

CONFÉRENCE SPATIALE
CANADIENNE 2025
ÉEDS - CANADA



CANADIAN SPACE CONFERENCE EVENT GUIDE



January 24th-26th 2025
Concordia University, QC

CONFÉRENCE SPATIALE CANADIENNE 2025

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SPONSORS OF CSC 2025



Rocket Lab is an end-to-end space company delivering reliable launch services, spacecraft, satellite components, and on-orbit management.



GHGSat is the global leader in high-resolution remote sensing of greenhouse gas from space – an approach it pioneered – and provides unique emissions data and intelligence to businesses, governments, regulators, and investors worldwide, to optimize their performance and uphold environmental standards.



The Space Flight Laboratory (SFL) mission is to lower the entry barrier to space for companies, research institutions, government, and end users in order to enable more productive use of space for the next generation. SFL believes in offering the lowest cost possible to achieve objectives in space while adhering to approaches known to result in high quality and high reliability.



NordSpace is a new Canadian company with the mission to advance life on Earth, from space. NordSpace develops orbital class launch vehicles, satellite design/assembly/launch services, and advanced robotics with the goal of advancing life on Earth, from space.



MDA is an international space mission partner and a robotics, satellite systems and geointelligence pioneer with a 50-year story of firsts on and above the Earth, serving the world from their Canadian home and their global offices.



GINA CODY
SCHOOL OF ENGINEERING
AND COMPUTER SCIENCE

Concordia Institute of
Aerospace Design and Innovation

The Gina Cody School at Concordia, named after trailblazer Dr. Gina Cody, offers innovative aerospace programs with hands-on learning, cutting-edge facilities, and industry ties, blending engineering and computer science for modern aerospace challenges.



NGC Aerospace is a leader in autonomous navigation and control systems for space, aeronautics, and terrestrial applications. They specialize in developing innovative solutions like spacecraft guidance, autonomous vehicles, and Earth observation technologies, delivering high-performance products and services to global clients.



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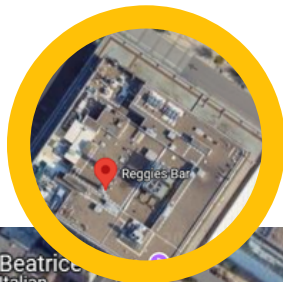


ACCESSING THE EVENT

The Canadian Space Conference is an in-person event at the John Molson Building, Concordia University. The campus is accessible by car and by the public transport.

