

Minutes of Meeting

Time & Date: 7:00pm, Thursday, Feb 18, 2021 (Next meeting is scheduled for March 18th, 7 pm)

- Zoom Meeting: <https://aiaa.zoom.us/j/95963441809?pwd=TjdUODZQSnRlQkl2amlRaEdSNEo5dz09>
- or call: 877-853-5257 US Toll-free or 888-475-4499 US Toll-free
- Meeting ID: 959 6344 1809 / Passcode: 910506

AIAA-NE online information:

- LinkedIn: <https://www.linkedin.com/company/aiaa-new-england>
- Website: <https://engage.aiaa.org/newengland/home>

Attendees: Charlie Wilson, Endri Lesha, Gary Wolfe, John Blandino, Krystina Walters, Umanga Balasuriya, Banafsheh Seyedaghazadeh, Bob Shin, Christian North, Connor Walsh, James Sherwood, Lynne Oliver, Naveen Sri Uddanti, Peter Dentch, Connor Miholovich, Thomas Stagliano, Hiro Endo

Apologies: Joe Vornehm, Allison Tsay

Highlights:

Three activities are so successful that we could submit articles to *Aerospace America*. These are the Aerospace Robotics Competition, WPI/AIAA jet engine project and our set of Sustained Achievement Awards. Allison Tsay has organized three teams from New England for this year's competition, with more showing interest for next year's competition. Hiro Endo has worked with students at WPI on a two-year project to design a diagnostic and control assembly for their WREN 75 miniature jet engine. The council voted to fund that effort. Charlie Wilson is obtaining Sustained Achievement Awards for twelve members contributing for 10 years or more.

1. Opening Remarks & Administration (Charlie)

- Welcome Naveen to AIAA-NE. Naveen is looking forward to getting more involved with AIAA-NE. He is currently participating as a mentor for ARC.
- Regional Activities – Charts from the Feb 4th Regional Advisory Committee meeting are available. Charlie reported that AIAA-NE is very active. We are in the top 3 of the 14 sections in the region. We have 1002 of the 7165 members in the Region I which runs from Virginia to Ontario to Labrador.
- If any council members are interested in taking AIAA professional courses, please let the council know. In the first of these, Allison took a Sustainable Aviation short course last October. She presented a 37-chart summary of what she learned from the sessions.
- Excellent talk by Dr. Maris' talk "Perspectives on (aerodynamic) drag" on Feb 18 - 400 attendances.
- Reporting on membership – Steady.
- Special guests:
 - WPI Jet Engine Team Leads (Peter Dentch, Connor Walsh, Connor Miholovich).
 - The team presented their proposal and application for funding to the council.
 - The students are developing a control system and a test stand for a small jet engine, which will be used as a demonstration stand at WPI and AIAA events (e.g. Collings Foundation Day).
 - Students are currently testing existing subsystems and learning about the jet engine. They would like to work on the project as soon as they have the funding approved.
 - Planning to give a Zoom presentation in the future. Also a good candidate for an article for *Aerospace America*.
 - Tom asked about safety measures and offered some advices on the topic.
 - The budget proposal was approved by Charlie, Gary, and Hiro (in Dave's absence).
 - A cheque will be issued for \$3500 to support the student's project (attached copy of the student presentation).

- Bob Shin (MIT-Lincoln Laboratory) and the Beaver Works Summer Institute
 - Dr Shin described the MIT-LL Beaver Works Summer Institute (BWSI) – 4-week STEM program for high school juniors. It started in 2016, is offering 13 courses in 2021 for an estimated 300 students 2021 from across USA (~30% from NE region). Typically the program has two phases, on-line sessions in the student’s selected course followed by the four week hands-on summer institute for successful graduates of the on-line sessions. Because of covid, both phases will be delayed virtual this year.
<https://beaverworks.ll.mit.edu/CMS/bw/bwsi>
 - BWSI has many projects, including a competition for students to design and build a cubeSat from \$250 worth of parts. This is its 4th year. A typical mission for the CubeSat is imaging-related. For example, detecting plastic in the ocean (2020), or penguins on Antarctica (2021). When in-person, the course incorporates simulated flights over a zip line at the Woods Hole Oceanographic Institute. Students have to control the satellites remotely as it flies over a target.
 - Bob proposed a joint AIAA-BWSI pilot program for this fall’s *Build-a-CubeSat* challenge for high school student on a regional or national scale, depending on the participation. Target is 10-20 teams (50 to 100 students). Virtual challenge. Team registration by September 15, access to BWSI online courses from October to Nov, weekly office hours, technical mentor support, hardware shipped to selected teams in early October, Final Competition (virtual presentations) in mid-December.
 - AIAA will be collaborating with BWSI & helping with the promotion for next year’s competition.
 - Prof. John Blandino offered to be the liaison from the council to BWSI. He also inquired if BWSI could consider expanding the offer to college students – It looks like a very interesting opportunity for college students.

