

Queen's University Presents:



Queen's  
UNIVERSITY



QUEEN'S SPACE CONFERENCE  
2024

DELEGATE HANDBOOK



# WELCOME

## QSC 2024: Space Technology Revolution

Welcome to the Queen's Space Conference, where the cosmos converges with cutting-edge innovation under the compelling theme of "Space Technology Revolution." This stellar event invites visionaries, scientists, and space enthusiasts to embark on a celestial journey exploring the forefront of technological advancements shaping our cosmic future. From revolutionary propulsion systems to state-of-the-art satellite technologies, the conference promises a captivating discourse on the transformative impact of space tech. Join us as we delve into the boundless possibilities, ignite imaginations, and chart the course for a new era in space exploration. The Queen's Space Conference is your portal to the forefront of the Space Technology Revolution.



# IMPORTANT INFORMATION

DATES: FEBRUARY 3-4, 2024

LOCATION: Residence Inn Marriott, Kingston, On.  
7 Earl St, Kingston, ON K7L 0A4

First Day Start Time; FEB. 3, 8:30AM [EST]

Conference Closing Remarks: FEB. 4, 2:30 PM  
[EST]

## CONNECT

WEBSITE: [QSCONFERENCE.COM](https://qconference.com)

INSTAGRAM: [@QUEENSSPACE](https://www.instagram.com/queensspace)





PLEASE CONTACT OUR DELEGATES  
COORDINATORS FOR ANY HELP:



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ALEXANDER J.M. KAPTZ  
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## 2-Day Itinerary

### Saturday, February 3rd

8:30-9:15am ~ Delegate check-in / Breakfast

9:15-9:30am ~ Opening remarks

9:30-10:30am ~ [Alexander Barovier](#)

10:45-11:45am ~ [Karl Stapelfeldt](#)

11:45am-1:00pm ~ Introduction of case competition

1:00-2:00pm ~ Lunch / case competition planning

2:00-3:00pm ~ [Nathalie Ouellette](#)

3:00-5:30pm ~ Case competition presentations

5:30-7:00pm ~ [Abigail Harrison](#)

7:00-9:00pm ~ Dinner / Case competition winners revealed

9:00PM ~ Day 1 over.





## 2-Day Itinerary

### Sunday, February 4th

8:30am ~ Delegate check-in

9:00-10:00am ~ **Andrzej Antoszkiewicz**

10:00-10:45am ~ Brunch

11:00am-12:00pm ~ **Abigail Lee**

12:00-1:30pm ~ Club fair

1:30-2:30pm ~ **Lisa Dang**

2:30-3:00pm ~ Closing remarks

3:00pm ~ Day 2 over. (Thanks for coming!)





# *BEFORE THE CONFERENCE*

## DRESS CODE:

-BUSINESS CASUAL FOR ALL DAY  
EVENTS

(TIPS FOR BUSINESS CASUAL) -----



(IF YOU HAVE A SPACE SUIT FEEL  
FREE TO WEAR IT)

## WHAT TO BRING

- LAPTOP/TABLET
- BRAIN POWER
- ENTHUSIASM FOR THE COSMOS



# SPEAKERS



## ALEXANDER BAROVIER

### Regulatory Specialist in Software Development

Alexander Barovier is a recent graduate from McMaster University's Engineering Physics program and currently serves as a Regulatory Specialist in Software Development at Kepler Communications Inc. In his capacity at Kepler, he is actively engaged in the regulatory team, focusing on simulation software to calculate interference between satellite constellations.

As a professional, Alexander's work extends to spacecraft attitude control, showcasing his interest in space exploration, technology development, climate science, astrophysics, and nuclear fusion. With a commitment to continuous learning and a broad interdisciplinary background, Alexander's choice of the Engineering Physics program at McMaster University reflects his desire to explore a wide array of topics in both engineering and physics without narrowing down his options too much.

