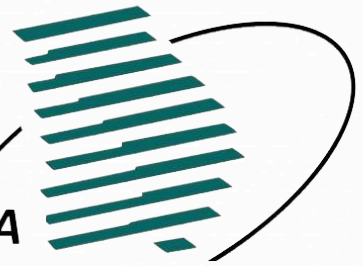


Partner

GEORGIA
Space Grant Consortium



GSGC 2019 Annual Report

WHO WE ARE

The Georgia Space Grant Consortium (GSGC) was established in 1989 to develop a statewide network of academic, industry, and non-profit partners dedicated to:

Maximize the number of Georgia students from all backgrounds who are well prepared in science, technology, engineering, and mathematics (STEM) fields and who are motivated to support space and aeronautics programs vital to this nation.

About:

GSGC conducts research, awards internships, scholarships, fellowships, conducts K-12 student and teacher training programs, and public outreach.

GSGC is actively engaged in preparing students in STEM to meet critical state and national needs with:

21 Affiliate Institutions

9 Partner Organizations

6 Historically Black Colleges and Universities

2 Women Serving Institutions

Higher Ed/Workforce Development:

Fellowships & Scholarships

NASA and Industry Internships

Student & Faculty Research

Hands-On Programs:

Faculty Research

Teacher Training

Hands-On Workshops

Public Outreach

Museum & Planetarium Programs

Camps and Science Programs

Partners:

Atl. Metropolitan State College

Center for Sustainable Communities

Commodore Conyers College and Career Academy

C-STAR

GA Center for Innovation for Aerospace

Hines Family Foundation

PinkSTEM

Scout Aerospace

West Georgia Technical College

Affiliates:

Agnes Scott College

Albany State University

Clark Atlanta University

Columbus State University

Fort Valley State University

Generation Orbit Launch Services, Inc

Georgia Institute of Technology

GA Southern Univ.-Armstrong

GA Southern Univ.-Statesboro

Georgia State University

Kennesaw State University

Mercer University

Morehouse College

Museum of Aviation

Savannah State University

SpaceWorks Enterprises, Inc.

Spelman College

University of Georgia- Athens

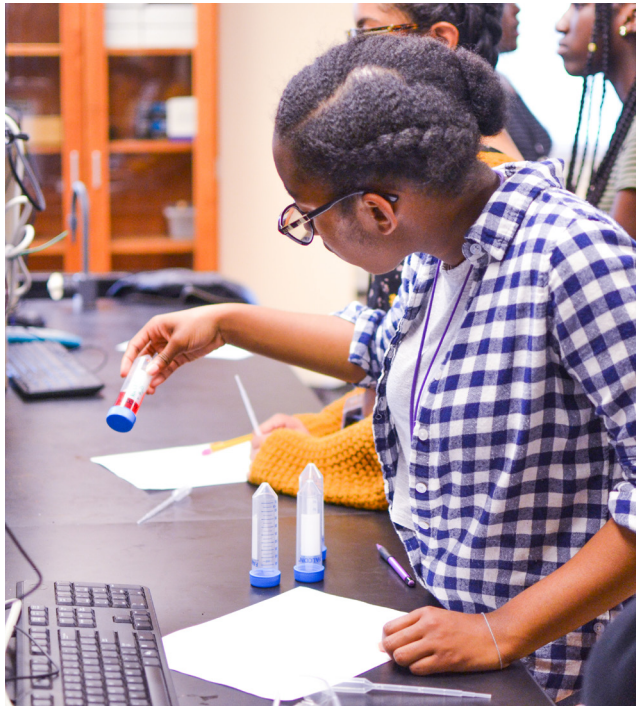
University of Georgia- Griffin

University of North Georgia

University of West Georgia



WHAT WE DO



Morehouse College

The Nuclear, Materials, and Space Science (NuMaSS) Enrichment Program of the Department of Physics & Dual Degree Engineering Program at Morehouse College addresses the increasing need for the creation of a next generation STEM workforce. The program accomplishes this, in part, by encouraging students to pursue careers in STEM fields. It also caters to middle and high school students who want to strengthen and reinforce their fundamental science and mathematics skills by engaging in college courses and college laboratories. The students attend college-level courses in STEM, initiate a science fair project, interact with current STEM majors at AUC institutions – Clark Atlanta, Morehouse, and Spelman -- and have informal career discussions with local scientists and engineers. Weekly enrichment activities include, but are not limited to, informational tours of Georgia Institute of Technology, the Savannah River Nuclear Facility, NASA Kennedy Space Science Center, and the DOE Oak Ridge National Laboratory.

University of Georgia - Athens

The primary goal of the research at UGA's Small Satellite Research Laboratory is to develop a prototype interface board for a system on a chip (SoC) containing a central processing unit (CPU) and graphics processing unit (GPU) to be used in the cube satellite form factor. The overarching goal is the creation of a system that is capable of operating as an integrated microprocessor and SoC/GPU. The research is done by undergraduate and graduate students, under the guidance of 12 UGA faculty advisors. These students have been awarded various internships; two of them both presented their work at the Symposium on Space Innovations, and had their work published in academic journals.



