of service to AIAA. On the contrary, Associate Fellow is an honor given for notable and valuable contributions to the art, sciences, or technology of aeronautics or astronautics, along with service to AIAA and the profession.

Here is a short description of the contributions made by both of our new Associate Fellows:

- **Todd Michal** was nominated for his accomplishments as focal and team leader for development of CFD grid technologies. Todd started with McDonnell-Douglas 33 years ago and is now a Technical Fellow in Boeing Research & Technology. Todd has developed tools for topology-based automated mesh generation, hybrid structured / unstructured meshes, and anisotropic solution-adaptive meshing methods. These tools are used by over 200 engineers and on nearly every military, space, rotorcraft, and commercial program in Boeing.
- **Rene Woszidlo** was nominated for his accomplishments in the field of flow control actuators and applications. Rene is the technical lead of the active flow control team in Boeing Research & Technology. Before joining Boeing in 2015, Rene was a Visiting Assistant Professor at the University of Kansas and a postdoctoral researcher at the Technical University of Berlin.

Congratulations to the AIAA Associate Fellows Class of 2020!

And, thank you to their nominators and those who wrote references for these nominees. These members would not have received this honor without your effort and time.

Technical Specialist Meetings: Wind Tunnel Series

Technical Specialist Chair- John Schaefer

On November 21, Boeing Technical Fellow Mat Rueger gave a presentation entitled “A Practical Guide to Wind Tunnel Testing.” He discussed many of the considerations which must be made for modern wind tunnel testing, including Reynolds number effects, manufacturability of test articles, and support from computational fluid dynamics simulations. Mat’s decades of experience in the field has given him an excellent historic perspective on the evolution of wind tunnel testing and its goals over time, which he conveyed to the audience. The event was very well received, with over 80 people in attendance.

On December 10, the November wind tunnel presentation was followed up with a tour of the Boeing Polysonic Wind Tunnel (PSWT), a 4-ft x 4-ft wind tunnel located near Lambert Airport. The tour was originally scheduled to be given by Mark Kammeyer, Boeing Associate Technical Fellow; however due to the popularity of the event, three additional tour groups were established, led by PSWT staff members Tom VonHatten, Rob Spencer, and Rob Whiting. Many attendees from the November Technical Specialist event also attended the tour. In total, the event was limited to 80 attendees due to the capacity limitations of the PSWT facility.



John Schaefer & Mat Rueger

AIAA December 2019 Meeting

Brad Sexton– Service Projects Chair

The AIAA St. Louis Section held a combined Dinner Meeting / 9th Annual Member Appreciation Event on December 12, 2019 at Orlando’s Event Center in Maryland Heights, MO. Nearly 60 people attended the event.

Mr. Ray Cosner led a panel of McDonnell Douglas / Boeing retirees as they shared stories and lessons- learned regarding “Making Tactical Aircraft – Stories from the Trenches”. During the evening, the panelists discussed the unique challenges they faced in their careers and in bringing platforms such as the F-15, F/A-18, and KC-46 to fruition.



The Panel of Speakers From left to right: Don Althen, Hoyt Wallace, Carol Evans, Charley Saff, Ray Cosner, Section Chairman Jim Guglielmo

Prior to the panel presentation, the St. Louis Section’s Class of 2020 associate fellows, fellows, and longtime members were recognized and presented with a lapel pin specifically designed for the St. Louis section. Additionally, long time members (25, 30, 35, 40, 45, 50+ years of membership) were presented with a unique “Challenge Coin” specifically designed for the St. Louis Section. The St. Louis section’s goal is to have two membership appreciation events every year; one event for new members and one event recognizing the longtime members.