During his time at McMaster, Alexander actively participated in extracurricular activities, being involved in McMaster NEUDOSE and serving as a representative during the engineering welcome week. With nearly three years of dedicated work in his role as a Regulatory Specialist in Software Development at Kepler Communications Inc., Alexander Barovier is making notable contributions to the intersection of regulatory compliance and cutting-edge software development within the space communications industry.





# SPEAKERS



## Dr. KARL STAPELFELDT

Chief of the Laboratory for Exoplanets and Stellar Astrophysics

Dr. Karl Stapelfeldt is a distinguished scientist and Chief of the Laboratory for Exoplanets and Stellar Astrophysics at NASA Goddard Space Flight Center. Holding a Ph.D. in Astrophysics with a graduate minor in Planetary Sciences from Caltech (1991) and a B.S.E. in Mechanical & Aerospace Engineering and Engineering Physics from Princeton University (1984), Dr. Stapelfeldt has consistently demonstrated excellence in his academic and professional pursuits.

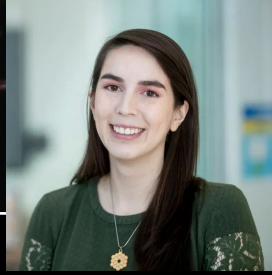
From 1993 to 2011, Dr. Stapelfeldt was a vital member of the science staff at the Jet Propulsion Laboratory in Pasadena, CA. During this period, he contributed significantly to various projects, including serving on the Hubble Space Telescope/WFPC2 instrument science team, the Spitzer Space Telescope Project Science Office, and the Terrestrial Planet Finder Coronagraph mission study team.

Currently serving as the Chief Scientist for NASA's Exoplanet Exploration Program, Dr. Stapelfeldt has been instrumental in advancing our understanding of astrophysics. His expertise spans a wide range of topics within astrophysics, including protoplanetary and debris disks, exoplanets, and star formation. Dr. Stapelfeldt employs diverse observational techniques, such as optical, infrared, and mm-wave observations, coronagraphy, and modeling of circumstellar disks' scattered light and spectral energy distribution.





# SPEAKERS



## DR. NATHALIE NGUYEN-QUOC OUELLETTE

Astrophysicist and Science Communicator

Nathalie Nguyen-Quoc Ouellette is an astrophysicist, science communicator and lifetime lover of all things space! She obtained her Ph.D. in Physics & Astronomy at Queen's University in Kingston, Ontario in 2016. Her research focuses on galaxy formation and evolution, particularly those found in clusters. Nathalie is currently the Deputy Director of the Trottier Institute for Research on Exoplanets (iREx) and the Mont-Mégantic Observatory (OMM) at the University of Montréal and is also the Outreach Scientist for the James Webb Space Telescope in Canada collaborating with the Canadian Space Agency. She is a frequent contributor and analyst in Canadian media on everything related to space. She also organises and participates in science outreach events from local to international scales to encourage the interest and participation of youth and the general public in space science and to increase scientific literacy in Canada.





# SPEAKERS



## ANDRZEJ ANTOSZKIEWICZ

Chief Operating Officer

International Dialogue Centre (KAICIID)

Prior to joining KAICIID Andrzej served in various international leadership functions across several international organizations. These included the Organization for Economic Cooperation and Development (OECD) in Paris, the Fédération Internationale De Football Association (FIFA) in Zurich, the Organization for Security and Co-operation in Europe (OSCE) in Vienna, and the North Atlantic Treaty Organization (NATO) in Brussels.

While at NATO Andrzej also served as the Lead for Planning and Coordination, and the plenipotentiary of the Secretary General in the United Kingdom, for the preparation of the 2014 NATO Summit in Wales. In 2015 he was appointed as Principal Advisor to the Government of Poland on the planning of the 2016 NATO Summit in Warsaw, for which he was made Knight of the Order of Merit of the Republic of Poland.





