NASA Rover Challenge

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Overview

- Introduction
- Project Description
- Design Components
- Competition Performance
- Questions

The Team

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Project Description

- Design and Assembly a Human Powered Rover
- Research and Development of Technology
  - Course Completion Performance
- Promote Interest in NASA for Aspiring Engineers

Objectives

- Reduce Assembly Time
- Increase Traction
- Improve Handling
- Repair Braking System

Constraints

- 50% Structure Change
- Complete Wheel Fabrication
- Able to be Carried 20 ft.
- Fit Inside 5 ft. Cube

Folding Pedal Support Design

Objective:

Improve Assembly Time

Constraint:

Fit Inside a 5’ Cube

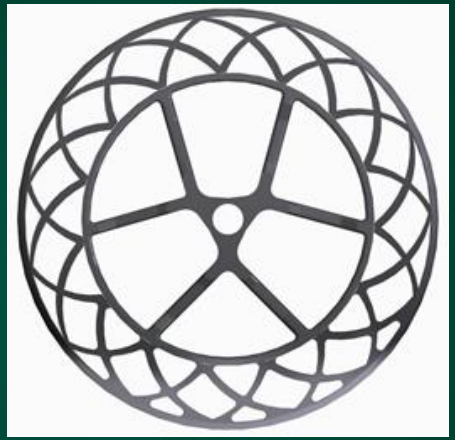
Wheel Design

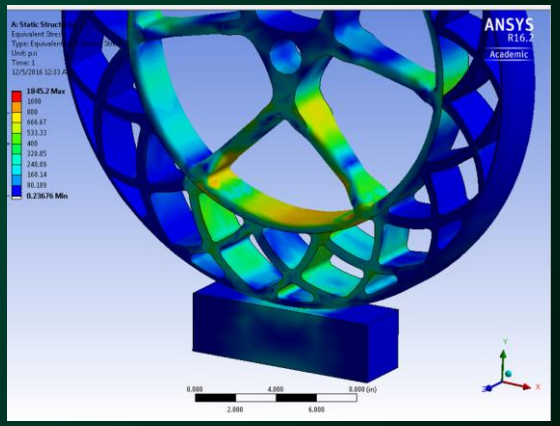
Objective:

Increase Traction

Constraint:

Lightweight and Durable





Wheel Design

Objective:

Increase Traction

Constraint:

Lightweight and Durable

Spindle Design

Objective:
Create Castor Angle

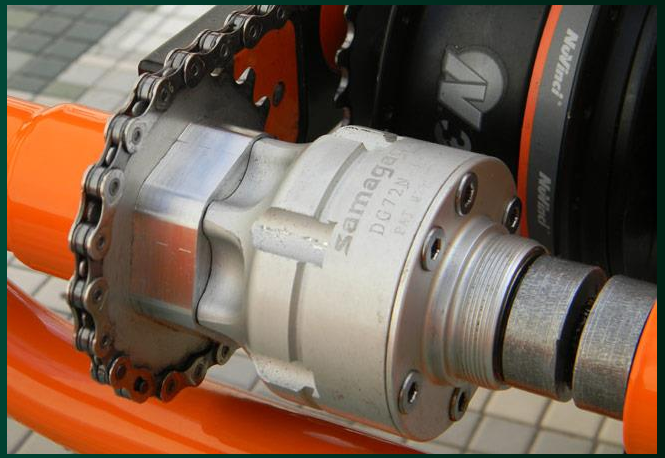
Constraint:
Suspension Arm
Geometry

Spindle Design

Brake Design

Objective:
Create Castor Angle

Constraint:
Suspension Arms



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Brake Design

Competition Performance

Competition Performance

Competition Performance

Special Thank you to the North Dakota Space Grant Consortium

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Questions