

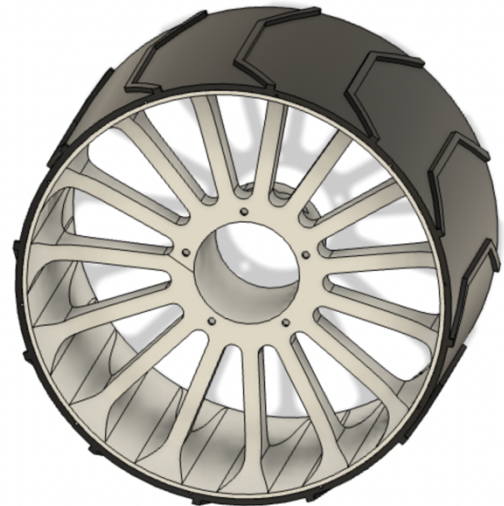
Project proposal

Title: Rover wheels design
 Supervisor: ...
 Timeframe: Spring 2022

EPFL Xplore is an interdisciplinary project which aim is to design and develop a Rover to participate in international competitions, namely The University Rover Challenge and the European Rover Challenge. During 3 of the 4 missions that they have to achieve, our rovers need to navigate through sandy/rocky terrain to reach their destination. To adapt to such terrains, they must be able to rely on versatile and resistant wheels.

Project description

For most tasks, the rovers must overcome sloppy terrains made of sand and rocks. Hence, appropriate wheels need to be designed to ensure that they can overcome any type of terrain to be encountered. The student will therefore need to improve the current wheels' design using CAD software and test them by means of simulations (vibrations, shocks, etc.) and fast prototyping (3D printing). Further, the student will be part of the Xplore structure team to facilitate communication and information sharing regarding past and current designs.



Requirements

- Prior knowledge of Fusion360 and advanced CAD skills
- Basics in FEA Analysis (static and dynamic)

Contact

quentin.delfosse@epfl.ch