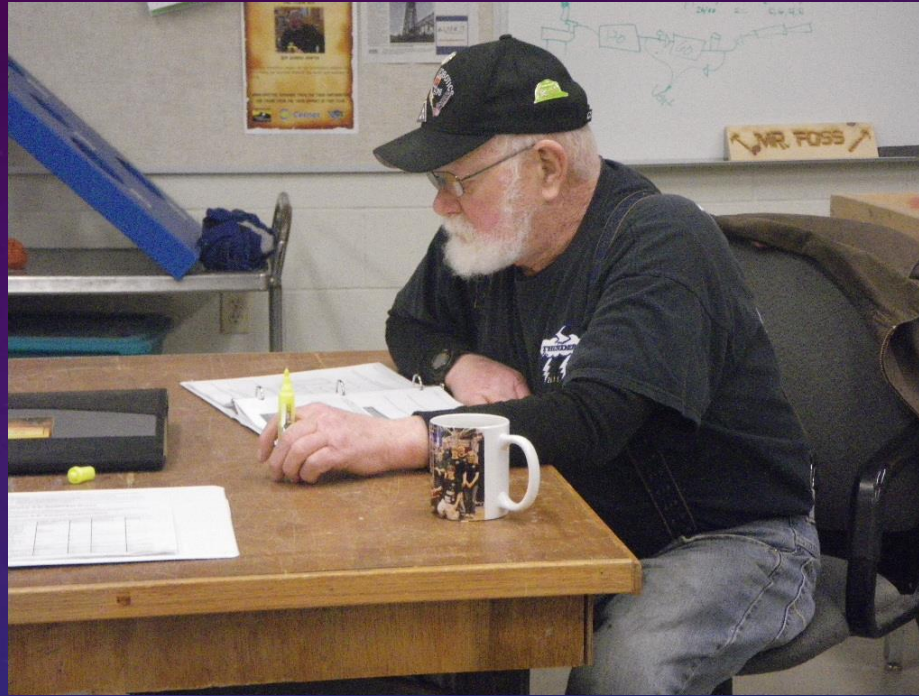




# 876 THUNDER ROBOTICS

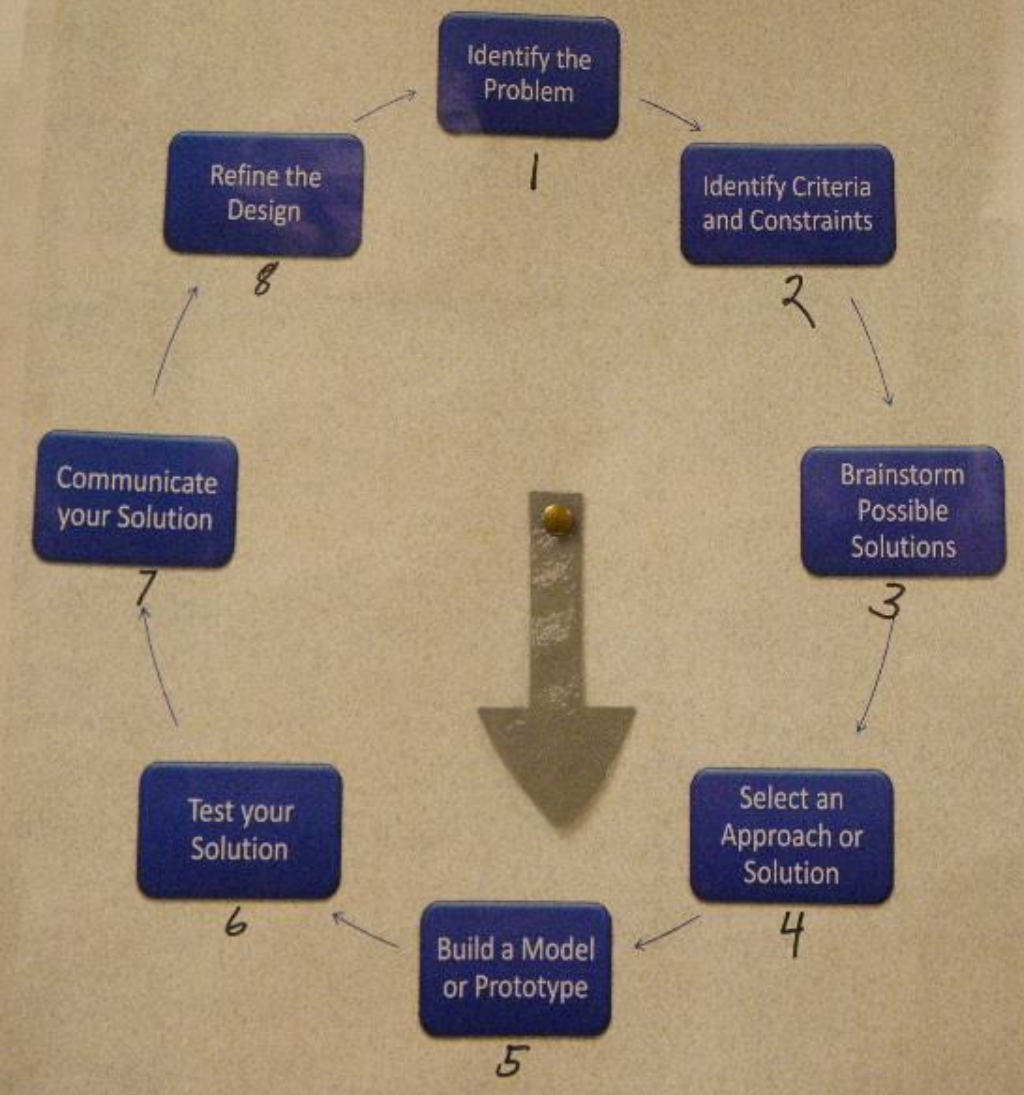
MIKE VOGLEWEDE, ADVISOR



# 6 WEEKS TO BUILD A ROBOT?

NO STRESS AT ALL

