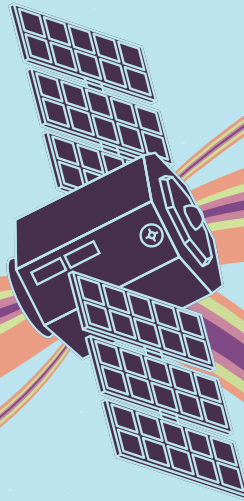


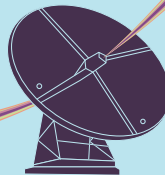
# ***SPACE Mission Architectures***



**INFINITE POSSIBILITIES**

34<sup>TH</sup> Annual  
Small Satellite Conference  
August 1 - 6, 2020 | Logan, UT, USA

**CALL FOR PAPERS | CALL FOR EXHIBITORS**



# August 1 - 6, 2020

## 34<sup>TH</sup> Annual Small Satellite Conference

### Space Mission Architectures – Infinite Possibilities

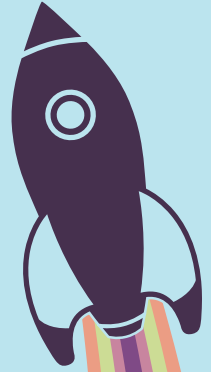
The demand for global connectivity and ubiquitous access is driving grand endeavors throughout both the public and private space sectors. The proliferated mission architectures needed to support commercially-motivated markets such as broadband communications and remote sensing are becoming increasingly intertwined with missions in support of civil and national security space applications.

As historic barriers to creating large-scale interconnected constellations continue to be overcome through advances in small satellite technologies and launch and ground systems, the emergence of new hybrid architectures is now being envisioned as part of the evolving space ecosystem. Selecting the appropriate architecture, or successfully orchestrating a combination of architectures, is a critical step toward implementing a system that fulfills mission requirements and objectives. Such an effort is becoming an increasingly complex art as there are seemingly infinite solutions. Adding to this complexity is the expectation that most, if not all, missions support security, information assurance, and interoperability.

The 34th Annual Small Satellite Conference will explore the realm of possible space mission architectures and how they can be practically achieved to support the diverse needs of the global space community.

### Abstracts are being accepted for consideration in the following:

- Pre-Conference Workshop – August 1-2, 2020
- Technical Sessions – August 3-6, 2020
- SmallSat Swifties – August 4-5, 2020
- Poster Sessions – August 1-2 & 4-5, 2020



# ***SESSION TOPICS***

for Pre-Conference Workshop and Technical Sessions

## **Abstract Deadline: February 4, 2020 | 11:59 PM MST**

### **Year in Review**

Review of missions that have been launched in the past 18 months, with an emphasis on lessons learned and/or technological advancements that significantly enhanced mission utility.

### **Ground Systems**

Innovative technologies or systems (hardware or software) for ground networks, mission operations centers, or science/data analysis that provide significant advances in mission utility.

### **Propulsion**

Key technologies for effective on-orbit propulsion and attitude control maneuvering.

### **Advanced Technologies**

Innovative technologies (hardware or software) that provide significant capability advancements in small satellite missions.

### **Educational Programs**

Educational programs, approaches, or philosophies that benefit the development of engineers and/or scientists through the use of small satellite technologies.

### **Next on the Pad**

Preview of missions that are scheduled to fly within the next 18 months, with an emphasis on the missions and their scientific or technological purpose.

### **Space Access**

Launch systems, rideshares, or multi-manifest opportunities that are specifically designed to provide access to space for small satellites.

### **Science/Mission Payloads**

Innovative technologies or systems that enable cutting edge missions to be formulated.

### **Communications**

Emerging technologies or techniques for the timeless challenge of communicating with small satellites.

### **Space Mission Architectures**

Explore the realm of possible space mission architectures and how they can be practically achieved to support the diverse needs of the global space community.