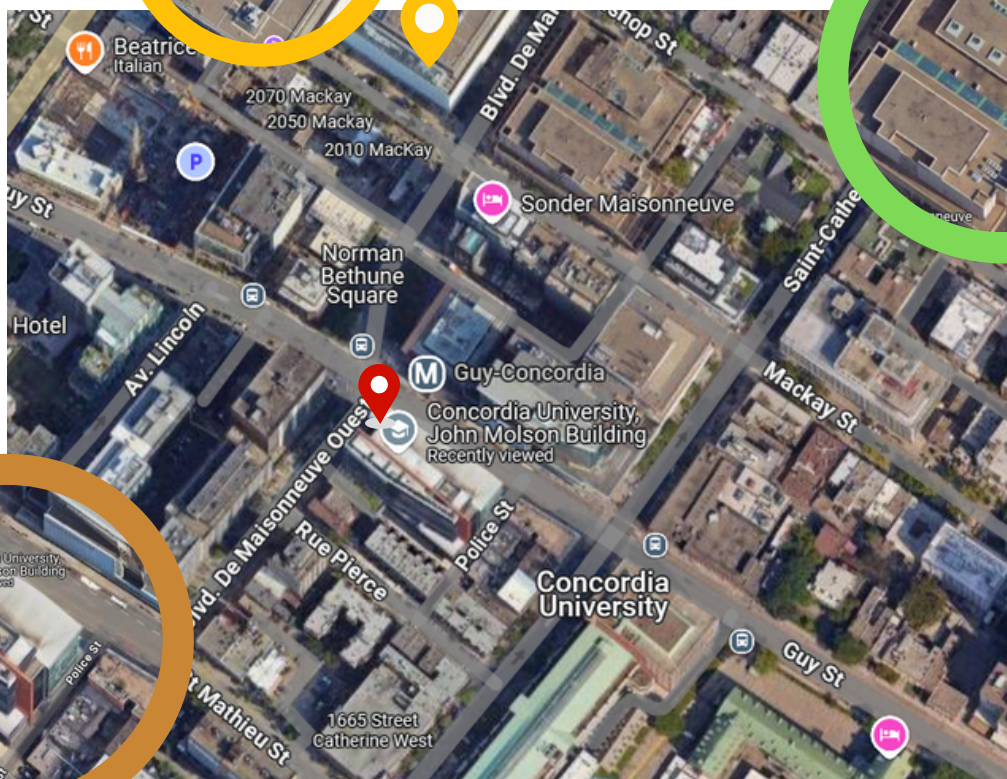
Reggies Student Bar

Building #003
1455 Blvd. De
Maisonnette Ouest,
Montreal, Quebec H3G
1M8



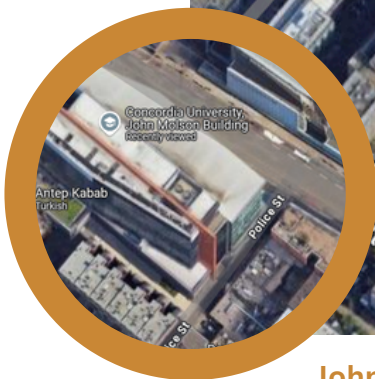
Library Building (Parking Spot)

Building #001
1400 Maisonnette Blvd
W, QC H3G 1M8



John Molson School of Business Building (JMSB)

Building #002
1600 Boulevard de
Maisonnette Ouest,
H3H 0A1



Main Entrance JMSB

intersection of Guy
Street and Blvd. de
Maisonnette Ouest



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ABOUT SEDS-CANADA & SPACE CONCORDIA



Students for the Exploration and Development of Space (SEDS Canada) is a student-run non-profit organization in Canada dedicated to strengthening Canada's future in space by providing post-secondary students with unique projects, research programs, and professional development opportunities in the Canadian governmental, industrial and institutional space sectors.

"Our theme represents humanities continuous achievements and discoveries in our universe and among the stars. With research escalated in the fields of astrobiology, space health, and celestial object exploration, the theme of this years' Canadian Space Conference seemed ready for lift-off."



Space Concordia's mission is to inspire the next generation of space professionals, fostering engagement in the space industry. The organization educates students through challenging, innovation-driven projects that surpass classroom teachings and offers workshops and tutorials to broaden learning opportunities. By developing advanced systems, Space Concordia pushes the limits of university-led innovation and contributes to advancing Canadian space technology.



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Day 1

Registration & Networking

VENUE

Day 1 Welcome &
Opening Remarks,
Welcome by SEDS and
Space Concordia



Adam Lam (He/Him)
SEDS Canada President



Simon Randy (He/Him)
President of Space Concordia

**MB 9th
floor
Lounge**

Opening Speech
by Dean of
Concordia



Hoi Dick (Eddie) Ng, PhD, Ing., FCSME
**Associate Dean (Academic Affairs),
Gina Cody School of Engineering and Computer
Science**
**Department of Mechanical, Industrial and
Aerospace Engineering**

**MB 9th
floor
Lounge**



Lisa Campbell
(She/Her)

Lisa Campbell, President of the Canadian Space Agency since September 2020, previously served as Associate Deputy Minister at Veterans Affairs Canada, focusing on veteran well-being and recognition. Before that, she was Assistant Deputy Minister of Defence and Marine Procurement, overseeing Canada's military and marine equipment acquisitions. Earlier in her career, she was Senior Deputy Commissioner at Canada's competition authority, reviewing mergers, business conduct, and enforcing advertising laws. Ms. Campbell has extensive experience in regulatory work related to data collection and trade in emerging business models and has worked as a litigator in criminal, employment, and constitutional law. She holds a B.A. in Political Science from McGill University (1988) and an LL.B. from Dalhousie Law School (1991).

