

THE LAUNCH CANADA CHALLENGE 2023

Rocket Launch Competition



Sponsorship Package



Message from the President



On behalf of our whole team, I'd like to thank you for your interest in sponsoring the Launch Canada Challenge.

The aerospace industry is experiencing unprecedented and rapid change. In Canada, there is a surge of grassroots interest in rocketry. Today there are over 25 university rocket teams across the country with **more than 1,000 active student members**. These student teams are in many cases **the largest engineering design teams at their schools** and are pushing the envelope in the multidisciplinary field of rocketry like never before: innovating in everything from aerostructures, composite materials and advanced manufacturing, to avionics and even liquid and hybrid propulsion. Traditionally, this has not been an area of technological focus in Canada and so far, these students have received little support or acknowledgement in their home country, even as they win top honours abroad at international competitions. **Yet many have gone on to found their own launch vehicle and spacecraft companies, and are now transforming the industry and building whole new capabilities in Canada and internationally!**

Now is the time to help Canadian students soar to new heights. The Launch Canada Challenge is the first engineering competition of its kind in this country. This annual event supports and advances the science, engineering and business of rocketry, space launch and their related fields while **fostering collaboration locally and internationally and building a strong culture of safety.**

With the support of bold, visionary partners like you, we combine the excitement of advanced rocketry with real, industry-driven challenges. We unite the diverse, highly motivated and rapidly growing group of students, help unlock their full innovative potential, and help them take their place as the engineering leaders of tomorrow.

We hope you'll join us!

Adam Trumpour
President, Launch Canada Challenge



Our Mission

Launch Canada's mission is to support and advance the science, engineering and business of rocketry and space launch in Canada, and to use the excitement of rocketry to educate students and the public in science, technology, engineering and mathematics and empower them to become leaders of tomorrow. We seek to unite industry, academia and government to help unlock their full innovative potential, grow the industry, and expand international space community collaboration.

What is the Launch Canada Challenge?

The Launch Canada Challenge is Canada's national rocket engineering competition. An annual event, it brings together the passionate and rapidly growing amateur and student rocketry community, numbering well over 20 universities and colleges from coast to coast.

Through our competition event, special projects, and events throughout the year, it connects these students with partners in industry, academia and government to facilitate the development of unmatched talent in the interdisciplinary field of rocket engineering, while fostering a strong culture of safety.





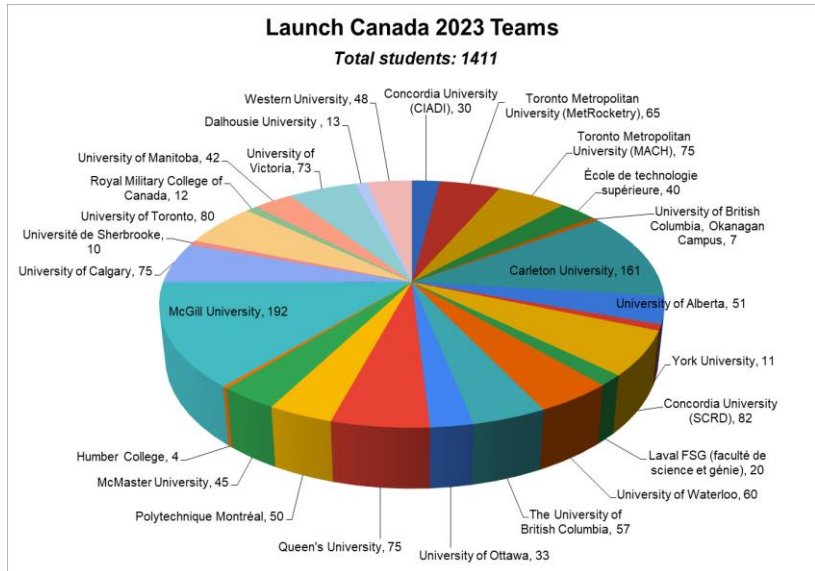
Who Participates in Launch Canada?