St Louis Section AIAA Associate Fellows and Fellows, from Left to Right: Wayne Nathanson (Associate Fellow), Rich Wlezien (Fellow), Rene Wozidlo (2020 Associate Fellow), Ed Whalen (Associate Fellow), Todd Michal (2020 Associate Fellow), Section Chairman Jim Guglielmo (Associate Fellow)



St Louis Section AIAA Long Time Members, from Left to Right: Wayne Nathanson (61 years), Harlan Ashton (35 years), Rich Wlezien (40 years), Todd Michal, (34 years), Section Chairman Jim Guglielmo



The AIAA Members Intently Watch the Presentation



Bob Dowgwillo presented Larry Brase with the Night's Raffle Prize

This event also affords the St. Louis Section an opportunity to participate in the Toys for Tots campaign. Through your generosity, we were able to amply fill the box with toys which will then be delivered to the US Marine Corps drop-off site for distribution to children in need.



Upcoming Events – 2020

- **January 16th:** REACH / AIAA Dinner Meeting – “Unmanned Aircraft Systems: Past, Present, & Future” with Dr. Jim Paunicka
- **January 29th:** Young Professionals Career Development Panel
- **February 11th:** Technical Specialist Meeting – Electric Propulsion
- **February 20th:** Dinner Meeting / Student Branch Engagement
- **March 10th:** Technical Specialist Meeting
- **March 19th:** Dinner Meeting/Educator Associates Recognition, Challenger Center Tour
- **April 14th:** Technical Specialist Meeting
- **April 23rd:** Dinner Meeting
- **May 14th:** Technical Specialist Meeting
- **May 21st:** Annual Honors and Awards Dinner

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

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



<https://wallpapertag.com/winter-snow-scenes-wallpaper>

Winter is the time for comfort, for good food and warmth, for the touch of a friendly hand and for a talk beside the fire. it is the time for home.

Edith Sitwell

AIAA St. Louis Section Council

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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.



Thursday, January 16th, 2020

Sky Room at Ferguson Brewery

418 S Florissant Rd,
Ferguson, MO 63135

Unmanned Aircraft Systems: Past, Present, & Future

Presented by Dr. Jim Paunicka, AIAA Associate Fellow
Sponsored by AIAA St. Louis Section & Boeing's REACH Organization

Join us for a brief history of unmanned systems, unmanned aircraft systems (UAS) today, the state of UAS technologies, UAS challenges, and the future of UAS.

Dr. Jim Paunicka, PE, is a subject matter expert in unmanned systems and autonomy, with decades of experience in industry. He has served as Principal Investigator on over a dozen DARPA, Air Force Research Laboratory, and Office of Naval Research programs in areas such as autonomy, manned-unmanned teaming, multi-vehicle teaming, embedded air vehicle software, verification and validation, and avionics systems. Dr. Paunicka is active as a member of the AIAA Unmanned Systems Integration Committee and the AIAA unmanned aircraft systems (UAS) Standards development team, the Immediate Past Chair of the AIAA Software Technical Committee, and is the Vice Chair and founding member of the AIAA Aerospace Cybersecurity Working Group.



Schedule

5:00 – 5:45 pm – Sign-in / Social
5:45 – 6:30 pm – Buffet Dinner
6:30 – 8:00 pm – Presentation / Q&A
8:00 – 8:30 pm – Networking

Menu

BBQ Pulled Pork
Seasonal Vegetables
Bistro Potatoes
House Garden Salad
Cash Bar

Cost

\$20 Regular
\$15 Educator Associates
\$10 Students

AIAA membership is NOT required to attend this event.

Reservation Deadline:

12 Noon, Monday, January 13th

Reservation Contact:

Send reservation by email*: stlaiaa@gmail.com

*In email, please include name, # of tickets, and specify if you are a REACH member

Door Prize!





American Institute of Aeronautics and Astronautics
St. Louis Section

Wednesday, January 29, 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*



Kevin Wise
Distinguished Senior
Technical Fellow
Advanced Flight Controls

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	Menu	Tickets
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5:00-5:30	Social/ Networking	Snacks/Drinks	Free
5:30-7:00	Panel discussion / Q&A		

Reservation by 12 noon Monday, January 27

Send reservation by email*: stlaiaa@gmail.com

Contact [Steve Clark](#) for questions

* In email, please include name and # attendees
RSVP's appreciated, but not required

