



# GSGC 2022 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

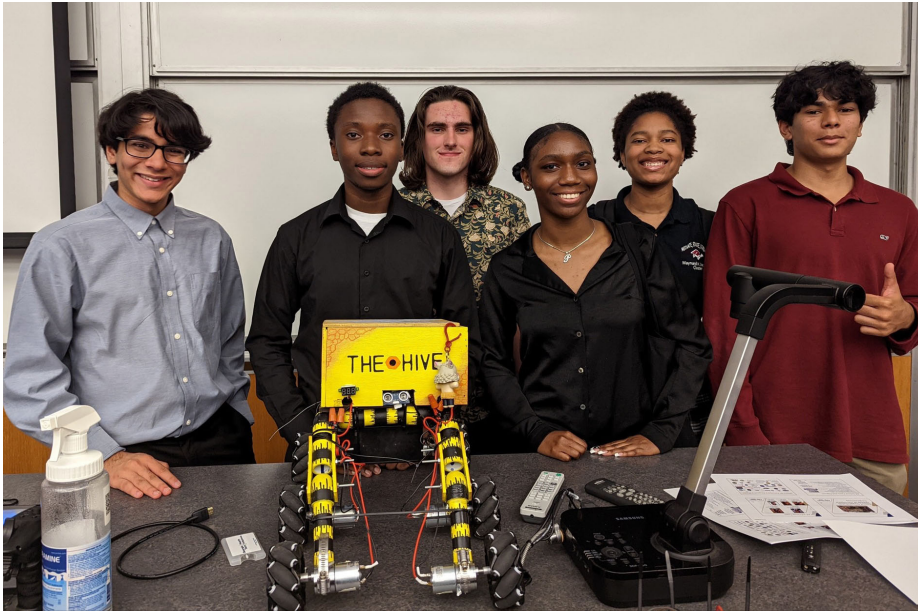


## PinkSTEM

PinkSTEM is a program founded in 2012 serving the metro-Atlanta area that focuses on helping girls break through systematic barriers in science, technology, engineering, and math (STEM) by encouraging them to explore those fields. PinkSTEM empowers girls and equips them to navigate beyond any under-representation, disadvantage, and/or disability.



# WHAT WE DO



## Science, Technology, Engineering Program

The Science, Technology, Engineering Program is a two week summer program that is offered at Georgia Tech during July to rising high school juniors and seniors to give them real hands on experience with engineering. Cohort teams of students use the engineering design process to build a rover that can traverse obstacles on martian or lunar surfaces.

## Museum of Aviation

The Museum of Aviation in Warner Robins, Georgia hosts STEM Educator Conferences and workshops for K-12 students and the general public. These workshops focus on varying areas of STEM providing participants hands on learning opportunities.



## Kennesaw State University

KSU physics undergraduates (Kenzi Waddell, Christian Perez, and James Gerdes) traveled to the laboratory to help set up the EMPHATIC detector for its current data-taking run. The KSU students helped connect and test detector cables, calibrate detector components, attach the photomultiplier tubes to the calorimeter components, and develop software to help distinguish the signatures of different types of subatomic particles in the detector using Cerenkov radiation.

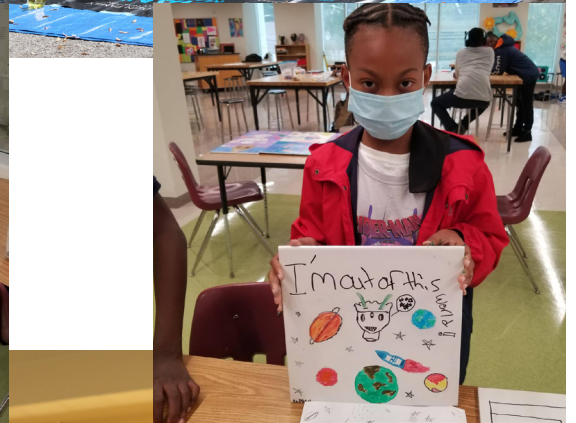


# SPACE DAY ATLANTA

During World Space Week (October 4-10, 2021), GSGC hosted its inaugural Space Day Atlanta (SDA) at Georgia Tech on Saturday, October 9th. More than 400 Georgia students and adults attended this STEAM showcase and saw demonstrations of current aerospace research at Georgia Tech, as well as participated in various hands-on activities such as virtual flights to Mars, rocket building/launching, and creating art about "what space means to you".