Georgia Southern University

GSGC supports the ongoing educational and outreach activities at the Georgia Southern University Planetarium. The Planetarium is a unique resource in southeast Georgia. It stands alone among other campus facilities in that it supports both student instruction and public outreach. These educational 'full-dome' shows are professionally produced and often narrated by popular celebrities. Many of them have been produced in collaboration with NASA. During the 2018-2019 academic year, the Planetarium hosted 243 group presentations, reaching an estimated 9,500 Georgia residents. The Planetarium events are staffed by Georgia Southern astronomy lab students multiple times throughout the fall and spring semester. During eight public events that were held during the academic year, the Planetarium had four Georgia Southern interns working alongside the instructors - an activity that enhances their knowledge base. The students returned in the summer for a ninth event.

WHERE WE ARE GOING

Elizabeth Tammi, Mercer University: NASA Summer Intern

Elizabeth Tammi is a communications major at Mercer University, she was awarded a NASA internship in 2019, funded by GSGC.

Growing up in central Florida, space shuttle launches and visits to Cape Canaveral were a regular part of my childhood. NASA was a huge pillar of my life from an early age, but I wasn't sure if there was a way to combine my love for NASA and space exploration with my journalistic aspirations.

I knew by my junior year of high school that I wanted to make the move to Georgia and attend Mercer University's Center for Collaborative Journalism. I remember when I later got accepted, I was invited to a Mercer-hosted event in Florida. There, another student asked me what my dream job would be. I confessed that I thought it'd be incredible if I could find a way to put my journalistic skills to use telling the stories of NASA.

That dream was pushed aside for the first couple years I spent at Mercer, though I did take an astronomy lab course my freshman year! I threw myself into other internships and practicum credits at local outlets like Georgia Public Broadcasting, our CBS affiliate, and The Telegraph. I studied abroad Oxford for six months, and also got my first book deal.

In 2018, it was my former co-intern from GPB that ended up bringing that dream of NASA back to me. Katie Atkinson (Mercer Class of 2019) and I had worked together at GPB and with our student newspaper, and she scored an audio production internship at NASA's Goddard Space Flight Center before her senior year. She came back to Macon the next fall with stars in her eyes—so to speak. Hearing her experiences, I knew that this was the type of work I wanted to do.

After a lengthy application process, and with the help of the Georgia Space Grant, I got to make the move to Greenbelt, Maryland last summer. From June through August of 2019, I worked in the main Office of Communications at Goddard as an audio production and newsroom intern. It was a fantastic year to be there, as the bulk of our coverage celebrated the 50th anniversary of Apollo

11. I started my summer by helping to launch the audio series "NASA Explorers: Apollo".

My biggest project was "Share Your Apollo Stories", an oral history project that received hundreds of submissions from nearly 30 countries. I got to be at the helm of that huge, international engagement effort and edited nearly 100 tracks to make a commemorative playlist.

Audio is a new frontier for NASA, and I got to help set the vision for the future of this medium. I laid down the groundwork for a future agencywide podcast, which I've had the pleasure of continuing work for throughout my senior year at Mercer in a remote, for-credit capacity.

Beyond audio, I got to try everything at NASA. I worked as a production assistant for a live broadcast on the National Mall in Washington D.C., wrote press releases and features, made social media posts, and helped coordinate live studio interviews between scientists and media outlets. Plus, I planned an office "field trip" to the nearby Applied Physics Laboratory at Johns Hopkins University. In addition, I ran a social media takeover campaign with Georgia Space Grant and also coordinated a Facebook Live streaming event with some other space grant recipients at Goddard to help share our knowledge of interning at NASA

In short, the internship was the ultimate way to spend the final summer of my undergraduate career in journalism. I may not be doing rocket science, but I appreciate that Georgia Space Grant saw the importance of supporting the storytelling efforts of NASA. I will always treasure the incredible gifts the state of Georgia has given me; not only have I had an amazing undergraduate experience at Mercer, but I also got to have the internship of a lifetime.



WHERE WE ARE GOING

Olatunde Sanni, Georgia Institute of Technology: GSGC Fellowship

Olatunde Sanni is a GSGC/HFF Fellow and a doctoral student at Georgia Tech's Aerospace Engineering School.

Sometimes the best-laid plans ...lead to even *better* plans

That's the way things have worked for Olatunde ("Tunde") Sanni, a third-year aerospace engineering graduate student whose outreach for the Hines Family Foundation has encouraged countless others to lay down their own blueprints for success.

And, then, like him, to *upgrade* those plans.

