



Summer 2019 Newsletter

Contributors:

Angela Diggs, Chi Mai, Judith Sherrill, Ryan Sherrill

Angela Diggs and Chi Mai, Editors

SUMMER IS HERE!

Lifetime Memberships

Did you know that you can purchase a lifetime AIAA membership for fifteen times the current professional dues? That may not be as much as it sounds, if you consider that dues increase over time and as your membership grade advances. (Associate Fellows and Fellows pay higher annual dues!) Paying for a lifetime membership early in your career can actually save you money in the long run, and guarantees your access to full membership benefits. Additionally, AIAA has payments plans that let you spread the full cost over 2, 4, or 8 installments. The Northwest Florida Section currently has 16 lifetime members—consider adding your name to the list when you renew this year!

Not quite ready for a lifetime membership? Check out special rates for the following groups:

- *Student-to-Professional Transition:* This option slowly increases your dues to 25%, 50%, 75%, and then 100% of the professional dues over a four-year span.
- *Spouse:* This option allows one member to pay full dues and their spouse to pay half the professional rate. What's the catch? You only get one copy of *Aerospace America*!
- *Retired / Return to Full-time Study / Unemployed:* Have you found yourself in a new phase of life? Contact AIAA to pay half the professional rate if you're retired, returning to full time study, or unemployed.

What are you waiting for? Join or renew today!

<https://www.aiaa.org/membership>

UP FRONT

AIAA Engage

WHY am I getting so many emails?

If you're asking yourself this question (or if you've already set up an email filter), here's the scoop:

- AIAA recently transitioned from a Sharepoint format to the Engage platform
- The new Engage site is easier to navigate and manage and is meant to encourage interaction!
- Northwest Florida Section can be found here: <https://engage.aiaa.org/northwestflorida/home>

Want to opt-out of those daily emails?

- Log in to Engage: <https://engage.aiaa.org/home>
- Click your avatar in the upper right, select Profile, My Account, and Email Preferences.
- Under "Communities," select "Manage Opt-Out List". You can select the communities you wish to hear from (like Northwest Florida!) but ensure other (like the Open Forum) are not selected.

IN THIS ISSUE

Lifetime Memberships / Up Front	1
Upcoming Events, Dates, and Deadlines	2
Announcements & News	3
Field Trip to FAMU-FSU	4
Apollo 11 Social / University of West Florida	5
SETP-AIAA-SFTE Joint Symposium / Member Prof ...	6
About the Section / Section Officers & Chairs	7

UPCOMING EVENTS, DATES, AND DEADLINES

National

[AIAA Fellow Nominations](#)

15 June 2019—Nominations Due

15 July 2019—References Due

Nominations are being accepted for Associate Fellows to be promoted to AIAA Fellow.

“An AIAA Fellow shall be a person of distinction in aeronautics or astronautics, and shall have made notable and valuable contributions to the arts, sciences or technology thereof.”

[AVIATION 2019](#)

17-21 June 2019—Dallas, TX

Early Bird Registration ends 27 May 2019

[Propulsion & Energy Forum 2019](#)

19-22 August 2019—Indianapolis, IN

Early Bird Registration ends 28 July 2019

AIAA SPACE sessions will be held at this forum

[70th International Astronautical Congress](#)

21-25 October 2019—Washington, D.C.

Early Registration ends 30 June 2019

Regional

[AIAA NEXT GEN Technical Symposium](#)

9-10 September 2019 —Huntsville, AL

The Greater Huntsville Section is hosting its annual regional technical symposium with technical sessions, keynote speakers, panel discussions, and workshops.

If you're interested in presenting, abstracts are due July 19, and no paper is required. Senior professionals are needed to volunteer as session chairs, judges, and mentors.

Section

Executive Council Meetings

2nd Monday of the month, 11:00 am

Bamboo Sushi Bar & Hibachi Express, Niceville, FL

If interested in attending, please let us know by e-mailing nwfl.aiaa@gmail.com so that we can inform you of any changes to the meeting.