**MB 9th
Floor
Lounge**



Madison Feehan (She/Her)
CEO Space Copy

**MB 9th
floor
Lounge**

Day 1 Closing



Audrey Medaino-Tardif (she/her)
Canadian Space Conference Lead

**MB 9th
floor
Lounge**

Networking & Industry Expo

(Booth Session: student groups, sponsors, poster presentations)

**MB 9th
floor**

Friday Get Together- Cosmic Lounge

Cost at the expense of the attendee

Reggies



Day 2

Registration & Networking

VENUE

Day 2 Welcome & Opening Remarks

Audrey Medaino-Tardif (she/her)
Canadian Space Conference Lead

MB 1.210

Opening Keynote



Oliver Hernandez
(he/him)

Olivier Hernandez, Director of the Planetarium, is an astrophysicist specializing in galaxy dynamics, exoplanets, and astronomical instrumentation. He holds engineering and physics degrees from École Centrale de Marseille and Université de Montréal, as well as a PhD in astrophysics. Formerly Director of Operations at Mont-Mégantic Observatory and a key figure in international projects like SPIRou, NIRPS, and the James Webb Space Telescope, he now leads research, ecological transition, and public education efforts at Espace pour la Vie, while remaining an associate researcher at iREx.

MB 1.210

10-Minute Coffee Break

Panel: IIAS Panel



Pierre Vualliet
(he/him)

Pierre Vualliet, a senior environmental engineer with over 15 years of global experience, focuses on sustainable solutions for space exploration. He is developing projects on In-Situ Resource Utilization (ISRU) for the Moon and Mars and integrating art into space to enhance astronauts' well-being. With a multidisciplinary approach and training at IIAS, Pierre aspires to contribute to responsible exploration and innovation as he pursues his dream of becoming an astronaut.



Toby Li
(he/him)

Toby Li, an Aerospace Engineering undergraduate at UC Davis, is passionate about human spaceflight. With the International Institute for Astronautical Sciences, he studied hypoxia risks and conducted dexterity tests in IVA spacesuits. His research focuses on autonomous deep-space habitats and radiation protection for human spaceflight. As a freelance reporter with over 16 million views in 2023, Toby has appeared on live TV, including the BBC, discussing major space missions like Polaris Dawn and NASA's Perseverance Rover. Aspiring to become an astronaut, he is committed to advancing human space exploration and enjoys skydiving and scuba diving in his free time.



Aleeza Batool
(She/Her)

Aleeza, a Jr. Materials and Process Engineer at MDA Space and aspiring astronaut, completed the Project PoSSUM Scientist-Astronaut Program in 2022, gaining expertise in mesosphere research, spacesuit operations, and space physiology. She contributed to the Canadian Reduced Gravity Experiment, studying Binder Jetting Additive Manufacturing in microgravity. At MDA, Aleeza supports logistics and engineering for Canadarm2 and the development of Canadarm3 for the Lunar Gateway. Passionate about science outreach, she inspires others about space and engineering while exploring creativity through mixed media art, photography, and staying active.

