ALUMNI NEWSLETTER

RENSSELAER POLYTECHNIC INSTITUTE — FALL 2021

We hope that this newsletter finds everyone well, and that each of you are enjoying the start of the new year! Surprising to none, the Fall 2021 semester was another productive term for the organization. This semester afforded Engineering Ambassadors (EA) the opportunity to partially return to in-person operations, following a long period of mostly virtual operations due to the COVID-19 pandemic. It is impossible to capture the tremendous impact that our EAs have had this past semester, but we will highlight some of our greatest efforts in this newsletter.

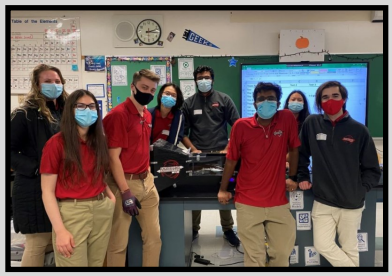
EA has continued to be heavily involved in the operations of Rise High. This semester, we launched a new in-person curriculum for Rise High, which was centered on professional development. The curriculum, which was developed by EAs during the Fall semester, allowed 8th and 9th grade students to experience brainstorming, prototyping, and teamwork within an engineering setting. With the goal of launching three new curricula this spring, we have been actively working to develop new modules on space, prosthetics, and physics, as well.

This semester, many of our EAs have pursued research opportunities with RPI professors. We are currently working with six different professors on a wide variety of research topics. The math and robotics program with Professor Paternain is still going strong, and new partnerships have been forged with the Blaber Lab and the Intelligent Structural Systems Lab.

In addition to these special projects, we have continued our outreach with numerous school visits, providing both virtual and in-person options to accommodate individual schools' health and safety protocols. During November, we were able to send 12 EAs on a full day visit to Maple Avenue Middle School — one of our largest school visits in recent years!

EA has also increased its volunteering efforts — establishing new relations with both the Troy Boys and Girls Club and Troy Public Library. Our work with the Troy Boys and Girls Club involves several Ambassadors visiting their facility twice a week, where we volunteer with other RPI students to contribute to the organization's mission. Both of these local outreach programs allow our EAs to give back to the Troy community, which is an integral part of our mission.

Following the conclusion of the Fall 2021 semester, we want to acknowledge Lawrence Luo, who graduated this past December with his degree in Computer Systems Engineering. Lawrence has been extremely dedicated to EA since joining in 2019, and we wish him all the best in his professional career! As we look ahead to the Spring 2022 semester, we want to thank all of our alumni for your continued support of the EA program. Your contributions in previous years have helped to build the foundation or current and future members of the organization. Please be well, keep in touch, and best wishes to all of you!



FALL 2021 EXECUTIVE BOARD

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Cameron Smith

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Sonu Chadalavada

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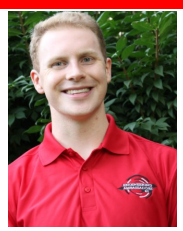

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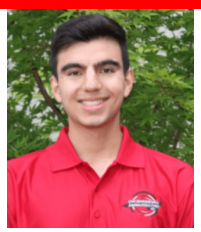
Matthew Fox



Financial Coordinator

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MEMBERSHIP HIGHLIGHTS

Each semester we like to feature a few ambassadors who have been going above and beyond both for our organization and in their own career paths.

Venkat Cherukupalli

Major: Aeronautical Engineering and Mechanical Engineering
Hometown: Belle Mead, NJ
Presentations: GPS, Mars Exploration, Getting into Orbit, Chemical Engineering Processes
Internships: Last summer, I had the opportunity to work at a startup called SolarFi, where I worked alongside 4 other engineering interns to design off-grid solar pods. This upcoming summer, I'm privileged to have an internship at GE Aviation as a Supply Chain/Manufacturing Intern.
Other involvements at RPI: I'm a hip-hop dancer in the Eighth Wonder dance group. Also, I am honored to be serving as the treasurer of RPI's Society of Asian Scientists and Engineers.
Favorite part of EA: Every day, my fellow EAs inspire me to learn and become a better person. I genuinely feel that each member is passionate about being a good person and helping those around them.

