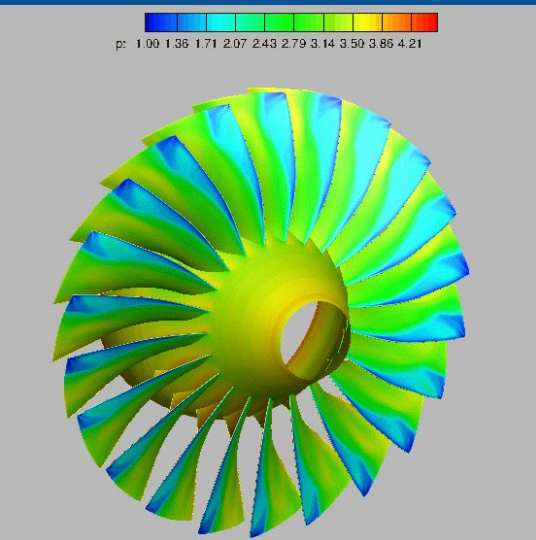




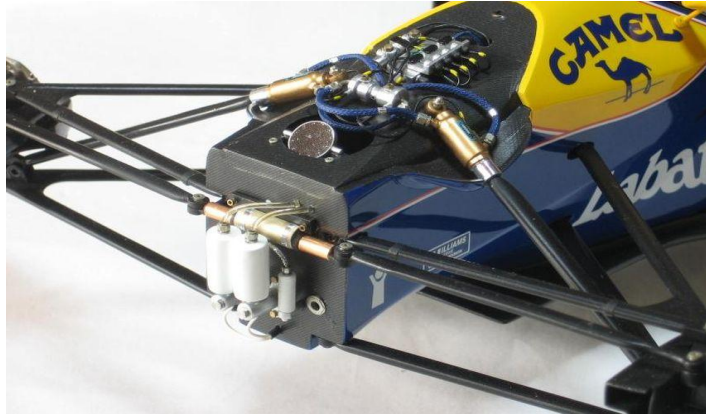
Aerodynamics & Traction & Suspension

By: Nick, Aidan, Alyssa



F1 -Nick

Suspension in F1 is based on the idea that the maximum speed should be carried through the process of hitting a bump, and dampening the shock as quickly as possible, regardless of driver comfort (since we do not have a driver, this is of no concern). The best way to do this is to try and integrate the suspension with the most least effect on speed. Another prominent factor is the chassis. For the chassis we should go for a minimal approach with a material easily manipulated to compliment the suspension. The way F1 does this is by making a lightweight one that would be well suited for any weather and is perfectly made to fit around the suspension. Unless anyone has any other ideas, bar stock seems to be a perfectly reasonable thing to make our chassis out of.





Suspension -Aidan



Main Points

- Absorbs shock to protect body
- Must have balance of handling and shock absorption
- Allows body to stay rigid but also allows shock absorption if needed