MB 1.210

10-Minute Coffee Break

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Day 2

VENUE

Speaker Session 1



Shawna Pandya
(She/Her)

Dr. Shawna Pandya is a Canadian commercial astronaut set to fly with Virgin Galactic's Delta-class spacecraft by 2026. An emergency physician, aquanaut, skydiver, and pilot-in-training, she is also the VP of Immersive Medicine at Luxsonic Technologies, Director of the IIAS Space Medicine Group, and Chief of Space Medicine at the Advanced Spacelife Research Institute. Dr. Pandya has conducted groundbreaking research in space medicine, participated in suborbital and underwater missions, and co-led numerous payload experiments. Honored with accolades like the Explorers' Club "50 Explorers Changing the World" and a Women's Space Award in Medicine, her work spans publications on spaceflight resilience and terrestrial applications of space technologies, and is exhibited at the Ontario Science Centre.

MB 1.210

Speaker Session 2



Andrew Higgins
(He/Him)

Andrew Higgins is a professor of Mechanical Engineering, with Masters and PhD degrees in Aeronautics and Astronautics from the University of Washington, Seattle. At McGill University, he has taught courses on compressible flow, thermodynamics, combustion, space propulsion, and statistical mechanics. He has worked for 30 years on research in high-speed flow and shock waves for applications to aerospace propulsion and fusion energy and is now setting his sights higher by considering the engineering problems associated with interstellar flight.

MB 1.210

Lunch Break & Film Screening (Space Down by Dominic Gagnon)

CAD Workshop by Concordia (During Speaker Sessions)

Art Panel



Bettina Forget
(She/Her)

Bettina Forget, Director of the SETI Institute's Artist-in-Residence program, fosters collaboration between artists and scientists, advancing art-science research and transdisciplinary education to challenge gender stereotypes. Her creative work spans traditional and new media, focusing on astronomy, sci-fi, and feminism, with exhibitions worldwide. A doctoral candidate at Concordia University, her research project "Imagine Aliens" explores the intersection of astrobiology, exoplanet research, and art.



Lee Wilkins
(They/Them)

Montreal-based artist, cyborg, and educator with a PhD candidacy at the University of Toronto. Interests include lasers, technology, space exploration, and whimsical robots. Summit Chair at the Open Source Hardware Association, co-director at Little Dada, and educator in electronics, programming, and wearable tech. Active in community initiatives, partnerships, and events like Make Change Conference and Defcon Biohacking Village. Research focuses on bodily politics in space exploration.

MB 1.210



Day 2

VENUE

Speaker Session 3



Rahul Goel
(he/him)

Rahul is a proud Canadian, serial entrepreneur, and aerospace engineer. Rahul currently works at NordSpace as the CEO, a Canadian space company building an end-to-end orbital launch system for Canada with its historic first experimental flight launching in 2025. Rahul holds a bachelor's degree in aerospace engineering from UofT's Engineering Science program, where he also founded the Robotics for Space Exploration (RSX) team, and is now pursuing a PhD part time at UTIAS in space robotics. He also is a strong advocate for supporting student design and engineering teams.

MB 1.210

10-Minute Coffee Break

Sponsor Speaker



Vincent Côté-Larouche
(He/Him)

Sean Tedesco is a passionate space and sustainability advocate, currently pursuing a MASc in Aerospace Engineering at UTIAS, with experience in satellite systems, team leadership, and advanced space missions.

MB 1.210



Sean Tedesco
(He/Him)

Vincent Côté-Larouche is a passionate advocate for space exploration, currently pursuing a master's in Aerospace Engineering at UTIAS. With experience in lunar rovers, astronaut training simulators, and small satellite development, he combines technical expertise with leadership and innovation.

Dr. Alfred Ng



Dr. Alfred Ng
(He/Him)

Alfred Ng obtained his Ph.D. from the University of British Columbia in 1992. He joined the Canadian Space Agency as the Research Scientist the same year and he is currently Acting Head, Academic Development. He served for 6 (2013-2018) years as the Chair of International Astronautical Federation Astrodynamics Committee. In 2018, he was elected as a member of the International Academy of Astronautics. He previously managed the CSA/CNES Joint Collaboration on Stratospheric Balloon program and he was also the Technical Lead on Canadian CubeSat Project. He has authored and co-authored 14 journal publications and over 45 conference papers.