Launch Canada unites nearly all the student rocket teams in Canada!

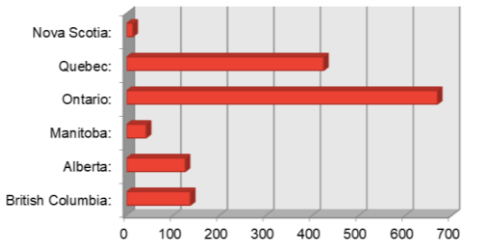
Over **1400 students** from coast to coast, from **26 different universities and colleges**.

Many are now among the largest design teams at their respective schools.

- 25% identify as female
- 39% identify as minority
- 95% undergrad
- 5% graduate



LC 2023 Students by Province

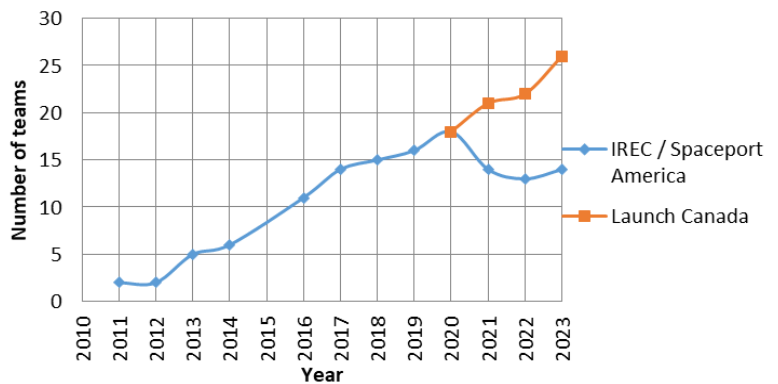


A Grassroots Engineering Movement

Rocketry is the largest and fastest growing area of student space-related activity in Canada, by a wide margin. In a traditionally very regional industry, student rocket teams have been creating pathways into the aerospace industry for large segments of the country where none existed before.

They are creating new opportunities for more Canadians

The Rise of Canadian Student Rocketry





Why Sponsor Us?

Exposure

This initiative is the **largest space-focused engineering event** in Canada, and we want to take every opportunity to showcase those who help it to take off: to our students, participants, sponsors, and the public at large. Through social media, our website, traditional and industry-specific media, our network of students and partner organizations, and the competition event itself, we'll make sure everyone knows you support Canadian students and innovation.

Simply put, there's nothing else like it in Canada.

Talent

Rocketry is a challenging, multidisciplinary field: one where Canada has limited past experience. Yet **over 1000 students** across the country are doing it anyway—and excelling. **Past students have even gone on to found their own launch vehicle and satellite companies!** The sort of people who persevere in taking on challenging aerospace projects in spite of the roadblocks are the sort of people who will be the innovation leaders of tomorrow. They have shown they're among the **best in the world** in all the areas that make up rocketry. Soon they'll be entering the workforce.

We think you should meet them.

Collaboration

We know that when diverse Canadians come together, there's no limit to what we can achieve. Our students represent exceptional talent and drive. We want to unite it with industry, academia and government to help these innovators to soar to new heights. As sponsors, we encourage you to **actively participate**: as judges, mentors, challenge designers, advisors, or speakers. **Connect with the students** as they work on ambitious projects. **Contribute and showcase** hardware, software or manufacturing services and support the innovation ecosystem that the participants are joining.

Let's show the world what we can accomplish... together!