Selected presentations and papers will be included in the Small Satellite Conference online proceedings. Proper approval and clearances are the responsibility of the author; please plan accordingly.



## ***Pre-Conference Workshop***

Educational and research programs, lessons learned, tutorials and CubeSat technology will be the main focus of the weekend sessions.

## ***Technical Sessions***

Weekday sessions focus primarily on cutting-edge technologies and missions supporting small satellite endeavors.

## ***SmallSat Swifties***

Selected participants will be given three minutes for a flash talk during breaks from the Technical Sessions.

## ***Poster Sessions***

Printed posters will be hung either during the Pre-Conference Workshop or the Technical Sessions. Dedicated viewing times are held twice daily.

**Abstract Deadline:  
February 4, 2020 | 11:59 PM MST**

# ***ABSTRACT SUBMISSION***

To be considered as a presenter for the Pre-Conference Workshop, Technical Sessions, SmallSat Swifties, or Poster Sessions, an abstract on your research must be submitted. Abstracts should clearly summarize the proposed presentation or poster. Abstracts must be submitted electronically at [www.smallsat.org](http://www.smallsat.org) before 11:59 PM MST on February 4, 2020.

## **When submitting, be prepared to supply the following information:**

- Title of paper
- Point of contact information
- Presenter name and contact information
- List of co-authors including name, affiliation, and email address
- Abstract – 500 word maximum, ascii text only
- The 2020 session topic that best fits the abstract (select one)
- Indicate if you want the abstract to also be considered for the Pre-Conference Workshop, Poster Sessions or SmallSat Swifties

## **Abstracts are selected by a peer review panel based on:**

- Appropriate technical content
- Value and relevance to conference and session topic
- Lack of advertisement/marketing\*

## **Please Note – By submitting, each author/co-author agrees to the following:**

- If accepted to present in the Pre-Conference Workshop or Technical Sessions, presenters must submit a technical paper to accompany their presentation. Poster Sessions and SmallSat Swifties do not require a technical paper.
- The Small Satellite Conference is authorized to circulate abstracts to committee members and reviewers for evaluation and selection purposes.
- Selected presentations and papers will be included in the Small Satellite Conference online proceedings. Proper approval and clearances are the responsibility of the authors; please plan accordingly.

\* Abstracts that focus primarily on marketing are strongly discouraged.

For technical program questions contact:  
Marianne Sidwell | [marianne.sidwell@sdl.usu.edu](mailto:marianne.sidwell@sdl.usu.edu)

# CALL FOR EXHIBITORS

The Small Satellite Conference provides exhibitors the chance to make new business associations and increase company exposure, while offering great networking opportunities. Don't miss out on the chance to showcase your company!

## ***Changes in Registration***

We have changed the registration process in order to accommodate for the increased number of exhibitors applying for the conference exhibit. The date and time of your application no longer affects acceptance or placement. Please note the new application procedure below.

**Commercial Exhibit Application Dates:  
Opens January 27, 2020 | 9:00 AM MST  
Closes February 7, 2020 | 11:59 PM MST**

## ***Registration in 3 Steps:***

### **Application**

- The SmallSat application window is open January 27 – February 7. Please go to [www.smallsat.org/exhibit](http://www.smallsat.org/exhibit) to apply as an exhibitor.
- *Determine the name and email address of the person who should receive all future correspondence regarding your company's exhibit.*
- Be prepared with payment for \$5 application fee, via credit card.
- Please understand that this is an application, not a guarantee of acceptance.

### **Acceptance**

- As there may be more applications received than spaces to exhibit, acceptance to the show and priority of booth selection will be made according to each company's credits as of January 1, 2020.
- All companies will be notified by February 20, 2020, regarding their acceptance status.

### **Booth Selection**

- Accepted company's booth selection will take place via teleconference. Companies will have access to updated floor plans on our website, indicating available space as organizations select booth space.
- Each organization's assigned booth selection time slot will be based on that company's accumulated credits.
- Companies with the same number of credits will be put in random order for booth selection.
- Please have the latest floor plan in view when calling in for space selection to ensure you have access to the most current booths available. This can be found on our website [www.smallsat.org/commercial/layout](http://www.smallsat.org/commercial/layout).

