



SFU Satellite Design Team

Sponsorship Package

About Us

A wide-angle photograph of a dark night sky filled with numerous stars of varying brightness. In the lower portion of the frame, the silhouettes of several people are visible, looking upwards towards the celestial display.

The SFU Satellite Design Team is a club run by space enthusiasts from SFU. We aim to inspire future generations of space explorers, engineers, and business leaders through innovation and teamwork. Through our endeavours designing and building a satellite, we are enhancing education, building community, and advancing science.

Scientific Mission



Canadian Hydrogen Intensity Mapping Experiment (CHIME) is helping us understand gravity and the expansion of the universe, by creating the largest ever 3D map of the 21 cm signature of neutral hydrogen. This map will cover half the visible sky, and be billions of light years deep.

The Simon Fraser University Satellite Design Team is collaborating with CHIME to design and build a satellite to act as a well characterized and predictable calibration source for the radio telescope. A good calibration source such as the one we are building, is needed to improve CHIME's radio telescope's measurement capabilities and boost confidence in their results. Currently, CHIME relies on calibration sources that are less predictable or do not provide the needed coverage at a sufficiently far distance.

The impact of this project isn't limited to the scientific impact of the results from CHIME. We are developing the nanosatellite as an open source project to promote accessibility to the space industry at a low cost. We will also advocate for scientific and engineering engagement within academia, industry and general public.



Outreach



One of our core activities is educational outreach. We believe strongly in sharing our expertise and experience with the public. Outreach is our chance to give back to the community, and to provide the recognition our sponsors deserve.

During 2016, the Satellite Design Team was a part of the Coquitlam School District's SpaceFlight Experiments Program. This was a 4-month long project where students were encouraged to conceive and design a scientific experiment to be conducted in microgravity on the International Space Station. During this program, we had the opportunity to present to over 500 students, on topics from biology and chemical structure in microgravity, to the space environment itself.

We have also had the opportunity to display our project and supporters at symposiums focused on encouraging women to pursue engineering and sciences as a career choice such as GoEngGirl and SheTalks. In addition, we have presented to local aerospace companies, such as MDA.



Industry Relations



We started the team because we're passionate about space. As university students, there are many opportunities available to us, especially for endeavours that focus on personal growth and employability. We see ourselves as the future stewards of the space industry, and through the projects we undertake, we intend to grow into capable, thoughtful, and innovative future employees for Canadian aerospace companies.

That's why we take industry relationships seriously. We have established relations with some of the biggest and most exciting companies in the industry and we are always looking for ways to build new relationships, and enhance existing ones. We love company tours, info sessions, and meeting engineers working in industry. We love advice and guidance from industry professionals. We value the relationships we build and we proudly promote our industry partners on our website, social media, t-shirt, and the satellite itself. Additionally, we offer the opportunity for our partner organizations to be featured at our educational outreach events, associating them with educational causes and innovative events.



Timeline



Projects



Satellite

Constructed as our entry to the CSDC, this CubeSat will be entirely designed and built in-house. The main mission is to act as a calibration source for the CHIME experiment.



High Altitude Balloons

High altitude balloons will be used to test satellite subsystems, such as radio communication - at long range and high altitude. Our first balloon was launched from Clinton, BC in August 2016.

Project Highlight: Latobius

The goal of our first high altitude balloon “Latobius” was to stress test our project management and mission design methodologies. This test culminated in the balloon launch, which brought together 18 members from Computing Science, Mechatronics, Engineering Science, and Business.

Latobius featured hardware and software that were custom designed and built in-house, and a tracking system that used GPS and amateur radio.





