



Davidson Institute

## Fellows Scholarship

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### **WASHINGTON-AREA TEENS RECEIVE NATIONAL SCHOLARSHIPS FOR UNMATCHED ACHIEVEMENTS IN SCIENTIFIC RESEARCH**

**Timothy Qian and Eleanor Sigrest each to be awarded \$25,000 and  
Kaien Yang to be awarded \$10,000  
as 2021 Davidson Fellow Scholarship Winners**

Washington – The Davidson Fellows Scholarship Program has announced the 2021 scholarship winners. Among the honorees are Timothy Qian, 18, of Rockville, Md.; Eleanor Sigrest, 18, of Woodbridge, Va.; and Kaien Yang, 18, of Annandale, Va. Only 20 students across the country to be recognized as scholarship winners each year.

“Being a Davidson Fellow means becoming part of a like-minded group of people who are passionate about their goals and dreams,” said Sigrest. “It means the work we are doing is important; it means our voices have been heard. Davidson Fellows represent the future of innovation and the ability to push the boundaries of society for the better. As a Davidson Fellow, students are encouraged and treated as professionals in their field. It’s an opportunity to learn about challenges in other scientific disciplines, solutions to those challenges, and then look for applications of those solutions that cross over to other research domains. It’s through opportunities like Davidson Fellows where diverse topics come together to create real innovation from the most unexpected connections.”

Sigrest’s project, *"Can You Hear the Empty Spaces?" Improving Spacecraft Efficiency and Capability Through a Novel Microgravity Fluid and Slosh Management Technique*, developed a new technique for reducing unwanted movement of fluid in a tank in microgravity. To test her theory, Sigrest had to raise \$25,000 for a parabolic flight through internships, grants and GoFundMe. Her work has applications in human sustainability in space.

Qian’s project, *Optimal Measurement of Field Properties with Quantum Sensor Networks*, theorized how to optimally measure combinations of electric or magnetic fields. Qian’s research results also have practical applications in improving hardware control in quantum systems, as well as aid in medical imaging to obtain information about cells.

Yang’s project, *New Methods for Computing the Configurational Entropy of Deeply Supercooled Liquids with the Potential Energy Landscape*, used statistical mechanical techniques to model supercooled liquids, supercooled liquids transition into glass. Yang’s work on the glass transition has potential applications in drug delivery to nuclear waste management.

“The 2021 Davidson Fellows Scholarship recipients have risen the challenges of a global pandemic to complete significant projects within their fields of study,” said Bob Davidson, founder of the Davidson Institute. “To be awarded this recognition, these students have shown immense skill and work ethic, and they should be commended as they continue their

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educational and research journeys while continuing to work to solve some of the world's most vexing problems.”

The 2021 Davidson Fellows will be honored during a virtual ceremony in September 2021.

The Davidson Fellows Scholarship program offers \$50,000, \$25,000 and \$10,000 college scholarships to students 18 or younger, who have completed significant projects that have the potential to benefit society in the fields of science, technology, engineering, mathematics, literature and music. The Davidson Fellows Scholarship has provided more than \$8.6 million in scholarship funds to 386 students since its inception in 2001, and has been named one of the most prestigious undergraduate scholarships by [U.S. News & World Report](#). It is a program of the Davidson Institute, a national nonprofit organization headquartered in Reno, Nev. that supports profoundly gifted youth.

#### **About the Davidson Institute**

Founded by Bob Davidson in 1999, the Davidson Institute recognizes, nurtures and supports profoundly intelligent young people, and provides opportunities for them to develop their talents to make a positive difference. The Institute offers support through a number of programs and services, including the Davidson Fellows Scholarship and the [Davidson Academy of Nevada](#). For more information about the 2021 Davidson Fellows, please visit: [DavidsonGifted.org/gifted-programs/fellows-scholarship](http://DavidsonGifted.org/gifted-programs/fellows-scholarship)

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*High-resolution photos are available at [www.davidsongifted.org/gifted-programs/fellows-scholarship](http://www.davidsongifted.org/gifted-programs/fellows-scholarship)*