"Originally, I came to Tech to get my master's degree and go back to industry," says the former National Instruments applications engineer, now pursuing a doctorate in aerospace engineering at Georgia Tech. "But since I've been here, I've seen there's so much more I want to learn. I want to become an expert. I began by enrolling in the Ph.D. program, where I've been working with Professor [Brian] German and Professor [Eric] Feron on an UAV design optimization project."

As a doctoral student, Tunde has immersed himself in the challenges, questions, and investigations that were too complex for a working engineer to pursue.

"Working with my co-advisors, I am optimizing designs for urban air mobility – the use of vertical lift vehicles to transport people within urban environments. This research will leverage NASA Glenn Research Center's Open MDAO platform. The possibilities are really exciting."

That enthusiasm naturally spills over into his GSGC/HFF outreach efforts, where Sanni has found himself working with children and adults in all strata of the educational system.

"In the Cobb County School District I trained more than 15 K-12 teachers as a part of their Problem Based Learning Space Innovations Academies," he said. "First, I gave a 75-minute introductory training about X-in-a-Box resources for STEM education. I also gave a 95-minute training on how to configure X-in-a-Box resources to collect

measurements for class experiments. In addition to training teachers, I was able to directly engage with parents and the community about the importance of STEM education and outreach."

Most graduate students would be hard-pressed to squeeze this level of commitment out of their already busy schedules. Tunde doesn't claim to be super-human – he is very busy – but he wouldn't have it any other way.

"I am wowed by how much the Space Grant Consortium helps other people get ahead. For me, it's been a bit like a family, where I feel obligated to give back," he says.

That obligation extends to his parents, who immigrated to the United States from Nigeria because they wanted their children to grow up in an environment that rewarded hard work and ambition. To a large extent, that plan was on target. Growing up in Maryland, Tunde excelled in math and science.

His motivation went into high gear when, as a teenager, Tunde's parents sent him to a Nigerian boarding school to finish his schooling. There, he experienced the binary nature of success: those who worked hard could hope to become a doctor, a lawyer, or an engineer.

"If you didn't work hard, there were no chances."

The experience gave Tunde a new respect for his parents' journey. And new motivation for his own.

"They sacrificed a lot for me to be successful, but they always made it seem like we were on an adventure. I feel I owe them my hard work for their sacrifices. But, like them, I think of my life as an adventure. They gave me that, too."



BY THE NUMBERS

The following numbers represent the direct student and community engagement throughout the state for the 2018-2019 academic year. All of the students, educators, and community members participated in a GSGC funded program.

12,000+ K-12 Students

1,315 K-12 Educators

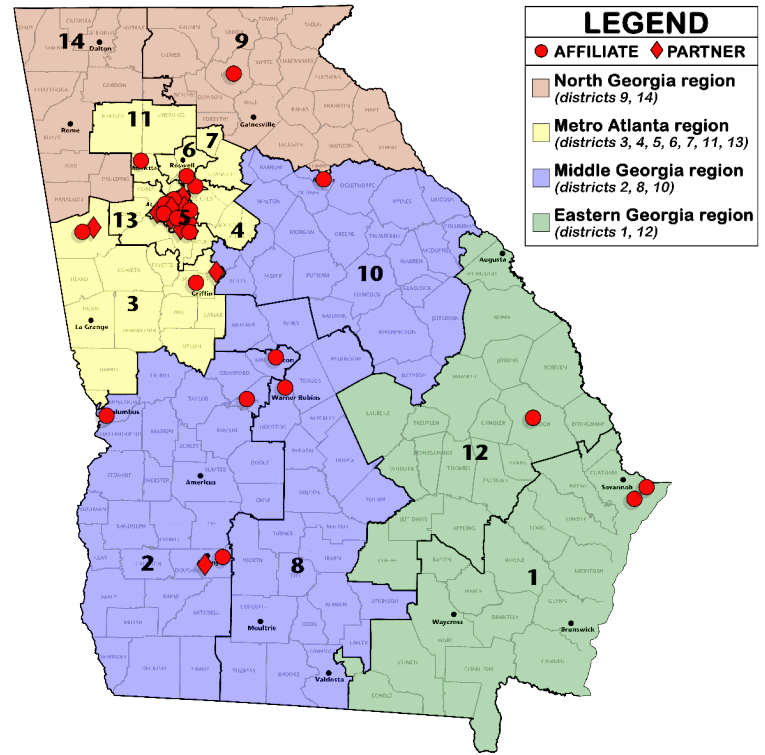
918 Undergraduate Students

65 Graduate Students

9,445 People Reached via Community Events

59 Fellowships, Scholarships, & Internships Awarded

BY THE NETWORK



GSGC has a robust statewide network, that continues to expand.

23,862

Georgia Residents Impacted

48%

Female Student Participants

42%

Under-Represented Minority Student Participants

***The sky is no longer the limit.
Reach for the moon, Mars, and beyond!***

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