MB 1.210



Day 2

VENUE

Workshop: H.R. Macmillan Space Centre



Michael Unger
(He/Him)

Michael, Interim Director of Programming at the H.R. MacMillan Space Centre, organizes events like Pi Day and Cosmic Nights and creates interdisciplinary programs blending fields like dance, neuroscience, drag, and astronomy. Passionate about connecting diverse audiences to the cosmos, he fosters curiosity about the universe. He also leads SCI-CATs, a team developing open-source science communication modules, and manages workshops and seminars across various platforms.



Dr. Rosanna Tilbrook
(She/Her)

Rosanna, Astronomer at the H.R. MacMillan Space Centre, develops astronomy and space science programming, including planetarium shows, community events, and media appearances for outlets like CBC and Global News. Holding a Master's in Physics and Astrophysics and a PhD in exoplanet discovery, she has been active in STEM outreach since 2016, creating content for festivals, lectures, and school programs. A former Vice Chair of the UK SEDS chapter, she now collaborates with SEDS-Canada to inspire future generations in space exploration.

MB 1.210

Dr. Lauren
Rhodes



Dr. Lauren Rhodes
(She/Her)

Dr Lauren Rhodes is an astrophysicist at McGill University. She is an expert in high energy astrophysics and radio astronomy which she uses to understand the formation and growth of stellar mass black holes both in our own Galaxy and those across the Universe. In her talk, she will present an overview of how she came to be a research fellow in Montreal, as well as discussing one of her favourite research topics: gamma-ray bursts, the most powerful explosions of the universe and the birth sites of black holes.

MB 1.210

Closing Remarks

MB 1.210

Yuri's Night Fundraising Event

Reggies Student Bar at Concordia

Reggies





Day 3

Registration & Networking

VENUE

Day 3 Welcome & Opening Remarks

MB 1.210

Leonardo
the Space
Pianist



Dr. Leonardo Barilaro
(He/Him)

Dr. Leonardo Barilaro, "The Space Pianist," is a pianist, composer, and aerospace engineer who bridges music and space exploration. As a Cultural Ambassador of the Space Art Movement, he promotes the idea that art deepens our understanding of the universe and our place in it. He leads the ASTROBEAT mission, combining science and art aboard the International Space Station, and aspires to perform the first piano concert on Mars, symbolizing creativity, connection, and the inclusivity of space exploration.

MB 1.210

Loic Albert



Dr. Loic Albert
(He/Him)

Loic Albert, Ph. D., is an astronomer affiliated with the Trottier Institute for Research on Exoplanets (iREx) at the Université de Montréal. As an instrument scientist, he participated in the design, testing and commissioning of NIRISS, the Canadian instrument onboard the James Webb Space Telescope (JWST). Since 2022, he is using data from JWST to study brown dwarfs and exoplanets.

MB 1.210

10-Minute Coffee Break

RASC Workshop

Prof. Karim
Jaffer



Prof. Karim Jaffer
(He/Him)

Prof. Karim Jaffer, a Physics Professor at John Abbott College since 2006, specializes in Astronomy education with a student-directed approach, incorporating current research and experiential learning, earning multiple research awards and publications. As Public Events Coordinator for RASC Montreal since 2016, he has revitalized the I.K. Williamson Astronomy Library and fostered partnerships with institutions like the Rio Tinto Alcan Planetarium and iREx. Chair of RASC's National Education and Public Outreach Committee, Karim mentors student astronomy clubs, organizes community outreach, and received the Charles M. Good Award in 2021 for his contributions.

MB 1.210

10-Minute Coffee Break

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Day 3

VENUE

Hilding Neilson



Hilding Neilson
(He/Him)

Hilding Neilson, PhD, is an astrophysicist and professor in the Department of Physics & Physical Oceanography at Memorial University of Newfoundland & Labrador in St. John's Newfoundland where his research focuses on stellar and exoplanet physics and the stories we can learn from stars and planets. He is also Mi'kmaw from Ktaqmkuk and works integrate Indigenous knowledges in astrophysics research and how we relate to outer space exploitation and exploration and our place in the cosmos.