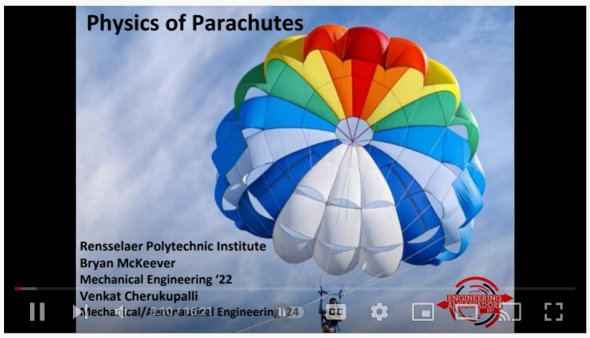
Jaclyn Higgins

Major/Minor: Biomedical Engineering/Studio Art
Hometown: Brewster, NY
Presentations: ECGs, GPS, Physics of Parachutes, Nanofluidics, GMOs, Evolution of Prosthetics
Research at RPI: This past semester I had the opportunity to participate in research in the materials engineering department with Dr. Palermo. The project is focused on creating a polymer coating using curcumin, a chemical found in turmeric, for biomedical implants that will help paralyzed veterans.
Other involvements at RPI: At RPI, I also work with the Science and Technology Entry Program (STEP) as a student teacher where we develop and present STEM based lessons to middle and high school kids. This past semester I made and presented a lesson I designed based on a NYTimes article about combining art and science.
Favorite Part of EA: My favorite program I've participated in is volunteering at the Troy Boys and Girls Club! I love being able to work with the same kids each week, getting to know them and their interests. Seeing their enthusiasm and curiosity is what inspires me to keep sharing my knowledge.

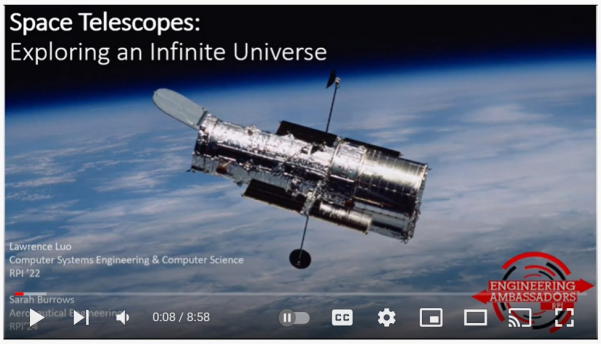
Bella Rocha

Major: Mechanical Engineering and Design, Innovation and Society
Hometown: Stamford, Connecticut
Presentations: Humanitarian Logistics, Structures, Drag Force, Water Filtration, Digital Sound, Inclusive Design
Intership: I'm passionate about utilizing my engineering skills through different social projects to create curriculum or technology that encourages a more inclusive and sustainable world. I was fortunate enough to have an internship where I was able to teach the importance of engineering and ethics through CAD workshops and Social Science readings to high schoolers.
Other involvements: I'm involved in Engineers for a Sustainable World where I collaborate with my peers to design and aid in building sustainable infrastructure within Ek' Balam Mexico.
Favorite Part of EA: EA has given me an opportunity to learn about different fields in engineering as well as helped me to cultivate my passion for teaching. Being a Hispanic woman in EA has allowed me to inspire other Hispanic students that they too can pursue and succeed in STEM.

SOCIAL MEDIA SPOTLIGHT



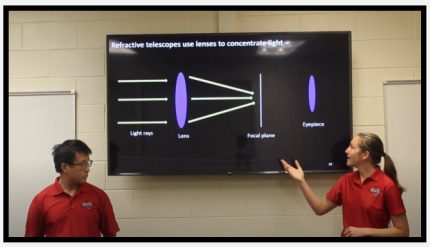
Physics of Parachutes---Presentation and Hands On Activity

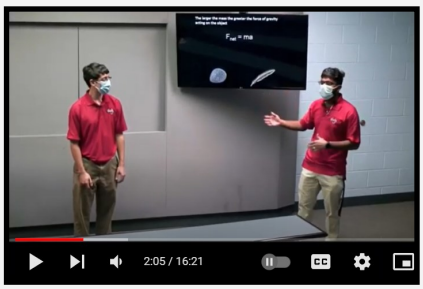


Space Telescopes Presentation

This semester, the organization has taken steps to improve our social media presence. Our main goals were to showcase Engineering Ambassadors in action as well as provide educational content to the broader community.