# Credit System

Companies with credits are placed according to the SmallSat exhibitor credit system, using the credits accumulated as of January 1, 2020. Credits are calculated cumulatively from years 1992-present. An organization may earn credits through the following options:

- Exhibit at the Conference – 5 credits per year
- Sponsorships - 2 credits per year
- Donation to Student Competition - 2 credits per year
- Open Industry Party - 2 credits per year

For the exhibit rules and regulations, schedule, exhibit layout, tips for registering, please visit our website at [www.smallsat.org](http://www.smallsat.org).

## Commercial Exhibit Space

### TAGGART STUDENT CENTER EXHIBIT SPACE

#### Single Booth Exhibit

- 8'D X 10'W
- \$1400

#### Double Booth Exhibit

- 8'D X 20'W
- \$2800

#### Tabletop Exhibit

- 2'D x 8'W
- \$800

### FIELDHOUSE EXHIBIT SPACE

#### Single Booth Exhibit

- 10'D X 10'W
- \$1400

#### Double Booth Exhibit

- 10'D X 20'W
- \$2800

#### Tabletop Exhibit

- 2'D x 8'W
- \$800

### TAGGART STUDENT CENTER EXECUTIVE SUITES\*

#### Center Colony

- 650 ft<sup>2</sup>
- \$5200

#### West Colony

- 400 ft<sup>2</sup>
- \$3950

\*The suites can be split between up to two partner companies; both companies will need to register as exhibitors.

For exhibitor information contact:  
Candace Malmstrom | [candace.malmstrom@sdl.usu.edu](mailto:candace.malmstrom@sdl.usu.edu)

# ***Sponsorship Opportunities***

**Sponsorship Registration Dates:**  
**Opens January 7, 2020 | 9:00 AM MST**  
**Closes June 17, 2020 | 11:59 PM MDT**

Corporate sponsorship opportunities are available to organizations wishing to elevate their visibility during the Conference. Sponsors receive increased exposure through Conference publications, the SmallSat website, and on-site recognition. Sponsorships are available to any organization regardless of exhibit participation. Sponsorships will be assigned on a first-come, first-served basis and are limited to one sponsorship per organization.

For sponsorship questions or additional information, contact:  
**Candace Malmstrom | [candace.malmstrom@sdl.usu.edu](mailto:candace.malmstrom@sdl.usu.edu) | (435) 881-0193**

## **WiFi**

- Sponsorship: \$10,000

## **Daily Coffee**

- Sponsorship: \$4,000

## **Ice Cream Social**

- Sponsorship: \$4,000

## **Weekend Coffee**

- Sponsorship: \$4,000

## **Business Center**

- Sponsorship: \$3,000

## **Munch and Mingle Luncheon**

- Co-sponsorship: \$1,250

## **Monday Brunch**

- Co-sponsorship: \$1,000

## **Pre-Conference Luncheon**

- Co-sponsorship: \$1,000

## **Fieldhouse Charging Station**

- Co-sponsorship: \$625

## **Fieldhouse Daily Raffle**

- Co-sponsorship: \$625

## **Launch Pad Patio**

- Co-sponsorship: \$625

## **Refreshment Break**

- Co-sponsorship: \$625
- Available Monday through Thursday

## **Pre-Conference Refreshment Break**

- Co-sponsorship: \$500



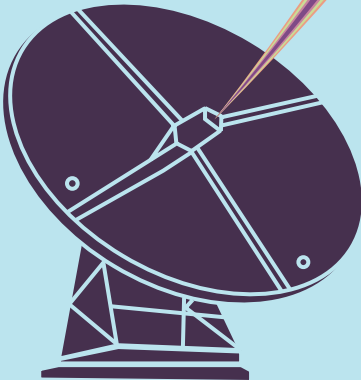
SELECTING THE  
***Appropriate  
Architectures***

is a critical step  
toward implementing  
a system that

***fulfills***

**MISSION REQUIREMENTS &**

***objectives***



# ***Student Opportunities***

The Small Satellite Conference welcomes all students and encourages them to participate, whether they are presenting a paper, participating in the University Exhibit, or simply attending the Conference. With industry professionals, researchers, and exhibitors in attendance, the Conference is an excellent opportunity to make contacts while learning more about career opportunities.