Timeline



The Road to the Competition

Ongoing events to build momentum:

Design Reviews

Winter / Spring

- Student presentations, report submissions and progress updates
- Opportunity for Launch Canada reviewers to critique student projects, provide feedback and guidance

Special Projects

Throughout the year

- Intensive, collaborative hands-on learning experience covering the practical side of rocket propulsion testing and safety
- Showcasing professional hardware and practices
- Current project: turbopump development

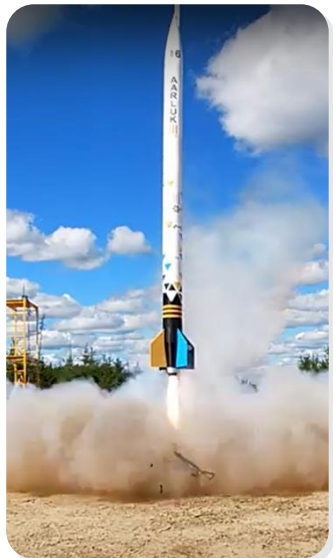


The Launch Canada Competition

The Competition

Launch Canada’s signature event, the annual competition takes place over a full year. Teams from universities nationwide design, manufacture and test sophisticated rockets with advanced avionics and payloads, engaging in rigorous systems engineering and design reviews and obtaining feedback from Launch Canada’s mentors and volunteers. This culminates in a **conference day** and several days of **launches** in August, in **Cochrane, Ontario** where the students put their work to the test and fly or demonstrate their projects under **controlled and safe** conditions.

Beginner	Advanced
<ul style="list-style-type: none"> • Entry-level challenge • Design, build and launch a rocket using large off-the-shelf rocket motors • Typical altitudes of 3 km • Additional “payload challenge” for innovative payload design 	<ul style="list-style-type: none"> • Experienced teams flying sophisticated vehicles • Student-developed hybrid or liquid rocket engines • Altitudes above 5 km • Emphasis on overall systems engineering • Incentivizes innovative technologies and concepts



Tech Challenge

Technology Development

- Design-build-test challenge for component and subsystem-level technologies to solve real technical challenges facing the industry
- Emphasis on entrepreneurialism
- Opportunity for partner organizations to sponsor specific challenges





The Launch Canada Competition

Conference Day

The opening day of the event, it includes:

- Student Exhibit Area
- Trade Show for Sponsors
- Networking among students, sponsors and attendees
- Talks and keynotes by sponsors & industry leaders
- Judging & safety inspections

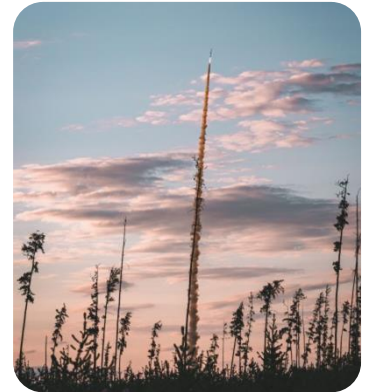


Launch Days

The climax of the competition is the launch event! Taking place over several days at a remote location, it includes:

- Base camp where teams prepare their vehicles
- Sponsor & vendor area
- Mission control & viewing area
- Launch pad areas

After passing a final flight safety inspection, teams are allowed to the pad area for the final test of the year's work!

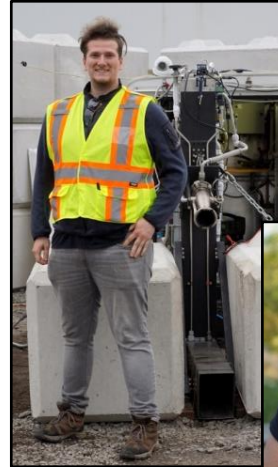




Special Projects

Launch Canada provides unique learning opportunities for students outside of the main competition as well. In the summer of 2021, 70 students came from across Canada to learn what it takes to fire a liquid rocket engine, see professional hardware and safety practices in action, and work through months of preparations and testing, culminating in a flawless engine firing.