Without the hard work and collaboration of GSGC affiliates, partners, and close to 100 volunteer undergraduate and graduate students from Georgia Tech, Georgia State University, and Kennesaw State University, this tremendous event would not have been possible.

Space Day Atlanta at Georgia Tech was also a sister event to two other efforts celebrating space: a series of space-focused livestreams GSGC hosted during World Space Week, as well as, a 4,800 square foot earthwork, by artist Stan Herd, was installed and unveiled in Woodruff Park in downtown Atlanta on International Day of the Girl, Monday, October 11th. The Hines Family Foundation, Georgia Tech's School Aerospace Engineering, Mercer's SEI Lab, and Morehouse Center for Educational Excellence, in coordination with Christina Korp of Purpose Entertainment, were instrumental in the planning and execution of this celebration of Women in Space! More than 1,400 1'x1' tiles painted by students at 14 metro Atlanta area schools and 3 children's hospitals were used to create a massive frame around the portrait.





# WHERE WE ARE GOING

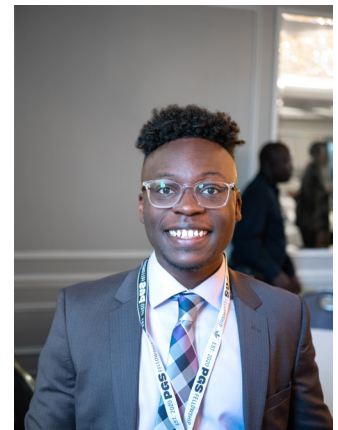
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Fallon Konow,  
Georgia State  
University

I am a third-year astronomy graduate student at Georgia State University (GSU) and a graduate lead with the Georgia Outreach Team for Space (GOT Space) team. Through GOT Space, I have expanded my outreach and presentation skills while pursuing my passion for inspiring young scientists. My research focuses on solar atmospheric dynamics observation and solar flare prediction by developing a new instrument. This past year I was awarded a NASA internship at the Jet Propulsion Lab (JPL) and funded through GSGC. I spent 2021 in Pasadena, California, developing and building my new instrument. It will observe in conjunction with a similarly designed telescope in Italy designed/operated by the University of Rome Tor Vergata. In the coming years, I will be attending both GSU and UniTov, uniting the two research endeavors while personally earning experience and a degree from both. My ability to pursue such a wide-reaching collaboration is thanks to the support I received from GSGC to begin my physical work in California last year. By the end of 2025, I aim to have both observation sites fully operational and automated, taking synoptic measurements of the full disk of the Sun and subsequently defending my Ph.D.

I am a 2nd-year Aerospace Engineering Student at Georgia Tech. I have been involved with GSGC for years, and the experiences have been nothing but stellar. When taking a step back, beyond the STEM activities, beyond visiting schools, you realized that you are touching lives. Working and interacting with K-12 students here has allowed me to connect and foster the next generation of dreamers. Through GSGC and its element of service, I was offered the opportunity to be a Patti Grace Smith Fellow, as well as an intern at L3 Harris Technologies where I was a Mechanical Design Engineer Intern in Rochester, New York. I was able to work on the drawings and design for the Nancy Grace Roman Space Telescope, which is a deep space telescope with the mission of uncovering more about dark energy and dark matter. I will be returning this summer to do more analysis on the mission. In addition, this work allowed me to get involved in more advanced projects. The Georgia Space Grant Consortium allowed me to see people from many backgrounds, increase my empathy, while stimulating their minds with the avenues that STEM offers. People do not know what is out there until they discover it, and I have personally seen the illumination on their faces when I tell them about the wonders of science, technology, engineering, and math.