Several action items were implemented in order to achieve these goals. In order to inform our audience about the impact and active role that our EAs have in the community, we made a social media post about each outreach or club event of the semester. We also spearheaded "Meet a Member Monday" — a series of weekly posts each featuring a member of our organization — in an effort for the broader community to get to know more about the awesome individuals in EA. Lastly, we collaborated with RPI media ops in order to make recordings of several of our most popular presentations. The presentations were then uploaded to RPI EA social media (Facebook, Instagram, and YouTube). Not only were these presentation recordings key to our collaborations with Troy Public Library this semester, but they are also a start to what we hope will become a virtual presentation library. The videos in this "library" will be used for EA's asynchronous learning events and collaborations. We already have plans to expand this method of asynchronous presentation to other libraries inside and outside of the capital region within the next semester.





Make sure to connect with us on social media!

Instagram : @rpi_ea

Facebook : /RPIEngineeringAmbassadors

YouTube : RPIEngAmbassadors

OUR SUPPORTERS

This year has been filled with so much exciting news for our EAs beyond their work in classrooms virtually and in-person. Thank you to everyone who has supported our Engineering Ambassadors since day one. Here are some of the organizations and companies that have supported our program and put their trust in the work of our Ambassadors for their own efforts over the past year.

WERGOLD FUNDRAISER

We're fundraising! Please visit our weR Gold campaign page, where you can donate to support future EA outreach work. Any amount is greatly appreciated. Details about the specific project we are fundraising for can be found on the page: https://impact.rpi.edu/project/29811. Thank you in advance for your support!

ALUMNI UPDATES

Nate Peck

Background: Nate graduated from RPI in 2021 as a nuclear engineering major. Outside of joining EA in the Spring of 2019, Nate was very active in Greek Life, serving as one of the Vice Presidents of the Interfraternity Council. The EA presentation he helped develop was on genetic modification.

After graduating, I ventured to Wilmington NC and went to work at my previous co-op location, GE Hitachi, as a Nuclear Fuels Analysis Engineer. I was immediately thrown into a wide breadth of technical work, primarily in the areas of radiological analysis. Upon arrival, we were deep into the development of our current new nuclear reactor project, a small modular reactor named the BWRX-300. As of today, we have won a contract to build this reactor in Canada, the first from GE in more than 20 years! While I am still fairly new here, I have learned so many technical skills, and continue leveraging the soft skills developed in EA. There is much technical work to be done, but it feels great to be a spearhead in the green energy transition!

Unfortunately, it has been tough to find good outreach opportunities during the rapid development of the BWRX-300, and the current pandemic, but I am glad to be working for an employer committed to such in more normal times. I am currently involved in GE's group for young professionals in nuclear, NAGYN. Through this group, I can continue outreach in similar ways as EA, such as school visits and judging science fairs. Outside of work, I have had a hard time adjusting to beach life. While the sun and the waves are nice, I must travel hours to find any mountain worth hiking. Wilmington is a great city, with companies like GE, Corning, and Thermo Fisher Scientific. If any EA's find themselves in the region, or working here, feel free to reach out!

Mack Ott

Background: Mack Ott graduated from RPI with a bachelor in Aeronautical and Mechanical Engineering in 2014. He was active in Greek life and Student Government during his time at RPI.

After graduating from RPI, I worked for Firefly Space Systems down in Austin Texas in the structures department. Realizing I preferred a different career, I left to pursue a Master's degree in Aerospace Engineering at the University of Florida. After graduating in 2016 and spending time with Lockheed Martin, I began working for The Aerospace Corporation supporting the Missile Defense Agency. There I've been working as a sort of a technical jack-of-all-trades. From data analysis of US missile defense systems to space environmental requirements for satellite systems, to software development, I've had the opportunity to engage in many different projects over the years. My wife and I also welcomed our daughter Zoe this past February!

Being able to speak to the current generation of RPI Engineering Ambassadors recently was an honor. Seeing how much it had grown has inspired me to get back into Engineering Outreach, both through my company's growing efforts and through imparting an appreciation for STEM to my daughter.

Rensselaer

Feeling Generous?

Simply Call RenXchange at 518-276-6055 and ask to donate to the Engineering Ambassadors fund directly. Engineering ambassadors is always willing to accept donations to help continue bringing the inspiring field of STEM to the youth.