

# STEM-IL Summer Opportunities



## **WHAT IS STEM-IL?**

Our office is a connecting hub designed to build pathways and pipelines to promote learning and innovative problem-solving in STEM-related areas. You can find us in Jennings 108 or at [stem-il@southernct.edu](mailto:stem-il@southernct.edu)!

Our CORE values:

- C – Community of Practice in STEM-related areas
- O – Outreach among and beyond STEM disciplines
- R – Research and Innovative Problem Solving
- E – Educating world citizens and leaders of tomorrow

# RESEARCH PROGRAMS REQUIREMENTS

**DATES – JUNE 1, 2020 – JULY 24, 2020**

ELIGIBILITY- MUST BE A STUDENT ATTENDING EITHER SOUTHERN CONNECTICUT STATE UNIVERSITY OR A CONNECTICUT COMMUNITY COLLEGE.

PERSONS WITH DISABILITIES, WOMEN, AND MINORITIES ARE STRONGLY ENCOURAGED TO APPLY.

STIPEND – EACH PARTICIPANT WILL RECEIVE A STIPEND OF UP TO \$4,000; [DURING THE EIGHT WEEKS IN THE SUMMER (JUNE & JULY), AND DURING THE FOLLOWING FALL AND SPRING SEMESTER FOR RESEARCH DONE WITH THE STEM-IL OFFICE]

**DEADLINE FOR SUBMISSION OF THESE DOCUMENTS AND THE  
ONLINE APPLICATION IS FEBRUARY 1, 2021**

APPLICATION REQUIREMENTS:

- OFFICIAL TRANSCRIPTS: MUST BE REQUESTED THROUGH YOUR INSTITUTION TO AND SUBMITTED ELECTRONICALLY TO CAREY CIABURRI AT STEM-IL@SOUTHERNCT.EDU
- LETTER OF RECOMMENDATION: IF YOU DO NOT HAVE THIS WHEN APPLYING ONLINE, A LINK WILL BE PROVIDED FOR YOU AT THE END OF THE APPLICATION FORM WHICH CAN BE SENT TO THE PERSON WRITING YOUR LETTER OF RECOMMENDATION.
- RESUME AND COVER LETTER: UPLOAD DIRECTLY IN THE APPLICATION

**APPLY AT:**

**[HTTPS://SCSU.IAD1.QUALTRICS.COM/JFE/FORM/SV\\_9LXIQNIV9D  
LQPZL](https://scsu.iad1.qualtrics.com/JFE/Form/SV_9LXIQNIV9DLQPZL)**

# CONGRATULATIONS TO LAST YEAR'S 2020 SUMMER RESEARCH FELLOWS AND INTERNS!

## EIAF Research Fellows:

- Camila Garcia Ramos- BS in Biology, 2022
- Latasha Neal- BS in Psychology, 2022
- Karl-Marx Delphonse- BS in Finance, 2021
- Mia Forgione- BS in Biology, 2021

## IAF Research Fellows

- Paul Nicholas- BS in Physics, 2020
- Sydney DeGoursey- BS in Interdisciplinary, 2020
- Alexis DeMarco- BS in Physics, 2023
- Benson Rodrigues-BS in Physics/Engineering, 2021
- Monica A. Kiehnle-Benitez- MS in Industrial Engineering,
- Katherine Perez-MS in Physics



## iGEM Research Fellows:

- Michael Macesker- BS in Computer Science, 2022
- Olivia Liebler- BS in Computer Science, 2021
- Marisa DeCiucis- BS in Biotechnology, 2022
- Ceren Citak-BS in Liberal Arts and Science Transfer
- Faruk Senturk- BS in Biology, 2020
- Peyton King- BS in Computer Science, 2021



## ECIC Research Fellows:

- Amy Orenstein- BS in Chemistry, 2021
- Ashley Czech- BS in Biochemistry, 2023
- Taylor Tab Weihing- MS in Computer Science, 2022
- Alyssa Rolls- BS in Biochemistry, 2022
- Syeda Minahil Gilani- BS in Chemistry, 2021
- Sarah Victoria Tsacoyannis- BS in Chemistry, 2021
- Julia Meyerovich- MS in Psychology, 2021
- Brittany Olivia Mignott- BS in Applied Science, 2021
- Maria Luisa Estevez- MS in Chemistry, 2021
- Jason DeAndressi-BS in Biology, 2020
- Jessica Dawn Peterman- BS in Biology, 2021
- Jason Daniel Aceto- BS in Chemistry, 2021
- Richard Szeligowski-BS in Biology and Physics, 2020
- Emily Keyes- BS in Chemistry, 2021

# JOIN THE STEM-IL SUMMER RESEARCH PROGRAMS

**Meet one of our faculty mentors!**

**Apply by February 1, 2021**



**Dr. Hwang, Chemistry Department (SCSU)**

"My research group works on two main project areas:  
1) finding new therapeutics for Lyme disease and  
2) designing novel non-antibiotic therapies to combat antibiotic-resistant bacteria.

New therapies are needed to effectively treat both Lyme disease and antibiotic-resistant bacterial infections. My students use a combination of organic synthesis and medicinal chemistry to create and purify novel compounds. Several of my students have been able to advance their research with support from ECIC, which enables me extra time to mentor them during the summer one-on-one. This mentorship allows students to refine their lab skills as well as enhancing their critical thinking, analytical, and writing fluency.