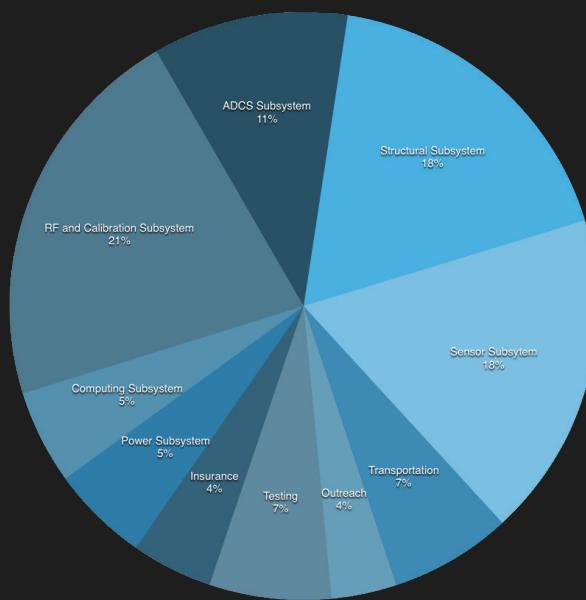
Your Support

As a student-led organization, we can ensure that any support is utilized in the most efficient manner to develop next-generation space technology.

We offer an incredible opportunity for students to build their skills. We're training the next group of experienced graduates and employees across all of our member disciplines.

Additionally, we can provide continued exposure for your brand and mission through our many educational outreach activities.

We believe that our success is your success. All of our core members are driven and dedicated to space research and education, and are eager to promote and use exceptional products.



Projected costs out of a total \$58,000 budget.

This covers flight hardware, and both prototype iterations.

