

# Olivier Lamarre

## Planetary Roboticist & Aerospace Engineer

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## Experience

### Long-Distance Navigation Autonomy Intern

NASA Jet Propulsion Laboratory, California Institute of Technology

📅 Sep 2019 – Nov 2020   📍 Pasadena (CA), USA

- Assisting the MAARS (Machine learning-based Analytics for Automated Rover Systems) research group, mentored by Dr. Masahiro Ono
- Create a compression framework for long-term planetary navigation autonomy
- Deploy algorithms to real research platforms and coordinate extensive field tests

### Resource-Aware Navigation Intern

NASA Jet Propulsion Laboratory, California Institute of Technology

📅 Sep 2018 – May 2019   📍 Pasadena (CA), USA

- Develop approximation methods to provide kilometer-scale resource-aware strategic planning capabilities to future solar-powered Mars rovers
- Support navigation autonomy development for the PUFFER micro-rover project

### Mars Rover Project Founder and Leader

McGill Robotics Engineering Design Team

📅 Jul 2014 – Jul 2017   📍 Montreal, Canada

- Manage a team of 60 members to design tele-operated multipurpose Mars rovers
- Compete in the University Rover Challenge and European Rover Challenge
- Lead field tests at the Canadian Space Agency & Mars Desert Research Station

## Education

### Ph.D. Applied Science – Aerospace Engineering and Robotics

University of Toronto Institute for Aerospace Studies

📅 Sep 2017 – 2023 (expected)   📍 Toronto, Canada

- Ph.D. candidate with the Space and Terrestrial Autonomous Robotics Systems (STARS) Laboratory, supervised by Prof. Jonathan Kelly.
- GPA: 3.9/4.0

### B. Eng. Mechanical Engineering (Major) & Geology (Minor)

McGill University

📅 Jan 2013 – May 2017   📍 Montreal, Canada

- Extracurricular: McGill Robotics Mars Rover Team (Founder & Lead)
- Societies: Golden Key International Honour Society, McGill Institute of Aerospace Engineering

## Honors & Awards

### ★ Alexander Graham Bell Canada Graduate Scholarship

Natural Sciences and Engineering Research Council of Canada  
\$105,000 over 3 years

### ★ Graduate Fellowship

NASA Jet Propulsion Laboratory  
\$15,000 over 6 months

### ★ Ontario Graduate Scholarship (x2)

\$20,000 over 2 years

### 🏆 Third Place Internationally (x2)

European Rover Challenge  
(2015 and 2016 competitions)

### 🎓 Dean's Honour List

McGill University  
Faculty of Engineering

## Skills & Strengths

Project Management   Public Speaking

Teamwork   Community Outreach

Leadership

Mission Systems   Python 2/3

Robot Operating System (ROS)   C++

MATLAB

## Scuba Certifications

### Advanced Diver

PADI (received 2014)

### Peak Performance Buoyancy

PADI Specialty Diver (received 2014)

## Languages

English

French

Spanish

