Poster sessions note interns’ work

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The Air Force Research Laboratory Scholars Program summer interns held a poster session for their research in various areas such as 3-D printing and plasma created by lasers on July 27.

“The poster session highlights their accomplishments and research throughout the summer,” said Eunsook Hwang, who is in charge of technology engagement for the AFRL Space Vehicles and Directed Energy directorates.

In addition to their poster presentation, some scholars had to give a 15-minute oral presentation. The poster presentations were split into two sessions, one July 27 and the other on Wednesday. More than 70 interns presented posters at each session.

At the start of the day, several scholars and mentors received awards for their work during the summer.

“It opens so many doors to show people in science fields there are whys to be passionate about science outside of academia, and we got to put our résumés in the hands of some of the industry leaders,” said AFRL Scholars Program intern and Outstanding Scholar Award recipient Ryan Phillips.

Phillips is a graduate student and worked in the AFRL Directed Energy Directorate.

His research consisted of trying to measure radio frequencies produced by plasma ignited from multiple lasers of different colors being combined into one beam. Using the multiple-color
The students selected their background music and began to write lyrics. At the same time, a group of girls in the camp worked on creating the choreography and selecting the location for the video. "One person came up with the first move and then the second person came up with the second move, till we each had our moves in the dance and we just linked them together," said Lauren Rider, 11.

The students recorded their lyrics Wednesday and immediately moved into videography. "It was so much fun listening to the song for the first time," said Genevieve Wilkinson, 9.

The kids learned how to sync themselves to their music as they were being recorded and the multiple takes required for the film. Once the filming is complete, the separate takes of each camper will be stitched together to form one music video.

"I think it was fun creating the music and the video, and our instructors were really nice and funny," said Layla Mott-Smith, 10.

The campers are ages 9-12.

Say It With Music tries to teach kids the influence of entertainment while building on core principles instilled in many Air Force bases, such as leadership and work ethic.

At the end of the camp, each student will receive a copy of the song. To protect the kids' privacy, the video will be a private file and only the Youth Center will have access to the video link.

"It was really fun and something new that I would do again if I had the chance," said Natasha Liddy, 10.

The song lyrics the campers wrote talk about the power of words and how they can hurt.

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This is Phillip's second year to be part of the AFRL Scholars Program. "This is an amazing program. I would love to see it replicated in other Department of Defense and Department of Energy labs," he said.

He also said the mentors are world-class and second-to-none.

"The best thing is as a scholar, you're not a lab assistant. You're doing actual research and work that fits into the Air Force's mission. The mentors let you make mistakes in your research and learn from them and don't just give you the answers," Phillips said.

While many scholars move on to careers outside of AFRL, some, like Daniel Guillette, get hired into permanent positions. Guillette was an AFRL scholar for three summers before he was hired in 2014.

"When I started I was really fascinated by space and thought the Space Vehicles Directorate was what I wanted, but because of this program I discovered Directed Energy and it just took my career in a different direction," he said.

Guillette is now a mentor in the program.

The scholars program is also open to high school students and undergraduates like AFRL Outstanding Scholar recipient Quinter Nyland.

Nyland started his internship as a junior in high school. This year is his third as an AFRL scholar and he recently completed his freshman year of college.

Nyland worked on 3-D printing in the Space Vehicles Directorate. His research was to use the additive manufacturing process to create structures with electronic components, like wiring, fabricated into them.

"This process is more cost-effective and reduces the amount of man hours needed to assemble and fabricate structures," he said.

Nyland also helped set up the additive manufacturing lab for future scholars and researchers.

"The best thing about undergraduates and high school scholars is they are exposed to the options in career fields early and are able to pursue their dreams," Hwang said.

AFRL pays for the scholars program mostly out of its core funding, and other AFRL directorates have begun to use the template started at Kirtland Air Force Base.

A representative from the AFRL Munitions Directorate at Eglin Air Force Base in Florida was present for the poster session to see how AFRL N.M. runs the program. The Munitions Directorate has 6 scholars this summer.

"We do this program not only to help the students but also for the new ideas that the scholars bring to AFRL," Hwang said.