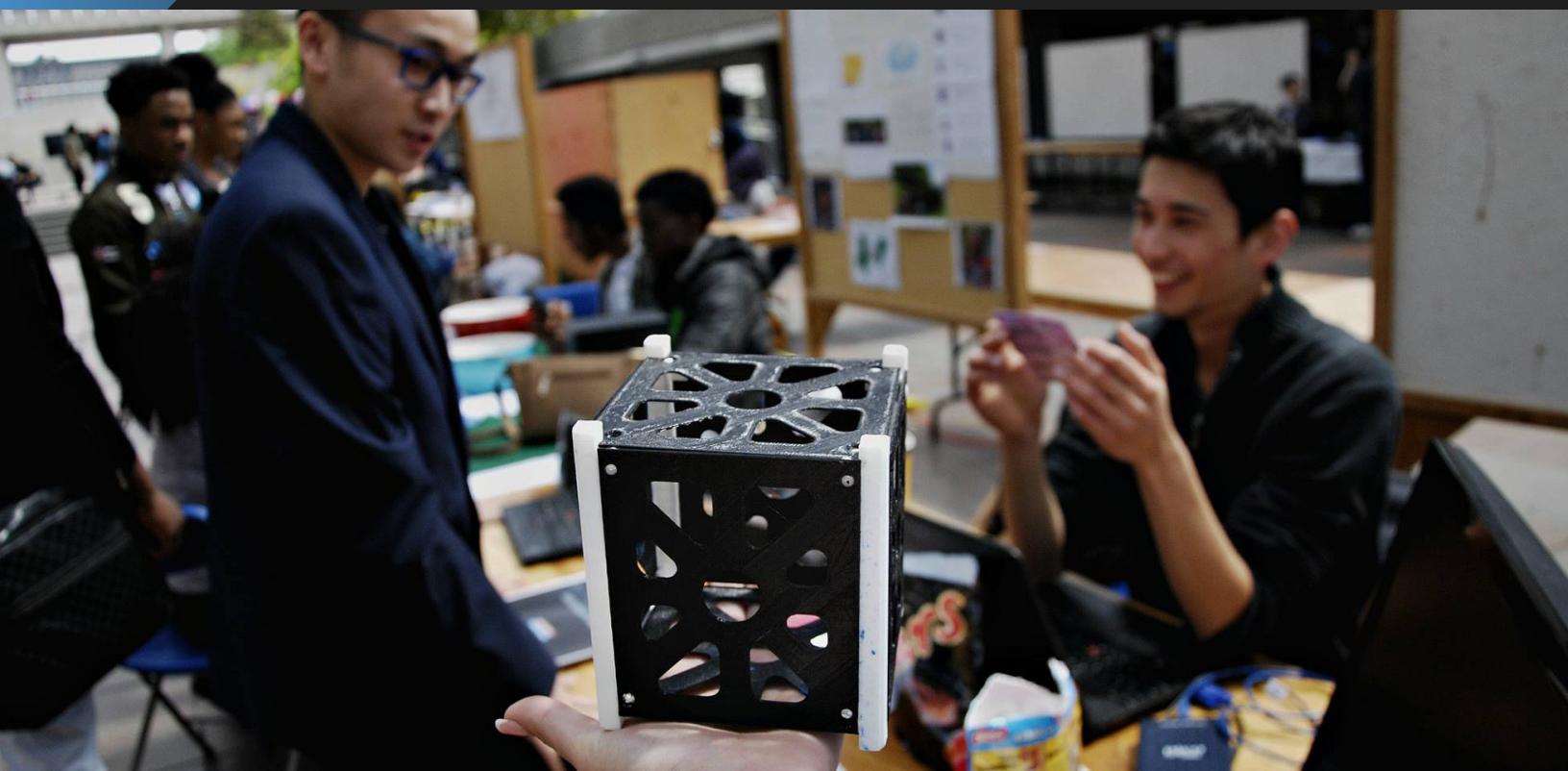


Sponsor Tiers

| | | |
|---------------------------|--|---|
| Diamond Over \$20,000 | Name the spacecraft Main logo on presentations Logo on social media Logo on shirt Logo on website Logo on documentation | |
| Platinum Over \$10,000 | Main logo on presentations Logo on social media Logo on shirt Logo on website Logo on documentation | |
| Gold Over \$5000 | Logo on presentations Logo on social media Logo on shirt Logo on website Logo on documentation | |
| Silver Over \$2500 | Logo on social media Logo on shirt Logo on website |    |
| Bronze \$750 - \$2500 | Logo on website Logo on social media |    |

All sponsorship tiers include mentions at our public outreach events, and placement in the sponsorship package.





The Canadian Satellite Design Challenge, CSDC, is Canada's premiere university level space competition. It is intended to operate like a typical spacecraft design and development lifecycle, but within a compressed timeframe.

As part of the competition, we will submit a series of proposals for review, present about the proposed mission for our satellite, and the design of the satellite itself.

Once the design reviews have been completed, we will begin assembly and testing of flight hardware that was developed during the early part of the cycle.

Our flight hardware will then be tested at David Florida Laboratory, the Canadian Space Agency's spacecraft integration and testing facility in Ottawa.



Our Team



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President & Founder



Jordan Lui
Vice President &
Industry Advisor



Tobi Nakamura
RF Lead & Founder
Technology Officer



Parsian Asgari
Project Manager
Science Officer



Tristan May
VP External, Project
Manager &
Mission Lead



Richard Arthurs
Principal Engineering
Lead
VP Finance



Steven Huang
Principal Engineering
Lead
Software Lead



Ryan Chang
Chief Accountant



Caitlin Finnigan
CHIME Lead



Cameron Jinks
ADCS Co-Lead



Harrison Handley
ADCS Co-Lead



**Svetlana
Borkovkina**
Sensors Lead



Brian Fisher
Structural Lead



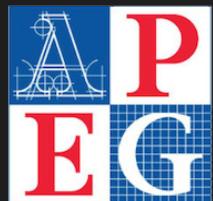
Oliver Luo
Power Co-Lead



Nell Du
Power Co-Lead



Current Sponsors



Professional Engineers
and Geoscientists of BC



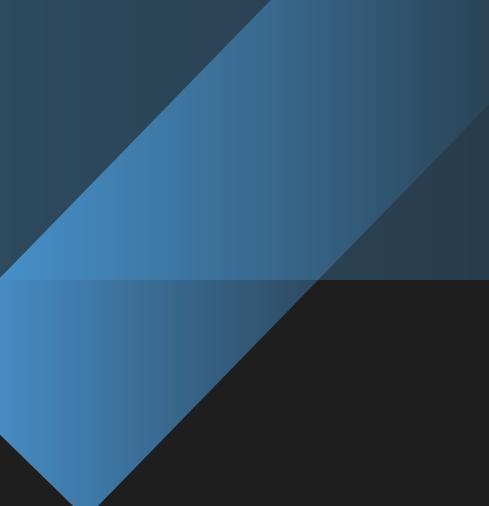
Contact Us

To learn more about the team and our projects or to support us, please contact:

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Thank you!