2. Reports by Committee Chairs & Volunteers:

- Website/LinkedIn (Hiro)
 - Promotion for MIT Beaver Works Summer Institute.
 - Congressional Visit Day CVD will be virtual. We continued to promote it.
 - Cross-promotion of AIAA Webinar on Feb 8th : Sustainability in Flight—Our Journey to Decarbonization.
 - Cross-promotion of Perspectives on (aerodynamic) Drag by Dr. John Maris (Royal Aeronautical Society - Montreal) on Feb 18th.
- Expenditures
 - Expenses:
 - \$1000 for awards trophies (x1) for long time contributors.
 - \$2000 for ARC drones for student-teams and mentors.
 - Total this year is \$4600 so far (budget is \$11,000)
- Aero-Robotics Competition - ARC (Allison)
 - We have 3 teams so far – Kicked off the competition.
 - She could not join the meeting tonight. Anticipate more news & updates perhaps next month.
- Upcoming Zoom Webinars
 - Late March – Hiro planning to set up a student presentation by WPI High Power Rocket Club.
 - April 5/8, NASA talk from BU (Hiro to ask Prof. Grace about the talk).
 - April 27th, Dr. Deborah Douglas on the new MIT museum.
 - Other Future Zoom Candidates:

- Lauren Trollinger may be able to link us into one or more Vertical Flight Society [was American Helicopter Society] zooms.
 - A Distinguished Lecturer.
 - Dr. Elad Kivelevitch (Mathworks): AIAA Intelligent Systems TC.
 - WPI Jet Engine Project Team – Student Presentation.
 - WoAA at MIT and WPI.
- STEM Outreach (Endri)
 - \$250 grants activities:
 - We have two recipients.
 - Allan Muller (Sherwood Middle School) thanked AIAA for the funding. AIAA funding was a life support for the Robotics Program...
 - Received an inquiry from a school in Maine.
- STK Project (Endri)
 - Endri is working on getting certified – he is in the final stage.
 - It will be good if he can demonstrate what he has learned – make a map of AIAA-NE region?
- College Outreach (Tom Phoenix Robbins)
 - Tom volunteered to actively participate.
 - Christian North (Middlesex Community College, MCC):
 - AIAA-NE checked with HQ that we can fund their activities after receiving and reviewing a proposal.
 - However, MCC advised Christian that it would prefer him and students to do the work through the school-supported funds before requesting the AIAA fund.
 - Prof. John Blandino asked if AIAA-NE can sponsor students who are interested in presenting (or attending) the AIAA virtual conferences (\$20/student). Council agreed to do so and will consider funding other costs.
- Charlie volunteered to remind students of the special projects funding we have available to supplement our traditional funding of the Design/Build/Fly competition and Regional Student Paper Conferences (9-10 April) which will be held virtually this year.
- WoAA / WPI Student Branch (Krys)
 - New leadership team coming in soon.
 - Planning joint events between WPI AIAA and WoAA.
- Diversity, Equity & Inclusion (Charlie)
 - Objectives: Increase diversity of council and membership, fund \$250 grants and build teams for the ARC.
 - Established a collaboration with the Aerospace Special interest Group of the National Society of Black Engineers. No responses. Continuing to search out different groups.
 - Interested in funding projects for underprivileged schools – but so far no inquiries!
- Honors & Awards (Charlie)
 - Sustained Achievement Awards being prepared for another eleven long-time contributors. At James' suggestion one will be for Eugene Niemi's family.
- New business:
 - Working on March newsletter.
 - Continue Green Engineering activity.
 - CVD on March 19th: Dave (NH), Endri (MA).

- Tom will lead an effort to build collaborations with state science teachers associations. Volunteers needed.
- In-person events are all off until COVID lifts:
 - Pratt & Whitney Hangar Museum Tour
 - Collings Foundation Day
 - Red Sox game

3. Other

- Next council meeting on March 18, 7:00pm-8:00pm.