# SPEAKERS



## DR. LISA DANG

Astrophysicist, Banting Postdoctoral Fellow

Université de Montréal

Lisa Dang completed her PhD at McGill University where she characterized the climate of extremely hot exoplanets from phase curves. For her thesis, she used full-orbit phase-resolved observations obtained by the Spitzer Space Telescope to map the thermal emission of a variety of short-period exoplanets. From thermal maps of distant worlds, she characterizes their climate by measuring advective and radiative properties. At McGill, she led the detection of the usual westward hot spot offset in the atmosphere of the young hot Jupiter CoRoT-2b, which suggests that our current understanding of exoplanets is incomplete. With Spitzer, she also observed extreme seasonal variation on the massive hot Jupiter XO-3b caused by its eccentric orbit and put constraints on its internal heating.

When she is not thinking of planetary atmospheres, Lisa occasionally dabbles in exoplanetary gravitational microlensing. During her graduate studies, she held a visiting research fellowship at Caltech/IPAC to work on the Spitzer Microlensing Campaign aiming to constrain the distribution of exoplanets towards the galactic bulge.



# SPEAKERS



## ABIGAIL LEE

Mechanical Engineering, Queen's University

Abigail Lee is in her fifth year of mechanical engineering at Queen's University. During her undergrad she has been actively involved in the Queen's Rocket Engineering Team where she helped launch their rocket in New Mexico to 30,000ft. Abby is currently the team's President and hopes to have a successful launch in June.

Between third and fourth year Abby worked at Rocket Lab on a year long internship, she worked on the research and development of their star trackers and reaction wheels at their Toronto office. Abby wrote a paper on her research which was accepted to the Small Satellite Conference in Logan, Utah. At the conference she competed against Master's students internationally and was awarded the first place prize for her research and presentation.

This May, Abby will be heading to MIT to experience microgravity on a Zero-G flight. She hopes that her experiment will help educators better teach about the effects of gravity and what happens when it's no longer present.

Outside school, you can usually find her at the Kingston airport working towards her private pilot's license or at home reading science fiction.





## SPEAKERS



### ABIGAIL HARRISON

Science Communicator, Future Astronaut, Non-Profit Founder

Abigail (Abby) Harrison is a graduate student at Queen's University studying Arctic region geochemistry as a member of the Facility for Biogeochemical Research on Environmental Change and the Cryosphere (FaBRECC) lab. Previously she has conducted immunology research at Harvard Medical School, astrobiology research at the Space Life Sciences Labs, machine learning research at Wellesley College, and limnology research at Lake Baikal, Siberia. Abby holds a bachelor's degree in biology from Wellesley College. Abby has had a passion for space exploration her entire life and is working towards becoming a NASA astronaut. At 15 years old, Abby served as the Earth Liaison for European Space Agency astronaut Luca Parmitano, helping to share his experiences living and working on the International Space Station with those on Earth. She then went on to found The Mars Generation non-profit, of which she was President for 8 years. Under her leadership, The Mars Generation reached millions of people with digital space content, provided hundreds of thousands of dollars in support for young people to have hands-on experiences in space and science, and engaged more than 2,000 students from around the world in a leadership development program. Her students' research will fly aboard Mission 19 in the spring of 2024. Abby is a prolific public speaker and staunch advocate for the future of space exploration and STEM education. She has delivered hundreds of presentations on these subjects, ranging from grade school audiences to the US House of Representatives.



# CASE COMPETITION

The QSC Case Competition will take place during the day on Saturday. You will be randomly assigned to a team of delegates, and every team will receive the same case.

Check out last year's case study on our website for an example:

[www.qsconference.com](http://www.qsconference.com)

You and your team will have a few hours to prepare a presentation on your recommendation for the case and will then present in front of a panel of judges and other delegates.

Judges will select the top teams to present at the finals. One team will then be selected as the winners of the case competition.

Delegates on the winning team will win an assortment of prizes.





# THANK YOU TO OUR SPONSORS!