## ***University Exhibit***

The University Exhibit provides opportunities for students to meet potential employers, graduate advisors and peers with similar interests. University exhibit space will be assigned on a first-come, first-served basis.

**University Registration Dates:**  
**Opens January 7, 2020 | 9:00 AM MST**  
**Closes June 17, 2020 | 11:59 PM MDT**

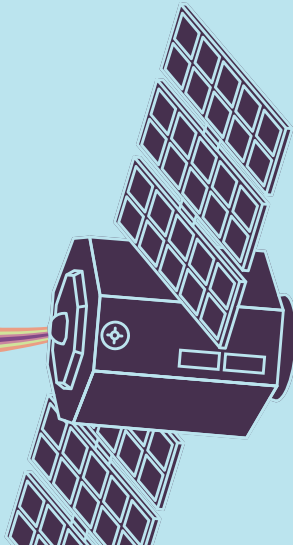
## **Tabletop Exhibit**

- 2'D x 8'W
- \$250

## ***Travel Awards***

The SmallSat Travel Award Program grants travel reimbursements to deserving full-time students desiring to attend the Small Satellite Conference.

To apply for this assistance visit our website at [www.smallsat.org/students/student-travel-award](http://www.smallsat.org/students/student-travel-award)



28<sup>TH</sup> ANNUAL

# ***Frank J. Redd Student Competition***

The Frank J Redd Student Competition provides students with the opportunity to share their work on small satellite concepts, research, and missions. This is the premiere aerospace competition in the nation. The finalists will receive monetary awards and have the opportunity to present at the Small Satellite Conference.

Papers should be focused on relevant experimentation and research related to: small satellites, their systems and subsystems, related infrastructure such as launch vehicles, ground systems, and data processing, and mission concepts.

Participation is open to full-time undergraduate and graduate students (masters only) pursuing a degree in an engineering or scientific discipline at an accredited college or university. Students seeking a PhD degree are not eligible for the student competition, but are invited to submit their research for consideration in other conference events. For complete competition rules and guidelines visit our website at [www.smallsat.org/students](http://www.smallsat.org/students).

**Student Papers Due:  
April 14, 2020 | 11:59 PM MDT**

## ***Donations***

An endowment fund has been set up to facilitate the Student Competition and Travel Awards.

For easy tax-deductable donations go to [www.smallsat.org/donate](http://www.smallsat.org/donate)

*“I was fortunate enough to take part in the Frank J. Redd student competition in 2019, and it was an amazing experience. It provides a unique opportunity for students to showcase their work and compete against some of the best young minds in the small-satellite industry. Contestants get to present to industry experts, including a panel of esteemed judges, and compete for generous prizes. The conference as a whole exceeded all my expectations, and I encourage students to submit their work for a chance to take part in a once-in-a-lifetime experience.”*

— Robin Aucoin, University of Toronto, Space Flight Laboratory



Small Satellite Conference  
1695 N Research Park Way  
North Logan, UT 84341

## ***CONTACT INFORMATION***

Abstract submittal, student competition, and general information:

**Marianne Sidwell**

marianne.sidwell@sdl.usu.edu

Commercial or university exhibits and sponsorships:

**Candace Malmstrom**

candace.malmstrom@sdl.usu.edu

**SmallSat,  
WHAT A BLAST!**

Find us on social media or  
visit us at [www.smallsat.org](http://www.smallsat.org)