Distinguished Lecture: Eugene Fleeman

11 June, Doolittle Institute, Niceville, FL

11:30 am—12:30 pm: “Missile Design, Development, and System Engineering” technical lecture

1:30 pm—3:00 pm: “Soda Straw Rocket Science Design, Build, and Fly Competition”, hands-on STEM activity open to professionals and students!

Professional Development Lunch & Learn Series

AIAA, ASME, SWE, and AFWiSE have teamed up to host monthly lunch-and-learn lectures for career enhancement and professional development.

14 June, Dr. Janet Wolfson, AFRL/RW, ASME

1130-1200, Doolittle Institute, Niceville, FL

Work-life balance is a constant struggle for busy professionals. Join us as Dr. Wolfson presents some strategies for managing both!

July - open for topics—contact us if you'd like to speak or have a request for topics.

15 August, Ms. Shere Tuckey, AFRL/RW, AFWiSE

1130-1200, Doolittle Institute, Niceville, FL

With so many demands on our time in various areas of work and home, how do you say “no” to keep things manageable?

ANNOUNCEMENTS & NEWS

National

2019 AIAA Aerospace Spotlight Awards Honorees

- AIAA Goddard Astronautics Award
John L. Junkins, Texas A&M University
- AIAA Reed Aeronautics Award
Philippe R. Spalart, The Boeing Company
- AIAA Distinguished Service Award
Klaus D. Dannenberg, AIAA (retired)
- AIAA Public Service Award
Pamela A. Melroy, Melroy & Hollett Technology Partners and Nova Systems
- AIAA Lawrence Sperry Award
Katya M. Casper, Sandia National Laboratories



2019 AIAA Foundation Educator Achievement Awards:

- **Charlotte Cook**, Carver Magnet School in Little Rock, Arkansas
- **Patricia Palazzolo**, Upper St. Clair High School in Upper St. Clair, Pennsylvania
- **Megan L. Tucker**, Hillsboro Charter Academy in Hillsboro, Virginia

Section

FIRST Robotics in the News

The AIAA Northwest Florida Section has been a strong supporter of the FIRST (For Inspiration and Recognition of Science and Technology) robotics program for many years. In addition to section members serving as coaches, mentors, and judges, the section was granted a FIRST STEM Equity grant in 2017 that has supported numerous FIRST LEGO League and FIRST LEGO League Jr. teams in Title I schools across 16 counties of the Florida panhandle.

Some of the FIRST LEGO League teams have been highlighted in the local news:

Paxton School:

<https://www.nwfdailynews.com/news/20190412/paxton-students-to-attend-lego-league-expo>



Bay County School District:

https://www.mypanhandle.com/video/students-learn-about-stem-using-legos_20190521232749



FIELD TRIP TO FAMU-FSU

The AIAA Northwest Florida Section (AIAA NWFL) in conjunction with the Junior Force Council of the Air Force Research Laboratory Munitions Directorate (AFRL/RW JFC; Eglin AFB) hosted a field trip to Florida A&M University and Florida State University (FAMU-FSU) in Tallahassee, FL. AIAA NWFL invited mechanical engineering students from the University of West Florida (UWF) to start a relationship with the goal of standing up a new AIAA student branch at UWF. In addition to AIAA NWFL members, 6 AFRL/RW members, 7 UWF students, 4 FAMU-FSU faculty/staff, and 9 FAMU-FSU students attended the events.

In the morning, the group toured the **National High Magnetic Field Laboratory**, which is the largest and highest-powered magnet laboratory in the world. The laboratory houses several magnets, the most powerful of which is a 45-tesla magnet. The laboratory is funded by the National Science Foundation and the State of Florida, and the facilities are available to researchers free of charge. The group saw how the magnets are designed, constructed, cooled, and used. At the end of the tour, each person received a Bitter electromagnetic disc from a used magnet.



