



NASA Connecticut Space Grant Consortium

NEWSLETTER

Our Mission:

To establish and promote NASA-related research opportunities, support education initiatives that inspire students, and to promote workforce development.

Looking forward to:

National Quadcopter Summer Workshop!

For the first time, NASA CTSGC will be hosting a national quadcopter workshop at the University of Hartford from June 3-7, 2019. It is open to all Space Grant faculty and has a cost of \$1,300. During the workshop participants will build and learn to fly a Quadcopter! The workshop will include 3D printing, sensor coding and installation, and steps and logistics of how to run a Quadcopter Challenge at their own institutions. By the end of the workshop, participants will be able to use their quadcopter to perform data collection to complete an 'exploratory mission'.



Attention
Faculty!

June 3-7, 2019

Inside the Issue:

Faculty Spotlight

Donna Hylton

P. 2

STEM on Wheels

Bus

P. 2

Student Spotlight

Thomas D'Auria

P. 3





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VOL. X

Spring

FACULTY SPOTLIGHT:

Donna Hylton

Donna Hylton, from Middlesex Community College, was awarded a STEM Education Programming Grant by NASA CTSGC during the Spring 2018 award period. In July 2018, around 90 children participated in the Adventures in Learning STEM Camp. Many of these children were from underrepresented populations and low to moderate income households. The goal of this event was to expose these children to the STEM disciplines and get them excited to learn about science, technology, and engineering. It also created an opportunity for parents to engage in discussions about STEM with their children.

The children got to participate in hands on science experiments such as swabbing bacteria and watching it grow. They learned about the cardiovascular system, mobile app programming, insects' anatomy, renewable energy and many other topics. An African American aerospace engineer taught them about how the women portrayed in the movie "Hidden Figures" were a great asset to

NASA during the space race.

The program also involved a field trip to the Connecticut Science Center to visit the "Exploring Space" exhibit. This exhibit included hands on activities such as making a moon crater, taking control of a lunar lander, and viewing a NASA space-suit.



STEM on Wheels Bus



The STEM on Wheels bus was created as a collaboration between the University of Bridgeport and the Discovery Museum with the support of the NASA CTSGC, and other funding agencies. The bus is a mobile laboratory that provides hands-on STEM experience to children in K-12 schools in the Bridgeport, CT area. Four students at the University of Bridgeport, Joshua Estrada, Abdallah Mohanad, Jailene Romero, and Luis Vargas, have been selected to assist with developing, preparing, and conducting hands-on activities on the bus. The projects that the children will participate in include coding, 3D printing, mechatronics, remote sensing, satellite orbits, and x-ray technology.



STUDENT SPOTLIGHT:

Thomas D'Auria

In the summer of 2016, Tom D'Auria of the University of Connecticut, received his first grant from NASA CTSGC; the Faculty-Student Summer Research Grant under advisor Dr. Luyi Sun. At the time Tom had just completed his second year in UConn's chemical engineering program and had spent the prior semester researching nano-materials in Dr. Sun's lab. Over that summer Tom continued his work in polymer-inorganic hybrid nano-coatings for tunable iridescence and other applications. However, in addition to continuing this research project, he also trained and supervised three community college students also working in Dr. Sun's lab. This collaboration between engineering 4-year undergraduate and community college students is one of the trademark features of the Faculty-Student Summer Research program.

Following this summer program, Tom continued research in Dr. Sun's lab for the entirety of his Junior year. The progress made over the summer was so substantial that after this third year, Tom was listed as an inventor on a patent submitted by Dr. Sun, covering the tunable iridescent nano-composites Tom had been researching during the academic year and summer research experience.

With this project largely wrapped up by the summer of 2017, Tom looked to gain experience in industry to compliment his nearly two years of research experience. He was awarded an Industrial Internship by NASA CTSGC to work at Proton Onsite in Wallingford, CT. Tom spent the summer learning about the company's production of PEM electrolyzers

for hydrogen fueling. Working in the manufacturing department, he designed and worked to implement multiple cost-saving measures on the factory floor.

As the internship came to a close, and with



UConn chemical engineering seniors working on the Proton sponsored Senior Design Project (from left to right) Alex Keane, William Tait, Kyle Terracciano, and Tom D'Auria

Tom's senior year approaching, he asked Proton to sponsor his upcoming Senior Design Project. In particular, he pitched the idea that the company's manufacturing process was wasting money on a particular platinum plating line and that his experience with nano-coatings offered a route to a substantially cheaper method. Coming full circle, Tom brought Dr. Sun on as the project advisor in a perfect combination of the nanomaterials re-

search and manufacturing experience that Tom had developed over his college career.