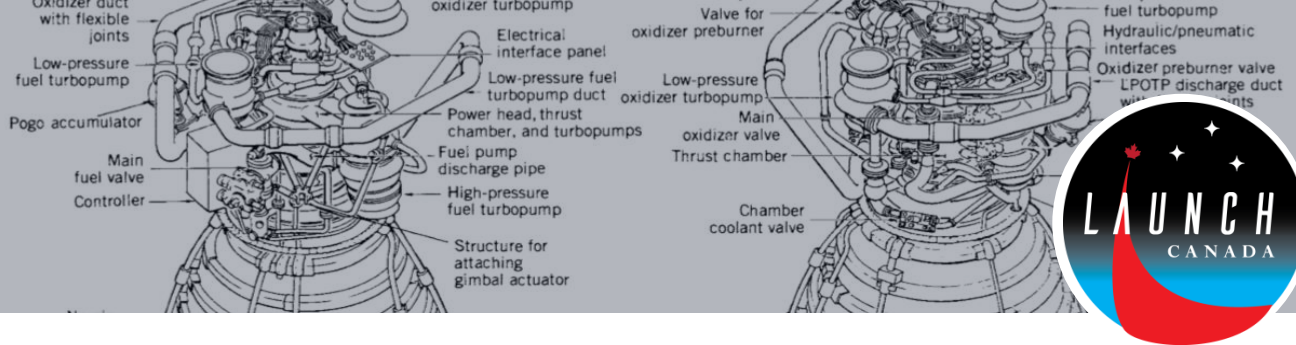
In 2022-2023 we're taking it to a whole new level and developing the **first rocket engine turbopump** in Canada, as well as compact, high-power electric pumps, with demonstrations at Launch Canada 2023. This will give students a broad learning opportunity that is unprecedented, while creating new technologies that do not currently exist in Canadian industry.



Intense, Real-World Engineering

Hands-on projects teach real-world skills and make theory come alive like nothing else can. They display to students the systems engineering, technical and management rigor that is expected by industry and introduce safety concepts and practices, while enabling cutting-edge technology development and demonstration at the lowest possible cost.





Launch Canada Turbopump Project

Turbomachinery is among the most challenging aspects of professional rocket propulsion systems. Attempting a turbopump development is almost unheard-of for students and amateurs, and few university programs teach these subjects at more than a superficial level.

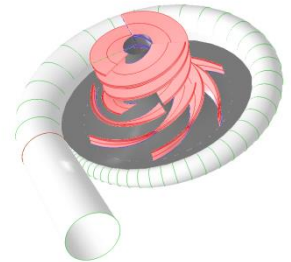
Launch Canada is changing this.

Over 100 participating students from schools in BC, Alberta, Manitoba, Ontario and Quebec

Objectives

Develop the first rocket engine propellant turbopump in Canada

- Initial electric motor driven fuel & oxidizer pumps by August, 2023
- Fully-integrated gas turbine driven version by August, 2024
- Full pump-fed test firing of existing 5 kN thrust rocket engine



Unprecedented hands-on , practical learning opportunity

- Create highly skilled students to drive tomorrow’s aerospace workforce
- Basics of systems engineering
- Engine cycles, theory of gas turbines & pumps
- Mechanical systems: bearings, seals, rotordynamics
- Electric motors, batteries & drivetrains
- Analytical tools & modelling, AxSTREAM, Flownex
- Instrumentation, controls, data acquisition
- Safety & testing practices



Broad collaborative footprint

- Engage students from across the country
- Engage and build industrial capacity & academic expertise domestically
- Engage with international partners to build connections with Canadian talent, companies and capabilities



Education and Inspiration

Launch Canada’s mission is to provide students with unprecedented real-world learning opportunities, and we take a holistic approach to accomplish this. In addition to our competition and project-based activities, we host an ongoing series of virtual talks for our students.

These talks span a broad range of subjects that reflect the highly multidisciplinary nature of rocketry. Past talks have included “fireside chats” with industry leaders, sharing their own stories, insights into the industry, and inspiring advice, as well as technical talks on safety, systems engineering, entrepreneurship, and a broad range of technical subjects.

