

STEM K-12 Outreach Award 2017-2018

Section Name: Greater Huntsville **Name of Person Submitting:** Naveen Vetcha

Section Size Category: Very Large **Section Officer Position:** Chair

The Harry Staubs STEM K-12 Outreach Award is presented to sections that have developed and implemented an outstanding STEM K-12 Outreach program that meets the general goals of the AIAA, such as 1) increasing Educator Associate membership, 2) recognizing Educator performance, and 3) increasing the number of actively engaged members, particularly in the area of STEM K-12 outreach.

Format: Submissions may be no longer than 12 pages with 12 point font. Pictures are encouraged to support the description. Documents will be accepted as Word or PDF.

Educator Associates:

Number of Educator Associates as of date of report: 130 (Increase of 40 from 16-17)

Please detail any teacher recognition that the section has participated in. *Examples: AIAA Foundation Educator Achievement Award nomination, local teacher of the year, section award, special service citations.*

Each year, the Section presents the [Konrad Dannenberg Educator of the Year Award](#) during the Annual Awards Dinner. The award is named for Mr. Konrad Dannenberg, a German-American rocket pioneer who was an avid proponent of education, an active member of the AIAA and an inspiration to the aerospace community. This year's award winner, Dr. Brian Landrum, was announced by Mr. Dannenberg's widow, Mrs. Jacquelyn Dannenberg. Dr. Landrum is an AIAA Associate Fellow who received PhD from North Carolina State University. He is currently on the faculty at University of Alabama in Huntsville.

To commemorate the first flight, section organized an essay contest partnering with local Experimental Aircraft Chapter. Two students who are children of section members were recognized for winning this contest. The first prize winner was given a free first flying training by local EAA chapter. The first prize winner also received the book titled "Women in Science: 50 fearless pioneers who changed the world." The second prize winner received a LEGO set of Space Shuttle Explorer.

Also during the Annual Awards Dinner, the Section presented certificates to the winners of the Space Systems Technical Committee essay contest. Each year the Space Systems Technical Committee sponsors essay contests for 7th and for 8th grade students. The subject of this year's contest was impact of Astronauts on NASA, future of United States, and international partnerships. Winner from the Section's area were 8th grader Miss Taylor Honeycutt, who was

presented certificates from the Section for her accomplishments. Miss Honeycutt was also recognized for winning the 2nd prize in the national 8th grade category. Miss Honeycutt and her teacher also received an award and recognition at the national level for winning the essay contest.

Please detail any K-12 educator professional development opportunities that the section has participated in. *These could include teacher workshops, special dinner meetings, tours, hosting training for competitions, trade show booths.*

The City of Huntsville hosts a public event downtown called [NASA/Redstone in the Park](#), and it usually attracts hundreds of families with kids of all ages. This event promotes possible STEM applications in the classroom. The Greater Huntsville Section set up a booth partnering with [FlyQuest](#). We setup a flight simulator using which kids could understand how an aircraft operates. Staffing the booth were senior members, YP members, Student members. This offered a great opportunity to tell the community about AIAA, and to interact with some of our student members.



In October, section participated in the annual [astronomy day](#) organized by local Astronomical Society. We partnered with a local start up called Trac9. Section setup a booth where kids were taught how to assemble propeller aircraft (made out of hard paper). Trac9 brought the full scale BB8 droid that they have created. They completely disassemble the droid and explained how it works. They also demonstrated it by operating it all over the field. Overall kids had fun throwing the propeller aircrafts and interacting with the BB8 droid.

Please list your section's member participation in competitions and programs as coaches, mentors, judges, hosts of local events. *May include non-AIAA events such as FLL or science fairs.*

Our section's participation in local competitions and programs spreads very wide. We were involved in Engineers Week, NASA Rover Challenge, NARSEF and ASEF (science fairs), AIAA SSTC Essay Contest, and the [AIAA GHSV Robert L. Sackheim Scholarship](#).

We supported the NASA Rover Challenge again, which was two days' worth of judging for the AIAA GHSV section. We sponsored three awards: Telemetry Award, Best Design Award, and Best Report Award. This year's race involved over 700 students from about 80 universities and high schools that came from all over the United States, Puerto Rico, Germany, Russia, India, Lithuania, Brazil, Bangladesh, and Mexico. We honestly couldn't have completed the judging for all three awards without the amazing help from our members.

NARSEF and ASEF are two science fairs held locally in Huntsville, AL. Long time member and former section chair Alan Lowrey coordinated section's participation at these fairs. Several section members volunteered as judges at both science fairs.

The AIAA GHSV Robert L. Sackheim Scholarship is awarded to a high school senior that plans to attend a university in the STEM field that could lead to a career in aeronautics or astronautics. Four of our members helped to decide the winner based off the applicant's essay, grades, and extra-curricular activities.

Please list any STEM education activities where section members got involved in a section activity for the first time (or nearly first time).

We attracted new section members in all of the activities listed above. One of the biggest attractions was the NASA Rover Challenge this year. We had a total of 10 volunteers that helped this year for the Challenge, 4 of which were new faces, and most of these individuals spent about 3-5 hours out of their Friday to help judge the awards.

Support of AIAA Signature STEM K-12 events:

Did your section host and act as the lead sponsor of any STEM K-12 events that are publically marketed as AIAA brand events (such as Engineers as Educators)?

Has the section participated in Engineers as Educators Workshop? No

If so, is there a local educator identified as a local resource for this training? No

If so, please list those educators:

Please detail any innovative local programs that have worked for your section.

Who can we contact for more information about these events?

(Bonus) Aerospace America article

Scoring of the above sections totals 100 points. For an additional 10 point bonus, please select a STEM outreach event that you would be willing to have included in Aerospace America. Articles may be attached to the award write-up and do not count towards the total page count. You must include 2-4 pictures, and the write-up may not exceed 500 words (250-400 preferred). Submission of the article for bonus points will be considered permission to print the article and pictures in Aerospace America. All submissions must include a contact person (name, phone, and email address).

AIAA exhibits at VBAS Astronomy Day

Ashley Scharfenberg

Images: Naveen Vetcha



AIAA Volunteers at the booth (left). Kids playing interacting with BB8 Droid (right)

This year, AIAA Greater Huntsville Section again had the honor of volunteering at the Von Braun Astronomical Society's annual Astronomy Day. The Greater Huntsville Section, alongside the University of Alabama in Huntsville Student Branch, hosted an informational and activity table. This year, AIAA also collaborated with a local small business Trac9. One of the Trac9's objectives is to inspire the future generations to pursue STEM careers. AIAA Volunteers handed out balsa and Styrofoam airplanes that young attendees got to build and play with while older participants were able to learn more about AIAA and the sections' upcoming activities. Trac9 volunteers brought a working full scale model of BB8 droid (Starwars) that they built. There were many other activity booths present at the astronomy day, alongside various telescopes that allowed guests to view the sun and stars. VBAS also put on various presentations on topics including asteroids and x-ray astronomy. AIAA was delighted to participate in this event and hopes to continue to be a part of it in the years to come. Volunteers and attendees alike felt it to be a huge success.