Possible types of suspension

- Coil springs
 - Dampers
 - Magnet Dampers
-

SUSPENSIONS



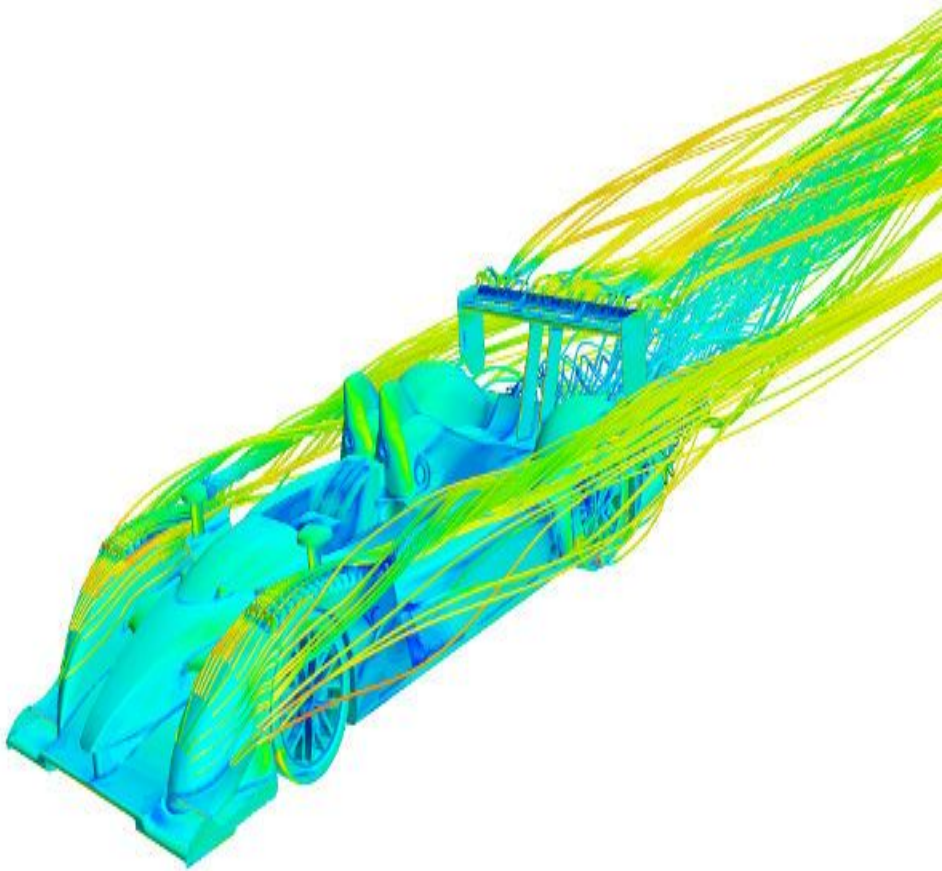
Click above to play video

Aerodynamics

-Aidan

Key Points

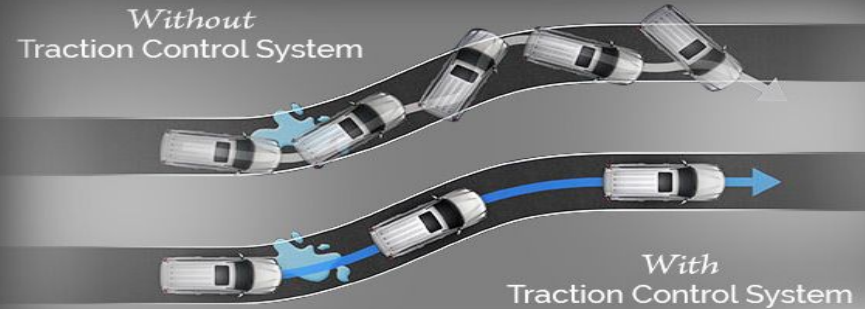
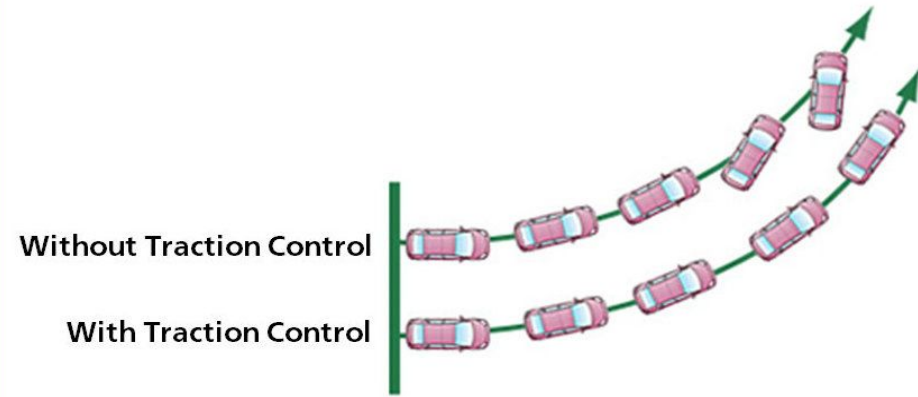
- Streamlined designs, no sharp edges
- Probably will not affect us unless we are going more than 10 miles per hour
-



Wheel Grip and Traction

-Aidan

- Friction is critical for manoeuvring a vehicle
- Friction is needed when turning, accelerating and braking.
- Without traction, drifting and skidding will occur
- Possible wheels: [Link 1](#), [Link 2](#)



Research and Designing-Alyssa

- Gathering information
- Identifying specific details of the design which must be satisfied
- Identifying possible and alternative design solutions
- Planning and designing an appropriate structure which includes drawings

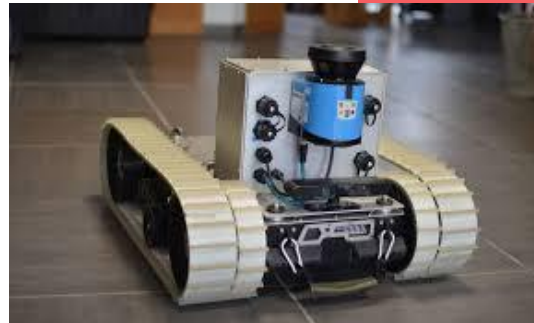
What do we need to accomplish?

We need our robot to:

- Be able to go through the course
- Be reliable
- Be able to go through or over all of the obstacles
- Able to work in any weather condition
- Have a backup plan
- Stay on track with our work
- Work together to incorporate everyone's ideas
- Not break last minute, or have it catch on fire

Examples:

Rover 5
Platform





FIN