



Winter 2017 Newsletter

Contributors:

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Chi Mai, Editor

AIAA ANNOUNCEMENTS

National Elections

The voting period for AIAA national elections is open until 31 March 2017. This is the first election under AIAA's new governance model. Members will elect the first President-Elect for the new Board of Trustees and the first class for the new Council of Directors.

Positions open for voting are:

- President-Elect
- Technical Directors:
 - ◊ Aircraft, and Atmospheric Systems Group
 - ◊ Engineering and Technology Management Group
 - ◊ Space and Missiles Group
- Director, Region II (that's our region!)

To vote, visit <https://www.aiaa.org/BODvote/>.

Membership Advancements

Nominations/references are being accepted for the grades of Associate Fellow, Fellow, and Honorary Fellow.

Visit <http://www.aiaa.org/AdvanceYourMembership> for requirements and forms. Contact our Membership chair at nwfl.aiaa@gmail.com for assistance.

Associate Fellow: Nom by 15 Apr, Refs by 15 May

Fellow/Hon. Fellow: Nom by 15 Jun, Refs by 15 Jul

Award Nominations

Nominations are open for several national AIAA awards and are due 1 July. For more information, visit <https://www.aiaa.org/OpenNominations/>.

UP FRONT

Section Elections

AIAA NWFL sections elections are upcoming. All officer and chair positions (listed on the last page) are 2-year terms and are accepting nominations.

To nominate yourself or another section member, e-mail nwfl.aiaa@gmail.com with the nominee's name and nominated position by 31 March.

Facebook Page

AIAA NWFL now has a Facebook page! We hope this page is a more engaging way to communicate than e-mails and the SharePoint site. Like us and contribute!

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

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UPCOMING EVENTS, DATES, AND DEADLINES

National

National Elections

Voting Closes: 31 Mar 2017

Membership Advancements

Associate Fellows

Nominations Due: 15 Apr 2017

References Due: 15 May 2017

Fellows & Honorary Fellows

Nominations Due: 15 Jun 2017

References Due: 15 Jul 2017

Award Nominations

Nominations Due: 1 Jul 2017

DEFENSE 2017

25-27 Apr 2017—Laurel, MD

Early Bird Registration Deadline: 14 Apr 2017

AVIATION 2017

5-9 Jun 2017—Denver, CO

Early Bird Registration Deadline: 15 May 2017

Propulsion and Energy 2017

10-12 Jul 2017—Atlanta, GA

Registration Opens: 13 Mar 2017

Early Bird Registration Deadline: 19 Jun 2017

SPACE 2017

12-14 Sep 2017—Orlando, FL

Registration Opens: 22 May 2017

Early Bird Registration Deadline: 22 Aug 2017

SciTech 2018

8-12 Jan 2018—Kissimmee, FL

Open for Abstract: 27 Mar 2017

Abstract Deadline: 12 Jun 2017

Regional

Region II Student Conference

Mississippi State University, Starkville, MS

Mar 20-21 (Mon-Tue), 2017

This spring, the Mississippi State University AIAA Student Branch will host the annual Region II Student Conference. AIAA student members at the undergraduate and graduate level from regional campuses will present and compete technical papers.

Professional members are encouraged to attend and volunteer to judge. For more information, visit <https://region2.aiaastudentconference.org/>.

Section

Executive Council Meetings

Bamboo Sushi Bar & Hibachi Express, Niceville, FL

2nd or 3rd Tuesday of the month, 11:30 am

All AIAA NWFL members are welcome to attend. 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.

Section Officer & Chair Nominations

AIAA NWFL sections elections are upcoming. All officer and chair positions (listed on the last page) are 2-year terms and are accepting nominations.

To nominate yourself or another section member, e-mail nwfl.aiaa@gmail.com with the nominee's name and nominated position by 31 March.

Section Professional Meetings

Planned topics of upcoming section professional meetings are:

- March: Speed Networking
- April: Distinguished Lecture

RECENT EVENTS

“Respect the Unstable” Lecture

Benjamin Dickinson

The AIAA NWFL section hosted a technical lecture event with a special showing of the seminal, 1st Heinrich Bode Lecture, “Respect the Unstable,” delivered by Bode Award recipient Guenter Stein at the IEEE Conference on Decision and Control in 1989.

“Respect the Unstable” emphasizes that the practical, physical, and sometimes dangerous consequences of control must be respected, and the underlying principles must be clearly and well taught. Instability examples include the Chernobyl disaster and the X-29 aircraft.

The event was held in November 2016 at the UF REEF Auditorium in Shalimar and attended by 15 local aerospace professionals.



Attendees listen to the seminal, 1st Heinrich Bode Lecture.

3-Phase Optimal Design for Sensitivity Testing

John Fay

John Fay, an AIAA Associate Fellow and NWFL section member, presented to AIAA NWFL members a talk on three-phase optimal design for sensitivity testing. The method is a way to specify points for reliability testing so that as much information as possible is gained with a limited number of trials. The event was held in July 2016 at The Boathouse Landing in Valparaiso.

MEET A MEMBER

John Fay

What is your current organization?

My current employer is Odyssey Systems Control Group; I work on the EPASS contract at Eglin AFB. I have been with Odyssey since 2015 and have been at Eglin AFB since 1985, except for a few years spent working for a NASA contractor in Huntsville, Alabama in the early 1990s.



Education:

A.A.: Anderson Junior College, 1976

B.E.S.: Georgia Tech, 1979

Ph.D.: Princeton University, 1985

How did you get started in aerospace?

From my childhood I was fascinated with fluid flow. I also had a deep love for mathematics which was helped by my parents buying me Martin Gardner’s mathematical games books. When I learned of the new field of computational fluid dynamics in the late 1970s, I felt it a combination made in Heaven for me. CFD, as it is better known, was the subject of my PhD dissertation.

