

# RIT Launch Initiative

**2023-2024 Sponsorship Proposal**  
[launchinitiative@rit.edu](mailto:launchinitiative@rit.edu)

# About Us

RIT Launch Initiative is a student-run organization focused on designing, testing, and manufacturing rocketry technologies for competition and student innovation. We pride ourselves on our ability to expand the aerospace knowledge of students while also staying accessible to all.



# The Mission

RIT Launch Initiative is made up of multiple subteams, all of which contribute to furthering our Intercollegiate Rocketry Engineering Competition (IREC) team.

Furthermore, we aim to give all members project experience and industry knowledge that will provide a significant advantage in their careers after graduation.



# The Launch Experience

As a part of the team, our students learn valuable skills by collaborating on a number of engineering projects including rockets, payloads, avionics, and more! Early in the Launch experience, students build their own high-powered rocket, introducing them to the fundamentals of rocketry which culminate in national certification. Students then continue to develop their understanding as they work through more advanced rocketry systems, learning important engineering and interpersonal skills along the way.

Wynter Petersen  
*President*

Louis Fleisher  
*Treasurer*

Donovan Barros  
*Director of Sponsorship*



# 2022-2023

## Accomplishments

### IREC

Successfully launched and recovered KONG, a Level 3 high-powered rocket that competed in the 10,000 foot apogee commercial motor category. Scored first for our tech report in this category. Designed a novel airbrakes payload with custom avionics to measure force on descent. **Won first place internationally in the Space Dynamics Labs Payload Challenge.**

### Avionics

Developed a modular flight computer architecture that connects its modules with Ethernet, designed several custom PCBs, and wrote platform-independent libraries to implement this architecture. Selected for one of 24 Project Technical Presentations during the Spaceport America Cup.

### Propulsion

Developed a program to generate optimal nozzle geometry for liquid fuel as well as designed injectors, a pressure vessel, and a fuel system.

### Space Race

Designed and built two complete Level 2 high-powered rockets with experimental designs. One rocket incorporates a dual 180-degree camera system in a transparent bay and uses single-bay chute deployment while the other developed their own umbilical cord system for power and communication.

### L1 Program

11 students were certified this year for the first class of high-powered rocketry thanks to this program, which also had a success rate of over 85% and zero rockets unable to reflly.



# Where Our Members Are

## Co-ops



**Louis Fleisher**

**Microelectronic Engineering  
Process Engineer at Northrop  
Grumman**



**Aaron Chan**

**Software Engineering  
Avionics Software at United  
Launch Alliance**



**Grace Dertinger**

**Mechanical Engineering  
Launch Engineer at SpaceX**

## Full Time



**Matt Ryan**

**Industrial and Systems  
Engineering  
Functional Test Engineer at  
Astra**



**Will Merges**

**Computer Science  
Avionics Integration and Test  
Engineer at NASA's JPL**



**John Ye**

**Computer Engineering  
Technology  
Hardware Engineer at  
Raytheon**

**RIT Launch Initiative has had its members on co-op or working full-time at many different companies in the fields of manufacturing, aerospace, and defense. In addition to the employers shown above, RIT Launch members or alumni have also worked at:**

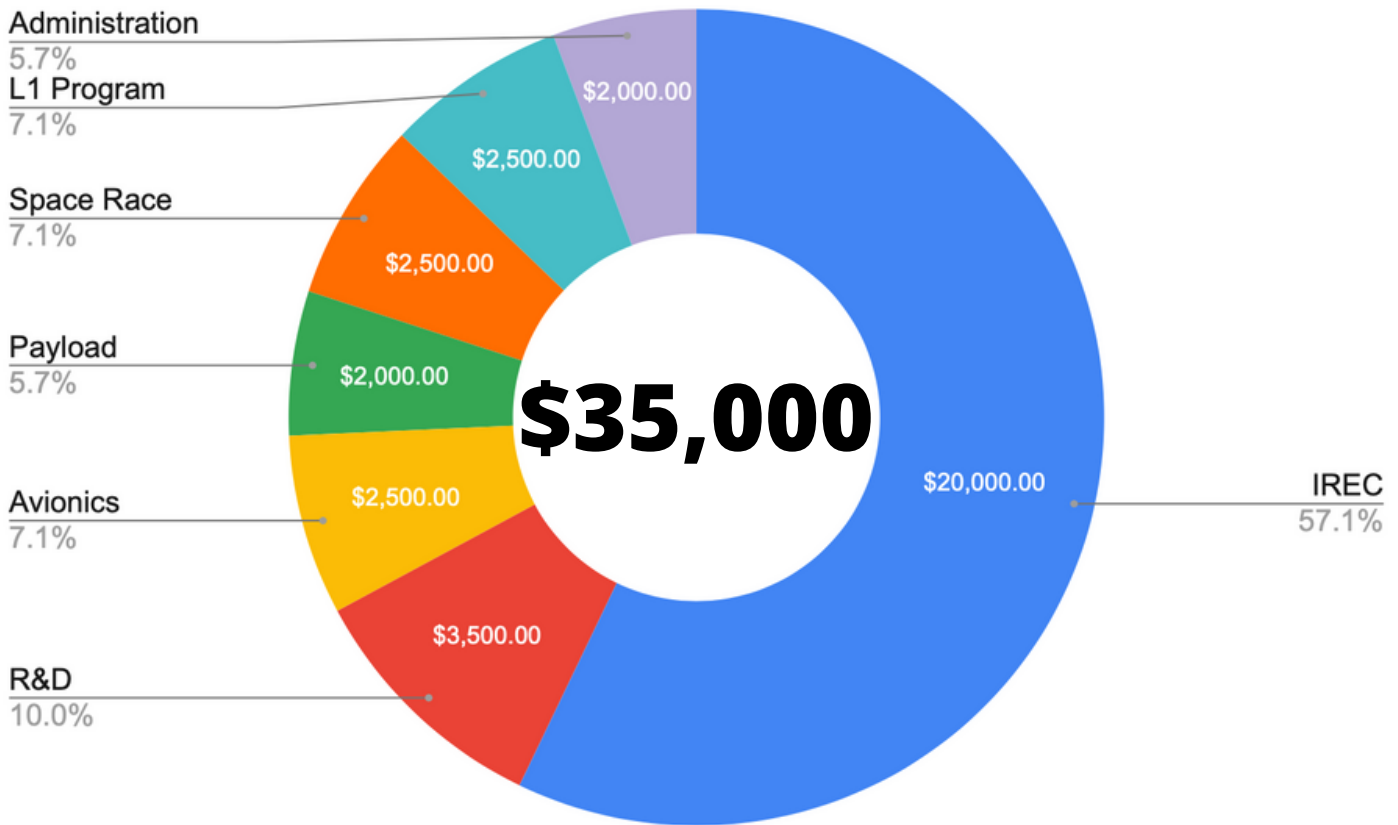
**ABL Space Systems, Bayer, BlueHalo, Bracalente Manufacturing Group, Collins Aerospace, D3 Engineering, G.S. Precision Inc., General Motors, GE Aerospace, HCA Healthcare, Hillrom, HP, Lockheed Martin, MACOM, Moog, NASA, QA Technologies, Relativity Space, Spirit Aersosystems, SiPhox, Sony, Tesla, Toyota, University of Rochester Laboratories, and Ursa Major**