(UL) Kristin Roberts, public affairs director of the National High Magnetic Field Laboratory, explains how the magnets are designed and built.

(LR) group photo

The group then had lunch hosted by the section with the **AIAA FAMU-FSU student chapter**. This allowed AIAA NWFL members, AIAA FAMU-FSU students, AFRL/RW JFC members, and UWF students to have informal conversations and network. Following lunch, a short NWFL Section meeting was held with announcements on upcoming events and member promotions. AIAA NWFL member and AFRL/RW JFC president Judith Sherrill gave an overview brief of the AFRL Munitions Directorate to faculty and students and highlighted faculty and student opportunities to work with AFRL.



Three **FAMU-FSU design teams** presented short briefs on a liquid rocket engine, NASA student launch competition project, and an in-space thruster design.



The group then toured the **experimental aerodynamic facilities** that are part of the multi-university consortium Florida Center for Advanced Aero-Propulsion. These facilities include a polysonic wind tunnel, subsonic wind tunnel, short take-off and vertical landing test facility, and hot-jet test facility. The group also toured the robotics laboratory where research on bio-inspired robotics is performed.



APOLLO 11 SOCIAL

The Northwest Florida Section had a night out at the movies to watch original footage from Apollo 11 with a dinner afterwards. This year marks the 50th Anniversary of the 20 July 1969 spaceflight and moon landing.



UNIVERSITY OF WEST FLORIDA

Daniel Bradley and Chi Mai met with interested professors and students at the Fort Walton Beach branch of the University of West Florida to discuss starting a new AIAA student branch. The UWF FWB campus is not currently served by any other professional society, so AIAA could fill a niche need in the Department of Mechanical Engineering.



SUMMER-INTERN MENTORING TIPS

Hosting a summer intern? Here a few tips from AFRL intern pros Dr. Jennifer Talley and Dr. Kaitlin Fair.

DO

- *Have a plan.* Then have a backup plan. Then have a backup to your backup plan.
- *Create tangible milestones.* Prepare for a broad spectrum of skill levels. Break up a project into smaller steps, and have follow-on work in mind.
- *Balance between clear project goals and open-ended research questions.* Give them space to ask their own questions and develop research skills, but offer enough guidance such that they don't feel lost.
- *Explain the "why" of your research.* Give a non-government reason that they are doing the work they are assigned. These students chose a DoD internship because they want to contribute to our country.
- *Allow mentees to work together on projects.* This is good training for later when they have to work on teams. It also gives them space to bounce ideas off one another and push each other to excel.
- *Be flexible.* The summer isn't all about you or the research. Interns are people too. They are giving up a summer vacation to work for you. And in theory, you'd like for them to maybe want to work for your organization in the future. Offer opportunities for fun.

DON'T

- *Assume they want to be there.* They may have been pushed into it. But that doesn't mean it can't be a good experience. Learn what motivates them.
- *Give up on your student(s).* If they don't accomplish tasks on their own the first time, assess and adapt. Ask for their feedback. Try a different approach.
- *Hide the work struggle.* Recognize the bureaucracy, but don't let it get in the way. Make time with your interns a priority.
- *Assume they can drive.* Some students don't need a personal vehicle where they go to school.

SETP-AIAA-SFTE JOINT SYMPOSIUM

1 March 2019

Ryan Sherrill

On March 1, 2019, The Society of Experimental Test Pilots, the American Institute of Aeronautics and Astronautics, and the Society of Flight Test Engineers hosted the 12th Annual SETP Southeast Section Symposium.

Dr. Ryan Sherrill, AIAA Northwest Florida Section Career Development and Young Professional Chair, was a co-host for the event and chaired the morning session. Over a dozen technical talks were presented on a range of topics including adaptive autopilots, world record attempts, helicopter performance, and the need for open dialog in the industry to prevent loss-of-life accidents.