After graduating from Princeton I taught for a semester at Cuttington University College in Suakoko, Liberia for a semester—very badly, I think (you don’t take a fresh PhD and put him in front of a classroom of 90 Remedial Mathematics students). I left Liberia after five months due to a combination of illness and political instability. Since then I have managed to give occasional seminars and talks as part of my job, at AIAA meetings, and as part of the AIAA’s education outreach program. I sometimes refer to myself as a “frustrated mathematics professor.”

OUTREACH

AIAA Student Branches

FSU REU Field Trip to Eglin AFB

Angela Diggs, written by Chi Mai

In July 2016, AIAA NWFL invited two groups of summer undergraduate researchers and their faculty advisors to tour Eglin Air Force Base and the Air Force Armament Museum. The student researchers were participating in a National Science Foundation Research Experience for Undergraduates (NSF REU) hosted by the Florida A&M University-Florida State University College of Engineering.

Professor Chiang Shih, chair of the mechanical engineering department, sponsors the Multi-physics of Active Systems and Structures (MASS) REU program.

Professor Okenwa Okoli, chair of the industrial and manufacturing engineering department, sponsors the Retaining Engineers Through Research Entrepreneurship and Advanced-Materials Training (RETREAT) REU program. Professor Okoli also hosts the Diversity in Research and Engineering of Advanced Materials Training (DREAM) program, which is sponsored by the Air Force Research Laboratory's Munitions Directorate at Eglin AFB.

Twelve students from the REU-MASS program and nine students from the REU-RETREAT and DREAM programs had an engineer's tour of the Air Force Armament Museum, went to lunch with AIAA NWFL members and Eglin AFB scientists, and toured facilities of the Air Force Research Laboratory's (AFRL) Munitions Directorate.

For more information about the REU programs noted in this article, their websites are listed below.

REU-MASS: <http://www.ame.fsu.edu/node/81>

REU-RETREAT: <http://www.eng.fsu.edu/retreat/>

DREAM: <http://www.eng.fsu.edu/dream/>



FSU REU students tour the Air Force Armament Museum.



AIAA NWFL members meet FSU REU students for lunch.



FSU REU students tour quadcopter lab at UF REEF.

OUTREACH (CONT.)

K-12

Engineers as Educators

Angela Diggs

The AIAA NWFL Section hosted an Engineers as Educators event in October 2016 at the Okaloosa County STEMM Center in Valparaiso. The workshop was co-hosted with the Air Force Association (AFA) and provided a chance for STEM professionals and educators to mingle and get hands-on training for four STEM lessons. The engineers and educators broke into teams to tackle each lesson over the three-hour training session.

AIAA Educator Associates Rick Soria and Karen Sledge taught the lessons with support from other local Educator Associates. AIAA Senior Member Angela Diggs coordinated event invitations, RSVPs, and breakfast.



Engineers as Educators workshop attendees work on the “Water Rockets” lesson.



Engineers as Educators workshop attendees work on the “Hot Air Balloons” lesson.



Engineers as Educators workshop attendees work on the “Balloon and Chemical Rocket Cars” lesson.

OUTREACH (CONT.)

K-12 (cont.)

FIRST LEGO League Coach's Training Workshop

Written by Chi Mai

In October 2016, the Doolittle Institute hosted a FIRST LEGO League coach's training workshop at Addie R. Lewis Middle School in Valparaiso. Coaches from Lewis Middle School, Calvary Christian School, and Wright Elementary attended the workshop to learn how to equip students as problem-solvers by using engineering design strategies and tools while creating mission solutions in robotics.

The AIAA NWFL section provided a \$400 grant matched by Doolittle Institute for \$800 total to supply LEGO MINDSTORMS EV3 Core and Expansion kits, servos, and sensors to coaches that attended.



FIRST LEGO League Coach's Training Workshop attendees using LEGO MINDSTORMS EV3 robots.

FIRST Robotics Competition Kickoff

Written by Chi Mai

In January 2017, the Doolittle Institute hosted the kickoff for the FIRST Robotics Competition at the UF REEF Campus in Shalimar.



FIRST Robotics teams at the competition kickoff at UF REEF.



Robotics demonstrations at the competition kickoff.



John Fay, AIAA Associate Fellow, and Tom Browder, president of the Northwest Florida Linux Users Group, supporting the kickoff.

OUTREACH (CONT.)

K-12 (cont.)

Science Night at Paxton School

Written by Angela Diggs

The AIAA NWFL section supported Paxton School's Science Night in November 2016. The Science Night was held during a home basketball game and included many STEM lessons, a flight simulator, and a hands-on rocket demonstration. Students collected tickets for completing STEM lessons to be entered into a raffle for a Sphero robot.

AIAA NWFL provided the Sphero robot, AIAA Associate Fellow John Fay presented the hands-on rocket activity, and USAF pilot Justin Elliott manned the flight simulator activity. AIAA Educator Associate Heather Stewart and her fellow teachers coordinated the successful event.



AIAA NWFL provided the Sphero robot door prize at Paxton School's Science Night.



USAF pilot Justin Elliott presents the flight simulator activity.



Students look at where their rockets went during the hands-on rocket activity.



Science Night attendees participate in a hands-on rocket activity.

ABOUT THE SECTION

The Northwest Florida Section of the American Institute of Aeronautics and Astronautics, Inc. (AIAA NWFL) is home to about 240 members (as of Jan 2017): 125 professionals, 94 educator associates, and 21 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/NWFL.AIAA>

SharePoint:

https://info.aiaa.org/Regions/SE/NW_FL/default.aspx

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VACANT—Open for Volunteers!

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Alternatively, use this direct link to set up: <http://smile.amazon.com/ch/59-3105873>