MB 1.210

Isabelle Tremblay



Isabelle Tremblay
(She/Her)

Isabelle Tremblay, with over 25 years in space exploration, leads Canada's space infrastructure development, focusing on telecommunications, Earth observation, and satellite maintenance. Her work supports environmental protection, disaster response, and space safety. She has contributed to NASA's Phoenix Mars Lander and James Webb Space Telescope and led Canada's Human Spaceflight Program, focusing on astronaut management and deep space healthcare. Tremblay holds a bachelor's in mechanical engineering and a master's in aerospace engineering from Polytechnique Montréal.

MB 1.210

Lunch & Movie

Sarah Morgan



Sarah Morgan
(She/Her)

Sarah Morgan is an Industrial Designer and founder of Nano-Lit Technologies, which creates advanced circadian rhythm lighting systems aligned with WELL standards to enhance health and well-being. Built on Nobel Prize-winning research and quantum dot technology, Nano-Lit's innovations also support health in extreme environments, including space exploration. She also founded Sarah Morgan Magic, an initiative educating communities on the transformative role of light in the built environment.

MB 1.210

Martin Lebeuf



Martin Lebeuf
(He/Him)

Martin Lebeuf joined the Canadian Space Agency in 2000, leading initiatives like the Canadian Analogue Research Network (CARN) and negotiating a deal with CNES to establish a stratospheric balloon launch facility in Timmins, Ontario. He developed key funding programs such as FAST and CUBICS, supporting academic and student engagement in space sciences. Martin also served on international committees like the International Space Education Board. He retired in April 2024 after a career dedicated to advancing space education and research.

MB 1.210

10-Minute Coffee Break

Ken Podwalski



Ken Podwalski
(He/Him)

Ken Podwalski, an aerospace engineer with a Master's in Aerospace Engineering, has dedicated 29 years to the Canadian Space Agency. As Canada's Gateway Program Manager, he leads the development of Canadarm3 robotics for the Lunar Gateway. Starting as a dynamic analyst on the ISS Mobile Servicing System, he advanced through roles like Mission Operations Manager and ISS Program Manager. Ken has played a key role in CSA-NASA collaborations, addressing ISS challenges, exploring deep space concepts, and securing Canada's role in lunar exploration.

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Day 3

Sponsor Speaker



Giovanni D'Aliesio,
(He/Him)

Giovanni D'Aliesio is a seasoned aerospace professional with extensive experience in space electronics. He holds a B.Eng. in Electrical Engineering from McGill University and an M.Eng. in Electrical Engineering from Concordia University. Joining MDA in 1999 as a Digital Engineer, Giovanni contributed to Canada's flagship space programs, including the ISS, Canadarm2, and satellite communication systems. Over his career, he has held leadership roles such as Product Development Manager, Director of New Business, and currently serves as Director of Business Development, overseeing key accounts and business growth in satellite systems.

VENUE

MB 1.210

SEDS Projects

Highlights



Riyana Afroze
Dep. Project Chair
(She/Her)

Presenting: CAN-RGX, CAN-SBX, Y-Space, ARX

MB 1.210

10-Minute Coffee Break

Closing

Keynote



Marc Garneau
(he/him)

Marc Garneau, born on February 23, 1949, in Quebec City, is an accomplished engineer, astronaut, and politician. After earning degrees in Engineering Physics and Electrical Engineering, he served in the Royal Canadian Navy and became the first Canadian in space on Shuttle Mission STS-41-G in 1984, completing three spaceflights and logging over 677 hours in space. He later served as President of the Canadian Space Agency, a Liberal Member of Parliament, and Minister of Transport and Foreign Affairs. A Companion of the Order of Canada, he has received numerous honors, including NASA medals and 11 honorary doctorates, and served as Chancellor of Carleton University.