Jalen Cauley,  
Georgia Institute  
of Technology



Ethan Sirak,  
Georgia Institute of  
Technology

I am a 4th year aerospace engineering student and an undergraduate researcher at the Vertical Lift Research Center of Excellence at Georgia Tech. I have been working with the Georgia Space Grant Consortium for over three years now. It has been a wonderful and invaluable experience for me both as a student and as a future engineer. Through the GSGC, I was able to get involved in the GT Aerospace Outreach program, and had the opportunity to interact with young minds that were interested in aerospace. With the Space Grant, I have had the chance to act as a mentor for high school students in the STEP program, as well as volunteer at multiple events for the cultivation of STEAM in younger generations. These opportunities have enabled me to develop new skills and have allowed me to improve my communication skills with people of all ages. This has been especially helpful in the search for internships and acquisition of research positions. The GSGC has instilled in me an understanding of the importance of giving back to the community, and has shown how rewarding the opportunity to help educate the future of STEAM is. I am grateful to the GSGC for the lessons I have learned through my involvement, and I will continue to work with the GSGC to inspire those who wish to pursue STEAM.

## BY THE NUMBERS

The following numbers represent the direct student and community engagement throughout the state for the 2021-2022 academic year. All of the students, educators, and community members participated in a GSGC funded program.

**7,385** K-12 Students

**645** K-12 Educators

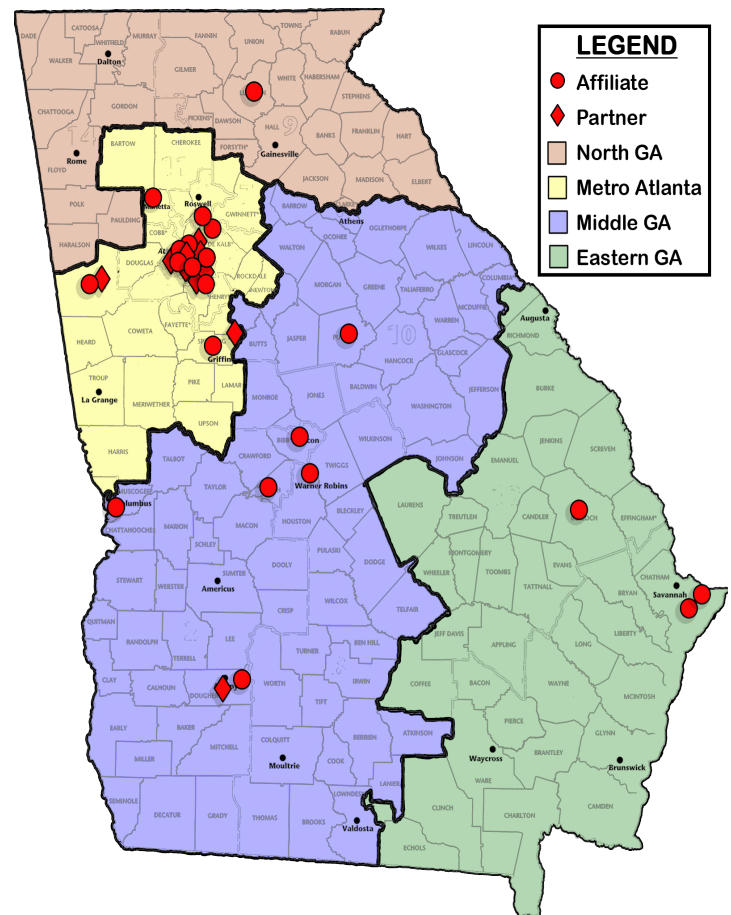
**2,234** Undergraduate  
Students

**101** Graduate Students

**3,955** People Reached via  
Community Events

**71** Fellowships, Scholarships,  
& Internships Awarded

## BY THE NETWORK



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

**14,596**

Georgia Residents  
Impacted

**46%**

Female  
Student Participants

**42%**

Under-Represented  
Minority Student  
Participants

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

### Contact Us

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