

2019 Goddard Keynote Scholarship Finalists

The National Space Club & Foundation is pleased to share the eight finalists for the 2019 Goddard Keynote Scholarship. The leadership was both impressed and inspired by these excellent candidates - we consider them all a part of the Space Club family. If you are interested in contacting the candidates below for academic or employment opportunities, please reach out to info@spaceclub.org.

Winner: Morgan Kopecky



Morgan Kopecky is a senior at Woodbridge High School, a competitive public school in Irvine, California. She plans to study mechanical or electrical engineering for application in a space-related field at Stanford University in the fall of 2019. During all four years of high school, Morgan has been a dedicated team leader of Irvine CubeSat, a team of students from five district high schools that have successfully assembled, launched, tracked and communicated with two mini-satellites in orbit. She enjoyed presenting the CubeSat communications system design to a team of NASA scientists and the district school board. Morgan also enjoys research in the field of genetic engineering and has been working with a team of scientists at University of California-Irvine for the past year-and-a-half. Her additional interests include mentoring students in science fair competitions and traveling to Sacramento to lobby for additional funding for high school STEM classes. More than anything else, she believes that communication is the future of STEM. Morgan has a passion for communicating complex scientific concepts, as well as her own research, to non-STEM

professionals and wants to use this passion to turn fear into curiosity to create change.

Finalist: Ragini Balachandran



Ms. Balachandran is currently a senior at Thomas Sprigg Wootton High School, a public school in Rockville, Maryland. In school, she serves as the President of the Robotics Club and a Captain for the Wootton Debate Team. Outside of school, she is the Captain of a First Tech Challenge (FTC) Robotics team and a UAS4STEM drone team. Under her leadership, her FTC robotics team advanced to the 2018 World Championship and her drone team ranked 4th in the 2017 & 2018 National Championships. Over the past two summers, Ms. Balachandran has pursued her passion for space as an intern at the University of Maryland's Alfred Gessow Rotorcraft Center, and as a Space Club Scholar at NASA Goddard. In her free time, she likes to bike, read non-fiction, and support STEM initiatives by volunteering on behalf of the Rockville Science Center at events such as the USA Science and Engineering Festival, Kidfest, and Rockville Science Day. After graduation, Ms. Balachandran expects to pursue an undergraduate degree in Aerospace and/or Mechanical Engineering. In her

future, she aspires to be a spacecraft engineer and explore the far frontiers of space through her creations.

Finalist: Charles Dove



A junior at Clemson University, Charles Dove is an Electrical Engineering major with minors in Mathematics and German. He has a deep, lifelong passion for space, and he is the founder and head of two major space-oriented programs at Clemson. The first program, ThinSat, works with a group of future women engineers from underserved communities to design and build a satellite payload, which is then launched into low Earth orbit on a NASA rocket. The second, Clemson Small Satellite, designs an original research payload to be launched with NASA, while simultaneously working with a local elementary school to teach a group of children about science, engineering, and space in an exciting, hands-on way. The program culminates in the children building a working satellite payload, which is launched alongside Clemson's research payload. In addition to these, Charles is also head of Avionics for the Clemson Rocketry Team, which designs high-altitude sounding rockets for international competitions.

Charles is an active researcher in high-powered laser systems and has research currently submitted for publication. He has received a number of awards for his academic ability, has recently been nominated by Clemson for both the Astronaut and Goldwater Scholarships, and is a National Merit Scholar. After graduation, Charles plans to continue his research in a graduate degree, then work as a researcher in the space industry. He finds his outreach work very fulfilling, and he plans to continue it throughout his career.

Finalist: Dahlia Dry



Dahlia Dry is a senior at Fort Myers High School in Fort Myers, Florida. This fall, she will be attending the Massachusetts Institute of Technology, where she plans to major in physics and eventually forge a career as an astrophysicist. Dahlia is an avid astrophotographer and reader of popular science books, as well as a self-taught programmer who has turned her love of astronomy towards developing software that works to optimize our ability to detect new exoplanets. She has won grand awards at the Intel International Science and Engineering Fair in 2017 and 2018 for her research, and in 2018 was selected to participate in the Summer Science Program in Astrophysics, where she collaborated with other students to calculate the trajectories of near-earth asteroids. She also shares her passion for science with others as a board member of the I Will Mentorship Foundation, a local nonprofit that seeks to provide opportunities for students to discover STEM and give back to the community. At MIT, Dahlia

hopes to explore both the universe and the unexpected connections between our perception of beauty and the pursuit of the unknown.