MB 1.210

CSC 2025 Closing Remarks

Adam Lam (He/Him)
President of SEDS-Canada



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CANADIENNE 2025**
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SCHEDULE

Friday
January 24, 2025

Time [EST]

5:00 - 5:10

Day 1 Opening Remarks- SEDS Canada

5:10 - 5:20

Day 1 Opening Remarks- Space
Concordia

5:20 - 5:30

Dean of Concordia - Hoi Dick (Eddie) Ng

5:30 - 6:00

Lisa Campbell- CSA President

6:00 - 6:15

Picture &
ISU Welcome Video

6:15 - 6:55

Madison Feehan- CEO SpaceCopy

6:55 - 7:00

Day 1 Closing: Audrey

7:00 - 9:45

Networking/Industry Expo

10:00

Friday Get Together @Reggies

MB 9th Floor

MB 9th Floor

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Saturday January 25, 2025

Time [EST]

8:00 - 8:10

Day 2 Opening Remarks- Audrey

8:10 - 8:50

Opening Guest: Olivier Hernandez

8:50 - 9:00

10- Minute Coffee Break

9:00 - 9:50

IIAS Panel

9:50 - 10:00

10-Minute Coffee Break

10:00 - 10:40

Dr. Shawna Pandya

10:40 - 10:50

10-Minute Coffee Break

10:50 - 11:35

Dr. Andrew Higgins

11:35 - 1:10

LUNCH & Film Screening

1:10 - 2:00

Art's Dialogue with Space

2:00 - 2:40

Rahul Goel, CEO of Nordspace

2:40 - 2:50

10-Minute Coffee Break

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2:50 - 3:15

Sponsor Speaker: SFL

3:15 - 3:55

Dr. Alfred Ng, CSA

3:55 - 4:45

Macmillan Workshop

4:45 - 4:55

10-Minute Coffee Break

4:55 - 5:35

Dr. Lauren Rhodes

5:35 - 5:45

Closing Remarks

5:00 - 7:00

Digital Photo

7:00 - 10:00

Yuri's Night Fundraising Event

MB 1.210

Reggies

Workshops running the same time as the
sessions

8:10 - 9:00

Space Life Sciences Workshop by
SEDS

EV2.260

1:10 - 3:10

CAD Workshop by Concordia

EV2.260

CONFÉRENCE SPATIALE CANADIENNE 2025

ÉEDS - CANADA



Sunday January 26, 2025

Time [EST]

8:00 - 8:10

Day 3 Opening Remarks- Audrey

8:10 - 8:50

Leonardo the Space Pianist

8:50 - 9:30

Loic Albert

9:30 - 9:40

10-Minute Coffee Break

9:40 - 10:30

RASC Workshop

10:30 - 10:40

10-Minute Coffee Break

10:40 - 11:20

Hilding Neilson

11:20 - 12:00

Isabella Tremblay, CSA

12:00 - 1:00

LUNCH & Film Screening

1:00 - 1:40

Sarah Morgan

1:40 - 2:20

Martin Lebeuf

2:20 - 2:35

15-Minute Coffee Break

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2:35 - 3:15

Ken Podwalski, CSA

3:15 - 3:40

Sponsor Speaker: MDA

3:40 - 4:00

SEDS Project Highlights

4:00 - 4:10

10-Minute Coffee Break

4:10 - 5:00

Closing Keynote: Marc Garneau

5:00 - 5:10

Closing Remarks: SEDS

5:10 - 5:30

Digital Photo

MB 1.210

Workshops running the same time as the
sessions

10:10 - 12:10

MathWorks Workshop by Space
Concordia

EV2.260

1:30 - 2:30

SCS Challenges by Better Than
Space (BTS)

EV2.260

2:30 - 4:30

Space Concordia Info Session

EV2.260