This joint event is a direct result of the AIAA Northwest Florida Joint Professional Society mixer held 6 months prior, which brought together members from around Eglin AFB to connect and foster professional relationships.



MEET A MEMBER

Kevin Diggs

In this newsletter, we meet Kevin Diggs, our section's Treasurer since 2017.

Interested in being featured in a future newsletter? Let us know nwfl.aiaa@gmail.com.



What is your current organization and primary job responsibility?

I work for AFLCMC/EBJ as the lead systems engineer for the Hypersonic Conventional Strike Weapon (HCSW) program.

How did you get started in aerospace?

I got interested in airplane spotting in high school and knew I was going to Georgia Tech and decided Aerospace Engineering was a promising future. It worked out.

What are you excited about in aerospace's future?

Hybrid propulsion systems and to see the US return to the Moon or execute a manned mission to Mars.

What do you like to do in your free time?

I have free time? Little League and Cub Scouts

Education:

B.S.: Georgia Tech, 2005 (Aerospace Engr.)

M.S.: Georgia Tech, 2007 (Aerospace Engr.)

ABOUT THE SECTION

The Northwest Florida Section of the American Institute of Aeronautics and Astronautics, Inc. (AIAA NWFL) is home to 289 members (as of May 2019): 124 professionals, 141 educator associates, and 24 students.

The section spans 24 counties across northern Florida from Pensacola to north of Jacksonville. These counties are: Escambia, Santa Rosa, Okaloosa, Walton, Holmes, Washington, Bay, Jackson, Calhoun, Gulf, Gadsden, Liberty, Franklin, Leon, Wakulla, Jefferson, Madison, Taylor, Hamilton, Suwanee, Lafayette, Columbia, Baker, and Nassau.

Most of the aerospace-related activities in the AIAA NWFL section are at military installations in the western panhandle.

Officer/Chair E-mail:

nwfl.aiaa@gmail.com

Facebook:

<https://www.facebook.com/groups/NWFL.AIAA/>

Twitter: @AIAANWFL

Engage (under construction):

<https://engage.aiaa.org/northwestflorida/home>

EXECUTIVE OFFICERS

Chair

Chi Mai

chilnmai@gmail.com

Vice Chair

Angela Diggs

angela.diggs.1@us.af.mil

Secretary

Micah Reese

reesemn@gmail.com

Treasurer

Kevin Diggs

kevin.diggs@us.af.mil

COMMITTEE CHAIRS

Program Chair

Eugen Toma

tomaeugen@icloud.com

Technical Chair

Eric Robertson

e.rob08@gmail.com

Membership Chair

Jill Barfield

jillyolandabarfield@gmail.com

Career Enhancement/Young Professionals Chair

Ryan Sherrill

ryan.e.sherrill@gmail.com

Education/Pre-College Outreach Chair

Judith Sherrill

judithabsherrill@gmail.com

Honors & Awards Chair

John Fay

john.fay.3.ctr@us.af.mil

Public Policy Chair

Michael Kelton

michael.kelton.1@us.af.mil

Communications Chair

Daniel Bradley

danlbradley@outlook.com

AIAA NWFL Facebook Group

AIAA NWFL has transitioned from a Facebook page to a Facebook group! We hope this is a more engaging way to communicate than e-mails and the Share-Point site. Like us and contribute!

<https://www.facebook.com/groups/NWFL.AIAA/>

AIAA NWFL is now on Twitter!

Follow us at <https://twitter.com/AIAANWFL>

AmazonSmile and AIAA NWFL

Shop at Amazon.com? Try AmazonSmile with your Amazon.com account and 0.5% of the price of eligible AmazonSmile purchases can go to AIAA NWFL!

<http://smile.amazon.com/ch/59-3105873>

End of the Year Banquet



The AIAA NWFL section celebrated the end of the 2018-2019 AIAA year with its first annual banquet. Thanks to all who attended!