We welcome the chance to provide speaking opportunities to our partners, and are happy to work together to develop talks or training sessions. These can include relevant technical subjects, info sessions to build awareness of the industry, or personal talks to share advice and lessons learned.



Peter Beck
 Founder, President & CEO,
 Rocket Lab



Dr. Justin Hardi
 Head, Rocket Propulsion
 Technology Dept, DLR
 Institute of Space Propulsion



Tom Mueller
 Co-founder & head of
 propulsion, SpaceX



**George T.
 Whitesides**
 Ex CEO, Virgin Galactic &
 The Spaceship Company



Mike Mullane
 Veteran space shuttle
 astronaut, author



Tory Bruno
 President & CEO,
 United Launch Alliance



Testimonials

Canada's talent in rocketry is undeniable and often proven in international competition. To hold our first competition on Canadian soil demonstrates the passion and interest of our young people. This bodes well for our future. Having witnessed the first launch in Canada is an historical event I will cherish forever.

*Sylvain Laporte,
Past President, Canadian Space Agency (2015-2020)*



I just wanted to give my personal thanks for all the support our club has gotten from Launch Canada. It is no secret that we have had our share of struggles the past year, but looking towards the future, I see immense potential and possibility. Launch Canada was essential in us getting to this point, and for that I give my deepest thanks.

*Adam Sundberg
Team Captain, U-Alberta*



*Without a doubt, LC has made us better engineers, leaders, team members (and wilderness adventurers).
Tantalus was the 1st rocket I've managed in my life. It meant so much to me to see it launch and that would not have happened without Launch Canada.*

*Thanks so much,
Taher Kathawala
Team Captain, UBC Rocket*





Testimonials

This was my first rocket competition and I am hooked! What you pulled together – and pulled off – was awesome, and the start of something special and important. Congratulations.

Amy MacLeod
Vice President Corporate Communications, MDA



The Launch Canada challenge fostered an awesome atmosphere of camaraderie and collaboration. It was amazing to see teams from across the country gather to showcase their projects and technology. Launch Canada has the potential to become a catalyst for the development of outstanding Canadian rocketry expertise, especially through the focus of the organization on educational initiatives, which I have myself benefited from, as a recent rocket design team alumnus.



Joel Jean-Philyppe
Past Team Captain, McGill Rocket Team

It's good to know that the Launch Canada challenge gathers students of the Canadian universities cherishing a dream of exploring the universe. I believe that such events that join the efforts of the global community will lead to breakthroughs and to economic effects at the national and international levels.

Aleksey Velmogin
Lead Designer, Ukraine's Yuzhnoye Design Office





Standard Sponsorship Levels

	REACH FOR THE STARS \$60,000+	ESCAPE VELOCITY \$30,000+	SECOND STAGE \$15,000+	FIRST STAGE \$10,000+	GROUND CONTROL \$5,000+
Number Available	1	3	Unlimited	Unlimited	Unlimited
RECRUITMENT AND NETWORKING					
Launch Site VIP Passes	15	10	4	2	1
Conference Attendance	✓	✓	✓	✓	✓
Promotion of Job Opportunities	✓	✓	✓	✓	
VIP Launch Site Access	✓	✓	✓		
Resume Bank	✓	✓			
Business-To-Student Speed Dating	✓	✓			
Facilitated Introductions	✓				
SPEAKING OPPORTUNITIES					
Launch Day mentions	✓	✓	✓ *	✓ *	
Launch Day briefing			✓ *		
VIP Dinner	✓	✓			
Closing Ceremony	✓	✓			
Opening Ceremony	✓	✓			
PROMOTION					
Conference Booth	Large, at entrance	Large, general area	Medium, general area	Small, general area	Small, general area
Naming Opportunities	Co-branding of entire competition	Base Camp, Mission Control or Launch Area	"Adopt a Launch Pad" *		
Base Camp & Conference Banner	Co-branded with Launch Canada	Featured logo	Medium logo	Small logo	Name
Additional Logos at Event	Prominent logo in all locations	Featured logo at mission control			
Logo on Official Shirt	Co-branded with Launch Canada	Featured logo	Medium logo	Small logo	Name
Media & Online	Press release, custom media campaigns	Press release, Mention in social & news media	Press release, Mention in social & news media	Social media mention	Social media mention
Website	Logo on homepage	Large logo on sponsor page	Large logo on sponsor page	Logo on sponsor page	Small logo on sponsor page
Promotional items in conference bags	✓	✓	✓	✓	✓
Product Placements	✓	✓	✓		
Logo on livestream	✓	✓			
Bespoke Marketing	✓				

