

# **Research Check-in**

**Location:** EGR Rm. 108 (Capstone Room)

**Date:** 9/24/2018

**Time:** 2:10pm

**Abstract:** Team met to discuss progress on designated research that was assigned by the team on Friday(9/21).

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## **Yaw Design (Faisal):**

- Researched pros and cons of passive yaw.
- Summarized active and passive yaw.
- Researched materials. Fiberglass potentially.
- Research redirected to more specifically research yaw geometry and best material from the multitude of options

## **Brake Design (Tanner):**

- Researched potential braking mechanisms (actuators and hydraulics specifically)
- Both options allow for less than full power than need be.
- Slowing applying brake power is also capable
- Will be continuing with calculations and other potential brake systems

## **Shaft and Bearing (Naser):**

- Hardened Stainless Steel for potential bearing material
  - Tough and strong
- Redirected to research low friction bearings for tower and shaft

## **Blade (Riley):**

- Researched simulation programs and potential blade design strategies
- Redirected to research the following:
  - 3D printing filaments and their physical properties
  - Low Deflection, High Strength
  - NACA airfoils and their number meanings(naming process)

## **Tower Design (Abdulaziz):**

- Zero research complete

**Meeting Adjourned:** 2:31pm