While the Senior Design Project is still underway, Tom was invited by the NASA CTSGC leadership team to attend the National Council of NASA Space Grant Director's meeting in Washington, DC. At the meeting Tom presented the ongoing work within this collaboration between Proton and UConn, and also told his story of how NASA CTSGC has been involved in every meaningful career move during his time in college. The NASA CTSGC leadership team wishes Tom the very best in his future endeavors!



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Space Grant Award Recipients (Fall 2018)

Faculty Research Grants

Djedjiga Belfadel (Fairfield)
 Clayton Byers (Trinity)
 Khaled Elleithy (U of B)
 Kevin Huang (Trinity)
 Haoyu Wang (CCSU)
 Natalie Schultz (Yale)
 Paul Slaboch (U of H)
 Kamau Wright (U of H)

Faculty STEM Education Research and Programming Grants

Alison Draper (Trinity)

Graduate Research Fellowship

Christina Cauley (Wesleyan)
 Arun Malla (UConn)

Undergraduate Travel Grants

Michael Boyle (Yale)
 Jovelt Dorsainvil (Wesleyan)
 Michael Henderson (Wesleyan)
 Ismael Mireles (Wesleyan)
 Benjamin Rumrill (ECSU)
 Anthony Santini (Wesleyan)

Undergraduate Research Fellowships

Patrick Dubiel (U of H)
 Russell Moore (Fairfield)
 Skyler Szot (Trinity)
 Hunter Vannier (Wesleyan)
 Zhengdong Wang (Yale)

NASA Academy Intern

Theresa Nosel (MCC)

Undergraduate Scholarships

Julia Burch (CCSU)
 Joyce Caliendo (UCONN)
 Michael Kohler (U of H)
 Leah Lansdown (UNH)
 Hetal Patel (UCONN)
 Genesis Paz (U of B)
 Donovan Palmer (Trinity)
 Simran Sehgal (UCONN)
 Alexandra Sinson (Trinity)
 Jonathan Stanford (UNH)
 Austin Thomas (UNH)

Community College Scholarships

Julio Acosta-Silverio (CCC)
 Micalyia Douglas (CCC)
 Trajada Jackson (NVCC)
 Joel Limleux (NCCC)
 Cindy Otchere (CCC)
 Alondra Torres (CCC)
 Linda Vossler (NVCC)
 Kalé Williams (NVCC)

Community College Transfer Scholarships

Paige Dowding (CCSU)

Student Project Grants

Lincoln Berkley (Yale)
 Jackson Ceme (UNH)
 Ian Denzer (Yale)
 Hanna Engstrom (Trinity)
 Alicia Kacharia (Yale)
 David Norris (U of H)
 Keshav Raghavan (Yale)
 Katherine Unfried (Fairfield)

Contact Info	Academic Affiliates		Non-Academic Affiliates
<p><u>Program Director:</u> Dr. Hisham Alnajjar</p> <p><u>Associate Director:</u> Dr. Mary "Cater" Arico</p> <p><u>Program Coordinator:</u> Janet Spatcher</p> <p><u>Office Assistants:</u> Adrienne Fisher Erin Sussmann Eva Von Dell Jacob Fett</p>	<p>Capital Community College</p> <p>Central Connecticut State University</p> <p>Eastern Connecticut State University</p> <p>Fairfield University</p> <p>Gateway Community College</p> <p>Housatonic Community College</p> <p>Manchester Community College</p> <p>Middlesex Community College</p> <p>Naugatuck Valley Community College</p> <p>Northwestern Connecticut CC</p> <p>Quinebaug Valley Community CC</p> <p>Southern Connecticut State University</p>	<p>Three Rivers CC</p> <p>Trinity College</p> <p>Tunxis Community College</p> <p>University of Bridgeport</p> <p>University of Connecticut</p> <p>UCONN Health Center</p> <p>University of Hartford</p> <p>University of New Haven</p> <p>Wesleyan University</p> <p>Yale University</p>	<p>Connecticut Invention Convention</p> <p>Connecticut Science Center</p> <p>Discovery Museum</p> <p>New England Air Museum (NEAM)</p>
			Industrial Affiliates
			<p>Pratt & Whitney Aircraft</p> <p>UTC Research Center</p> <p>Collins Aerospace</p>



CT Space Grant Lead Institution:
UNIVERSITY OF HARTFORD

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