* Limited number available, on a first-come basis



Additional “À la carte” sponsorship items

Item	Number available to purchase	Price (\$CAD)	Notes
Naming of Solids Launch Pad	4	7500	Sponsor’s logo will be included at the launch pad, and sponsor will be mentioned during launches from that pad
Naming + logo above conference main stage	1	7500	
Logo on Lanyards	1	5000	
Logo on Badges	1	5000	
Sponsored meal with speaking opportunity	5	4000	Meals for the attendees are available for sponsorship. The sponsor will be announced and may speak during the meal.
Address on the official livestream (live or pre-recorded)	Unlimited	1500 each (60 seconds)	
Livestream mentions	Unlimited	1000 each	
Logo on closing ceremony cake	2	2000	
Logo on Conference Bag	1	5000	
Additional VIP Passes	Unlimited	1000 each.	Passes allow sponsors access to the mission control and launch areas, when operational safety permits.

Additional Notes:

In-Kind Sponsorship

For both the launch event and Special Projects such as our liquid rocket engine testing workshop and turbopump development project, Launch Canada strives to showcase professional hardware, software, tools and other equipment to its students. We are always interested in in-kind donations of such items, and are happy to showcase and promote them to our participants and partners.

Prize Sponsorship

The prizes for any of the competition categories may be sponsored. These will be available on a first come, first served basis. Contact Launch Canada for more information.

Customized Options

Launch Canada wants to ensure its supporters get the best possible value, and we are always open to discussing additional avenues for collaboration, both that the event and throughout the year.



Launch Canada in the News

CTV NEWS
NORTHERN ONTARIO

NEWS VIDEO SHOWS ABOUT LOCAL

WATCH LIVE: Bank of Canada Governor Tiff Macklem takes questions following interest rate hike announcement

NORTHERN ONTARIO News

Cochrane looks to inspire future rocket scientists

space
PLACE CANADA

Home About Us Events Let's Learn ...

News Volunteer Contact Us

the pleasure of attending the Inaugural Launch Canada competition. It was an honour to be a competition diversity teams that presented their rockets or plans. These students are not only the best and most technical talent, but they have what it takes to be at the forefront of aerospace. Thank you to Launch Canada for the opportunity to partake in this historical event.

include:

the day for team presentations and rocket inspections and successful rocket launches including a hybrid and a two-stage launch.

with science and space enthusiasts from around the world and the local community of Cochrane.

participating in future Launch Canada events – a competition, design, review, and evaluation of advances in the field of rocketry.

ONTARIO, CA

COCHRANE
WONDERFULLY UNEXPECTED

LIVING VISITING DOING BUSINESS TOWN HALL SERVICES

QUICK LINKS NEWS & NOTICES COUNCIL MUNICIPAL ELECTIONS CITIZEN SERVICES

STARDUST FESTIVAL X LAUNCH CANADA

The Stardust Festival MAKING STEAM FOR EVERYONE! The festival will focus on all age groups on STEAM activities, on the importance of mental health awareness, mainstreaming Indigenous culture and knowledge systems in space research and exploration. The festival's program includes traditional drumming ceremonies, cultural and mental health workshops, inspirational keynotes, an exhibition, as well as many northern social events!