**RIT Launch Initiative is committed to promoting diversity and inclusion at all levels of our team. We are especially proud that our leadership team this year has a number of women and LGBT-identifying rocketeers, including our President, Vice President, Secretary, and Director of Public Relations.**



**Community outreach is also a point of emphasis for our organization. This past year, members volunteered at the Rochester Museum of Science to set up a booth for their "Space Week" and also held three hands-on sessions to teach RIT's freshmen about high-powered rocketry**



# Goals and Expenses Summary

Our goals for the upcoming year are to expand on what we have learned from this past year to build new pathways for innovation and engineering excellence in our projects, including:

**IREC:** Refine the winding process for tubes and manufacture more parts in-house. Develop a more reliable recovery system and use more cameras in the rocket.

**Avionics:** New revision of our modular backplane flight computer and more boards to collect flight data.

**Space Race:** Continue to provide newcomers with basic high-powered rocketry knowledge and incorporate more IREC research ideas into the Level 2 rockets.

**Propulsion:** Create an all-purpose propulsion test stand, manufacture and test a pressure vessel, and hot-fire test a liquid engine.



**L1 Program:** Certify more flyers and bump the success rate from 85% to over 90%



# Sponsor Benefits

Our club runs solely on donations because we believe knowledge should be accessible by all. Launch values our sponsors the with the utmost gratitude because you allow our club to create experts in engineering. We want to illustrate just how your donation benefits us, as well as you. The RIT Launch Initiative is a 501(c)(3) organization and [all donations are tax-deductible](#).

## Donation Value

Level 1: \$500	Name and Logo on Website	Name and Logo on Design Posters (Imagine RIT, IREC)	Monthly Newsletter	 Recurring Donations count as 150% of the donation amount			
Level 2: \$2500	Name and Logo on Website and IREC Field Shirts	Name and Logo on Design Posters (Imagine RIT, IREC)	Monthly Newsletter	Invitation to Launches	Stickers		
Level 3: \$5000	Name and Logo on Website, IREC Field Shirts, and all Level 2 and Level 3 Rockets	Name and Logo on Design Posters (Imagine RIT, IREC)	Monthly Newsletter	Invitation to Launches	T-Shirts and Stickers	Access to a curated pool of member resumes	
 Spaceshot: \$6500	Name and Logo on Website, IREC Field Shirts, and all Level 2 and Level 3 Rockets	Name and Logo on Design Posters (Imagine RIT, IREC)	Monthly Newsletter	Invitation to Launches	T-Shirts, Stickers and Custom Jackets	Access to a curated pool of member resumes	Private Recruitment Session with a Tour of our Build Area

## How To Donate



Funding



Services



Materials and goods

# Connect with Us

Thank you for your consideration in supporting the RIT Launch Initiative. If you are interested in becoming a part of our team or have any sponsor-related inquiries, please contact us via email. We appreciate your interest on the team and we look forward to partnering with you!



**Donovan Barros, Director of Sponsorship**

[launchinitiative@rit.edu](mailto:launchinitiative@rit.edu)



**Website**

<http://launch.rit.edu/>



**Facebook**

<https://www.facebook.com/launchRIT>



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**YouTube**

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