I have also had the opportunity to serve as a mentor for the EIAF program, which is an interdisciplinary research project that bridges STEM and entrepreneurship. My parents were entrepreneurs but not scientists, so I've always been interested in leveraging a lean business model with STEM technologies. My role as a mentor in this program is to guide students in analyzing and critically thinking about data and the scientific method for testing the efficacy of the new technologies."

For more information on STEM-IL summer programs and how to apply programs please visit:

<https://www.southernct.edu/stem/career-internship-opportunities>

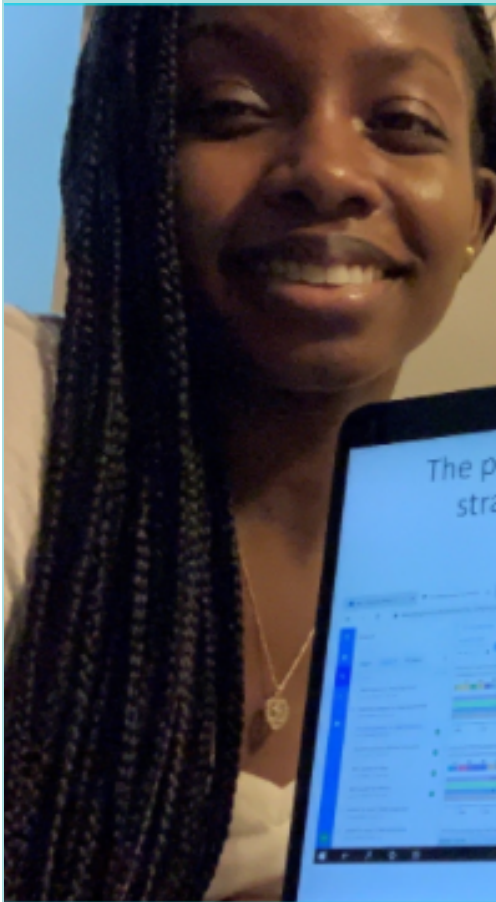


# JOIN THE STEM-IL SUMMER RESEARCH PROGRAMS

## New Haven Innovation Collaborative Research

### Experience (NHIC)

Apply by February 1, 2021



**Brittany Mignott**  
**Biology 2021 (SCSU)**

I chose to do this research because it focused mainly on genetics which was not my strong point in freshman year. Doing this research helped me better understand the different aspects of genetics that was not clear to me when I took the class because it was more hand on training using the fruit flies. Studying the Dad gene of the fruit fly was important to me because the genes found in flies appear in humans in a similar form. Therefore studying this gene could give insight into how processes unfold in humans. As for my future, my goal is to attend PA school and be hands-on in helping others.

**For more information on NHIC or other STEM-IL summer programs and how to apply programs please visit:**

**<https://www.southernct.edu/stem/career-internship-opportunities>**

# JOIN THE STEM-IL SUMMER RESEARCH PROGRAMS

## Industry Academic Fellowship Program (IAF)

Apply by February 1, 2021



**Benson Rodrigues,  
Physics 2021 (SCSU)**

"My name is Benson Rodrigues and I am a senior at Southern. I am studying Physics with a concentration in Education. Over the summer, I had the opportunity to conduct research with Dr. Schwendemann as part of The Industry Academic Fellowship Program. My project focused on analog to digital conversion through the Arduino Uno platform. I wrote programs for stepper motor operation to service a monochromator diffraction grating. I am implementing it this fall to use the monochromator for industry motivated spectroscopy applications. As a future science educator, its valuable to get research experience in addition to academics. Ultimately, I enjoy doing research as it allows me to apply my knowledge and work with faculty mentors to solve interesting problems."

**For more information on IAF or other STEM-IL summer programs and how to apply programs please visit:**

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# JOIN THE STEM-IL SUMMER RESEARCH PROGRAMS

## International Genetically Engineered Machines Fellowship

Apply by February 1, 2021



**Marisa DiCiucis**  
**Biotechnology 2022**  
**(SCSU)**

"Over the summer, I worked on modifying the fruit fly genome, specifically the Dad locus, virtually using CRISPR-Cas9 on Benchling. I annotated the fruit fly genome and added florescent tags virtually to the Dad locus to later check that the domains, MH1, MH2 and Linker regions, were successfully deleted. I also created a FRET construct to watch the loci interactions between Dad, Mad, and Medea. This work allowed me to enhance my bioinformatics skills and overall understanding of gene modification by using Benchling and online databases. In addition, by understanding fruit fly genetics, I can better use fruit flies as a nonpathogenic model organism for the current iGEM project. Furthermore, the repeated presentations helped me understand pacing and how to explain synthetic biology topics to a wide audience and built my confidence in presenting. Lastly, by partaking in this fellowship I am able to understand the interdisciplinary aspects of research, which will also be important in the iGEM competition when it is necessary to combine several different areas of STEM to complete a synthetic biology project."

**For more information on iGEM or other STEM-IL summer programs  
and how to apply programs please visit:**

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# JOIN THE STEM-IL SUMMER RESEARCH PROGRAMS

**New Haven Innovation Collaborative Research**

**Experience (NHIC)**

Apply by February 1, 2021



**Jason Aceto**  
**Physics 2021 (SCSU)**

I am a veteran who served our country, and now I am devoted to advances in health and science. It's a dream to contribute to treating diseases. I once worked on the frontlines of healthcare as a medic and EMT, and now I'm hoping to contribute through the scientific and research aspects of the field. Studying docking sites on SARS-CoV-2 target biomolecules is relevant for us all as a society right now as finding suitable target sites can lead to possible vaccine developments, and better treatments for those infected with the virus. It's the dedication of this line of work that will soon lead our society to return to a more normalized routine.

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