Finalist: Lauren Falk



Lauren Falk is a senior at Bishop Fenwick High School in Franklin, Ohio. In the summer of 2018, Lauren was chosen to participate in the Wright Scholar Program at Wright-Patterson Air Force Base in Dayton, Ohio. For nine weeks, Lauren worked with a team in the Air Force Research Laboratory's Thermal Management and Propulsion Branch researching electromechanical actuation technology aimed at augmenting or replacing hydraulic actuators of both manned and unmanned aircraft. Lauren plans to continue research with the same team in the summer of 2019. In addition to her outstanding academic achievements, Lauren is the young adult leader of St. Leo the Great Church's youth group for underprivileged immigrant teens and is a student ambassador and peer mentor at her high school. She has been dancing in a studio for fifteen years, studying multiple dance disciplines including ballet, contemporary, and jazz. Lauren also enjoys serving as the 2018-2019 President of Bishop Fenwick's Key Club and Captain of the Bishop Fenwick Varsity Dance Team. After graduation, she intends to major in Aerospace Engineering at the University of Notre Dame with the ultimate goal of having a career at NASA or a commercial space company. She looks forward to furthering her education so that she may one day collaborate with other passionate scientists and engineers on projects related to human space travel and discovery.

Finalist: Nicolas Ferree



Nicolas Ferree is a senior at Maggie L. Walker Governor's School, a selective magnet high school in Richmond, Virginia. He received the Bausch and Lomb Science Book Award, given to the top science student in the junior class. Nicolas has recently been involved in several math competitions, including the Modeling the Future competition, in which his team has advanced to semifinals. He has won numerous awards in language competitions, such as Summa Cum Laude on the National Latin Exam for six years in a row, 1st place in the statewide Classical Association of Virginia Competition, and 3rd place on the National Italian Exam. Most of his free time is spent on competitive rock climbing; he has won competitions encompassing Virginia, Maryland, West Virginia, and DC, and has also qualified for five national championships, placing in the top 15 several times. A passion for the outdoors has led him to volunteer weekly with Blue Sky Fund, an organization that helps underprivileged kids get access to outdoor adventures. Nicolas is currently participating in the Virginia Aerospace Science and Technology Scholars program; he hopes to pursue graduate degrees in aerospace engineering. His dream is to one day become an astronaut and walk on the surface of Mars.

Finalist: Andrew Gatherer



Andrew Gatherer is a first-year Master's student in Aeronautical and Astronautical Engineering at Stanford University. He graduated Magna Cum Laude from Rice University in 2018 with a B.S. in Mechanical Engineering. Extremely passionate about breaking the technical, political, and financial barriers of space exploration, Andrew has published articles in SpaceNews, the Stanford Daily, and the Rice Thresher covering space policy and the future of the aerospace industry. At Rice, Andrew founded and led Rice Eclipse, Rice's largest project-based club focused on building and launching rockets and rocket engines. In addition to his Stanford classwork, Andrew is contributing to small satellite research on constellations and underactuated control. Having completed two internships with SpaceX, Andrew is excited to pursue further study of spacecraft design and navigation to enable the next generation of human and robotic space exploration.

Finalist: Katherine Melbourne



Katherine Melbourne is an Astrophysics major at Yale University graduating in December 2019. She has shared her enthusiasm for space by volunteering with her local astronomy club in Iowa and serving as the past co-president of Yale Women in Physics. Katherine is an avid observer, collecting data at Kitt Peak National Observatory in Arizona, La Silla Observatory in Chile, and soon Keck Observatory in Hawaii in 2019. Her research experiences at Boston University, the University of Chile, and NASA Goddard led her to study M dwarf stars with exoplanets for her current undergraduate thesis. She is presenting her research at the 2019 American Astronomical Society annual conference. Katherine also has experience in space policy and diplomacy, interning at NASA's Office of International and Interagency Relations and working as a 2019 Brooke Owens Fellow in Ball Aerospace's Strategic Operations office this coming summer. She was named a 2018 John Mather Nobel Scholar, was a recipient of the 2018 Women in Aerospace Foundation Scholarship in honor of Molly K. Macauley, and was awarded the 2016 Horkheimer/Smith Youth Service Award for Astronomy Outreach by the Astronomical League. Outside of astronomy, Katherine co-hosts a podcast that empowers women in search of their first jobs

after college and enjoys running marathons. She plans to pursue a Ph.D. in astrophysics before entering a career in astronomy research and space policy.