The Cochrane
Times-Post

Opinion Our Newsroom All Newspapers Driving Healthing The Growthtop Working Cochrane

News / Local News

Rockets to the stars

Deborah Morin
Aug 09, 2022 · August 9, 2022 · 3 minute read · [Join the conversation](#)

spaceQ

Logout Account News CSA Culture Defence EO Education Opinion Podcasts Science Technology Watch

SPIRIT OF COLLABORATION AT LAUNCH CANADA CHALLENGE

Craig Bamford August 9, 2022 Education, News Leave a comment

The first experimental amateur launch license was issued for the Launch Canada Challenge. Credit: Launch Canada.

“I look forward to participating in future Launch Canada events – a closer look at the design, review, and evaluation of advances in the field of rocketry.”

Wintta Ghebreyesus, Space Place Canada Director



2021-22 Supporters



Space will be one of the important drivers of the 21st century economy. This made-in-Canada competition will spur on innovation and act as a springboard for new opportunities and collaboration in rocketry and propulsion. I wish to put my full support behind the Launch Canada Challenge.



— Professor Jean-Pierre Hickey, University of Waterloo



We believe the Launch Canada Challenge will stimulate the advancement of rocket technologies and the development of related skills in the Canadian space sector. We are pleased to join forces with this Launch Canada to educate and inspire Canadian youth who dream of taking rocketry to the next level.



—Geoffrey Languedoc, Executive Director of CASI



Founding Sponsors



Dan Steinhaur
President,
Stein Industries



John Burgener
President: Burgener Research,
Telegistics
Director: Rocketplane Global



Randall Lilko
Research Lead,
Randing Research



“ Canada has a long and proud history as a leading space-faring nation, and a talent pool that is second to none. The Launch Canada Challenge is a unique initiative that will allow students to use their talents to design, build and fly advanced rockets and technologies. Stein Industries is glad to sponsor this initiative and the activities of the future engineers and scientists that will help build Canada's economy of tomorrow. ”

— Dan Steinhaur

“ Canada was built by explorers willing to risk everything to find new lands, new trade opportunities, and new ways of life. Our company is pleased to sponsor the Launch Canada Challenge based on our belief that made-in-Canada rocketry capabilities are essential to our future as a space-faring nation. ”

— John Burgener



Meet Our Team



Ademir Vrolijk
PhD Candidate at George Washington University specializing in innovation and incentive challenges



Michel Wander
Integration and test systems engineer at the Canadian Space Agency for over 20 years



David LeFrancois
Nuclear and aerospace professional



Paul Shepherdson
High power rocketeer and mechanical designer



Ariyanna Kresnyak
Controls engineer, co-founder of Arbalest Rocketry



Robert Bernard
Structural engineer in the aerospace and defense industry



Christopher Hobbs
Avid high-powered rocketry and laminate structure enthusiast



Ryan Anderson
Space systems consultant President, Canadian Space Society



Karina Sapelnikova
Propulsion engineer at Rocket Factory Augsburg, Germany



Simon Moffatt
Responsible Engineer for upper stage propulsion at Rocket Lab



Marc-Andre Chartrand
Enthusiast of all things space and Test & Certification engineer



Mitchell Passarelli
PhD candidate in thermoacoustic combustion instability at Georgia Tech



Jason Michaud
CEO at Stardust Technologies, advocate for STEM education, northern and First Nations communities



Zak Harrison
Gas turbine and rocket propulsion engineering professional



Adam Trumpour
Gas Turbine and Rocket Propulsion Professional, President of Launch Canada



Contact

The Launch Canada Challenge will be one of the biggest and most unique student engineering events of 2023, and represents the most dedicated, resourceful, up-and-coming students in the country. Contact us today!

Adam Trumpour
adam@launchcanada.org