



**USF SOCIETY OF AERONAUTICS AND ROCKETRY**  
THE SKY IS NOT THE LIMIT.

## **SPONSORSHIP INFORMATION**



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University of South Florida - Society of Aeronautics and Rocketry



# ABOUT SOAR



***SOAR is a multidisciplinary organization dedicated to the research and development of rocketry and aerospace technologies.***

## OUR TEAM

The USF Society of Aeronautics and Rocketry is unique among student organizations in that it operates in a manner as close as possible to that of a productive engineering company. To this end, SOAR is structured in a way that allows us to work on several major projects at a time. At the head of SOAR is the Executive Board, consisting of our President, Vice President, and Chiefs of Finance, Operations, Engineering, and Rocketry. Under the Executive Board are the Operations and Engineering branches. The Engineering branch is further divided into teams for each project. Each of these teams has its own project manager as well as other positions tailored to that specific team's requirements. On the other side of SOAR, the Operations branch houses the Marketing and Events teams, and the Leadership Development Program.

SOAR currently has about 50 active members, and that number is constantly increasing. Because a company cannot run solely on engineers alone, SOAR is by necessity a multidisciplinary organization - our membership includes students of finance, biomedical sciences, psychology, physics, chemistry, and communications, among others. The real-world experience that SOAR gives its members is extremely beneficial; our members regularly obtain (and succeed at) internships at the likes of NASA, MIT, and SpaceX.

## WHAT WE DO

At our core is the goal of becoming a world-class aerospace organization, and our current projects reflect that ambition. These projects, including our two-stage rocket, our high altitude project, and our liquid propulsion initiative (among others) are detailed on the following pages. With USF SOAR, ***THE SKY IS NOT THE LIMIT.***



# CURRENT PROJECTS

## NASA STUDENT LAUNCH

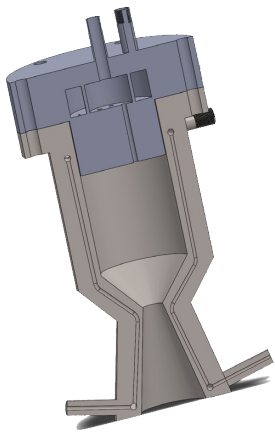
For the 2018 NASA Student Launch Initiative, a national rocketry competition that focuses on innovative payload design, SOAR has taken on the challenge of constructing a five inch diameter rocket that will reach exactly 5,280 feet at apogee before safely landing and deploying a rugged autonomous rover with onboard solar panels. This task is made especially difficult due to the competition's constraints on remote control, the need to navigate difficult terrain, and the challenge of safely landing the payload without damage.



## TWO-STAGE ROCKET

Last year, SOAR built its first multi-stage rocket, *Taurus I*, with the intention of launching it at the Large Dangerous Rocket Ships Festival in Maryland. However, the booster (lower) stage was not permitted to be used due to concerns that the rocket would surpass the festival's height ceiling of 14,000 ft. This year, SOAR plans to further develop the rocket and launch it at the Spaceport America cup in New Mexico, aiming to launch a research payload to an incredible height of 30,000 ft using two custom, in-house manufactured solid motors.

# CURRENT PROJECTS



## LIQUID PROPULSION PROJECT

Only about a dozen universities in the United States have built a working liquid engine, and we aim to make USF the next one. This long-term project is inherently resource intensive (requiring extensive research and analysis, the creation and use of highly controlled test environments, and the custom machining of nearly every part), however it is well worth the time and effort. The accomplishment of this project will put SOAR on the national map and hopefully well on the way to space flight, while providing valuable data to the global research community.

## HIGH ALTITUDE PROJECT

The next step toward SOAR's ultimate goal of reaching the boundary of outer space and putting a satellite into orbit is to develop an extremely high altitude rocket. This rocket will implement the liquid propulsion technology currently being researched, however it will have to be more advanced than any rocket SOAR has ever designed in order to reach record height limits and survive the extreme forces subjected to it by the powerful liquid engines.

## RESEARCH PAYLOADS

SOAR has been building rockets every year for the past several years, and thus has some rockets in storage that, while still able to be launched, are rarely used. The Research Payloads project aims to bring these rockets back to life with experimental payloads designed in cooperation with faculty and graduate students at USF. This would provide SOAR with the unique opportunity to actively contribute to active research projects that could potentially benefit the entire global scientific community.





# CURRENT PROJECTS

## TRA CERTIFICATION PROGRAM

Education is primary among our many goals at SOAR. Our guiding organization, the Tripoli Rocket Association, recognizes three levels of certification, each authorizing the rocketeer to launch ever more powerful rockets. To this end, we conduct Level 1 Certification build classes to help members learn the basics of rocketry and build a strong base of knowledgeable members. We believe this endeavor is paramount to the success of our organization and to transmitting knowledge that might otherwise be lost as members graduate.



## AERONAUTICS RESEARCH INITIATIVE

Until now, the USF Society of Aeronautics and Rocketry has focused almost entirely on rocketry. However, the Aeronautics Research Initiative aims to change that by developing a program focused on other means of controlled flight, such as quadcopters and airplanes. This project has the potential to enable SOAR to participate in national collegiate aeronautics competitions, such as those run by the AIAA or NASA.





# SPONSORSHIP BENEFITS

## AVAILABLE PACKAGES

*All donations are tax deductible\**

### SPORT PILOT

\$100 - \$1,000

- Social media promotion
- Company link and logo on SOAR website
- Company logo featured in all presentations and videos

### AIRLINE PILOT

\$1,000 - \$2,500

- Social media promotion
- Company link and logo on SOAR website
- Company logo featured in all presentations and videos
- Small company logo on rockets
- Framed team photograph

### FIGHTER PILOT

\$2,500 - \$5,000

- Social media promotion
- Company link and logo on SOAR website
- Company logo featured in all presentations and videos
- Large company logo on rocket
- Company logo on SOAR banners and apparel
- Framed team photograph

### ASTRONAUT

\$5,000+

- Social media promotion
- Company link and logo on SOAR website
- Company logo featured in all presentations and videos
- Large company logo on rocket
- Company logo on SOAR banners and apparel
- Custom SOAR plaque
- Access to SOAR resume database

## 'À LA CARTE' OPTIONS

\$1,000	Prime logo location on rocket center of gravity
\$1,500	SOAR recruiting event
\$6,000	Rocket naming and livery rights

\* Tax-deductible donations are made to the USF Foundation, a 501(c)(3) non-profit that acts as a proxy for SOAR. In-kind donations are also always appreciated.



# CONTACT US

Thank you for your interest in SOAR! If you are interested in donating or want to learn more about the USF Society of Aeronautics and Rocketry, please contact us directly and/or follow us on social media using the information below:

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### PHOTO CREDIT:

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