# Engineering Design Process



## Foundations

Spaghetti  
Goal: Build  
tower to  
base b

## Tech Design

Roller co  
Goal: Build  
to control  
a

Grab a huge exercise ball  
Shoot it 7 feet in the air

Fast

Powerful

Traction

Accuracy

Maneuverable



# BRAINSTORMING





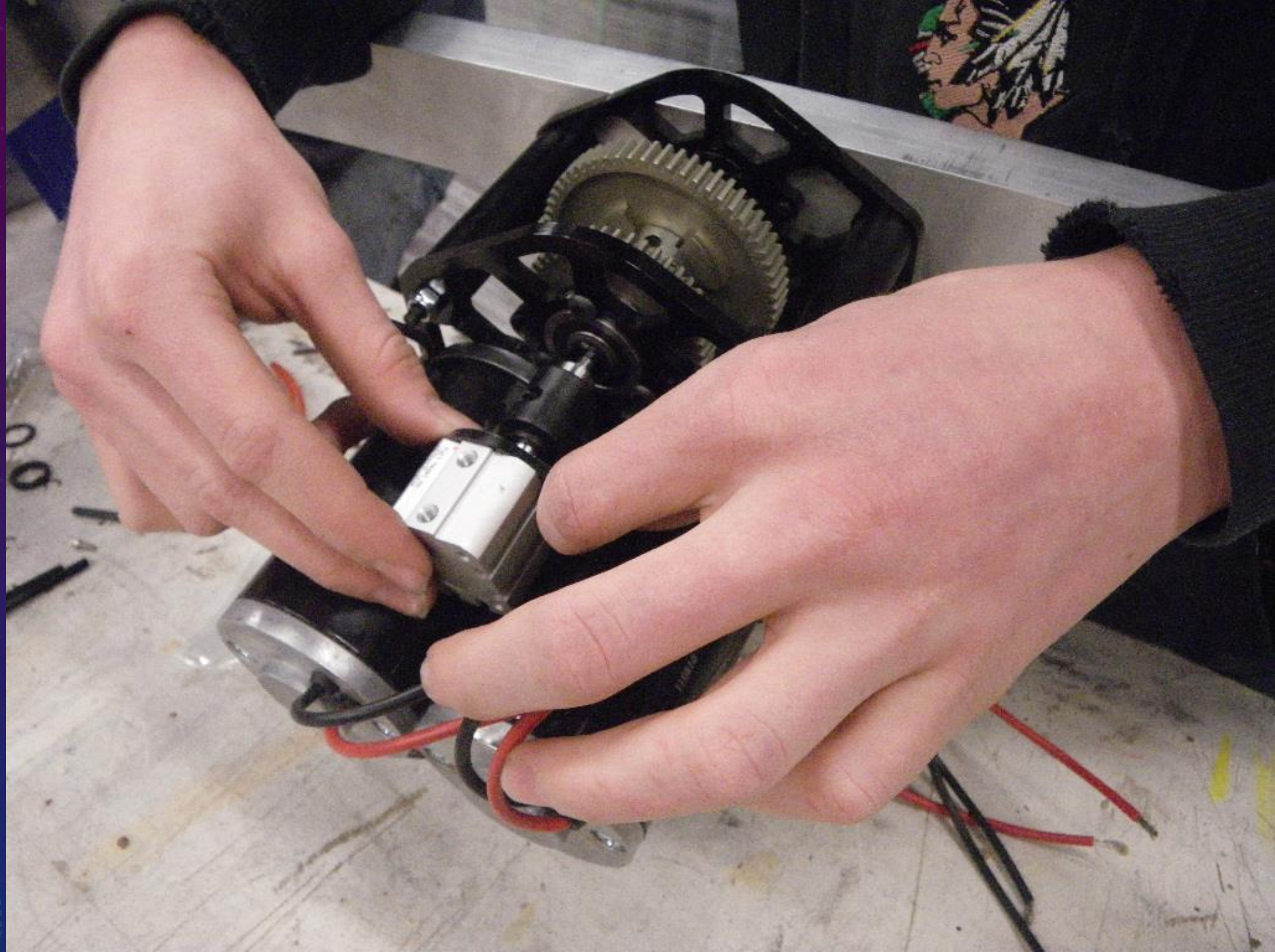


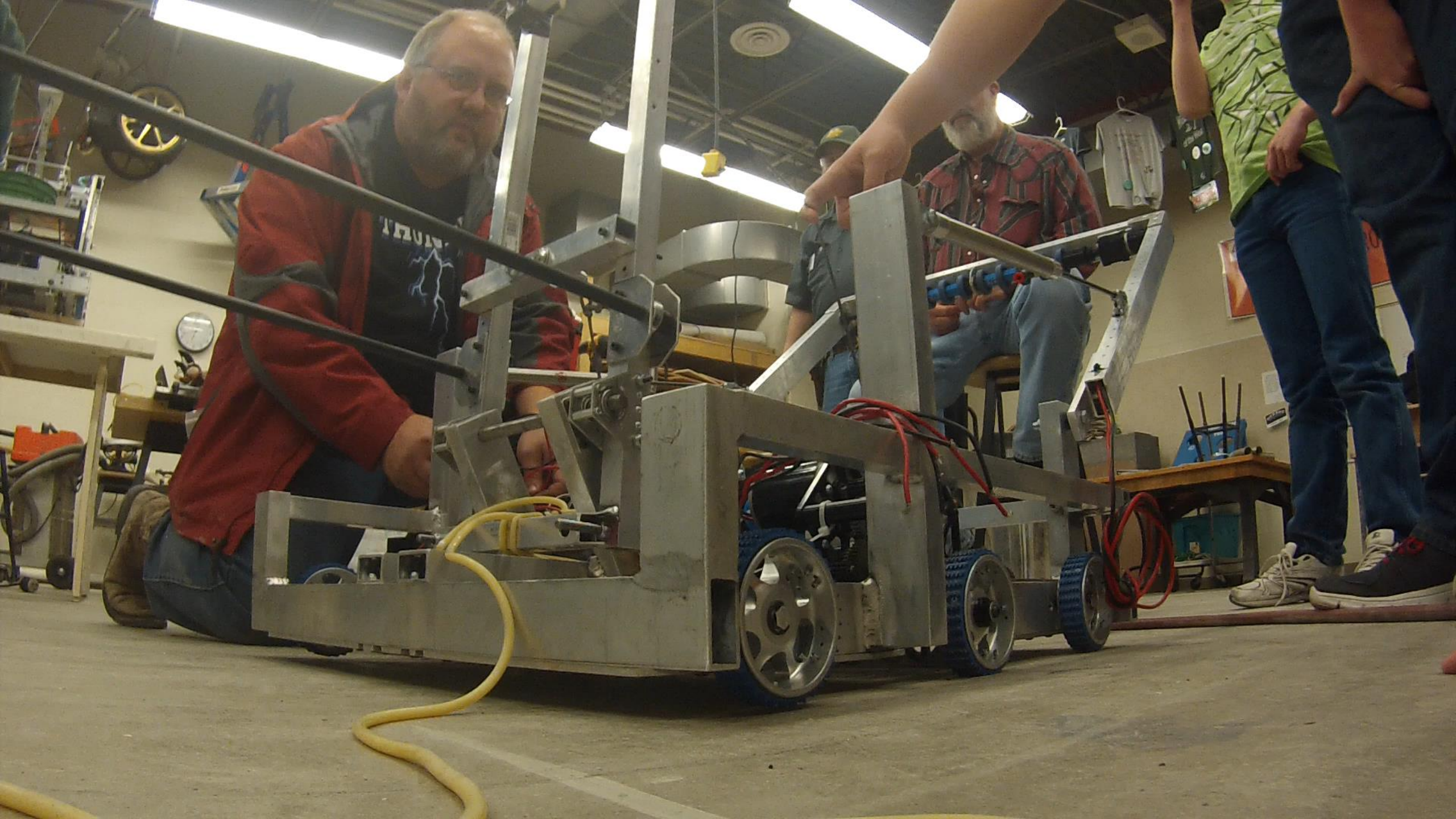
# TRYING OUT IDEAS

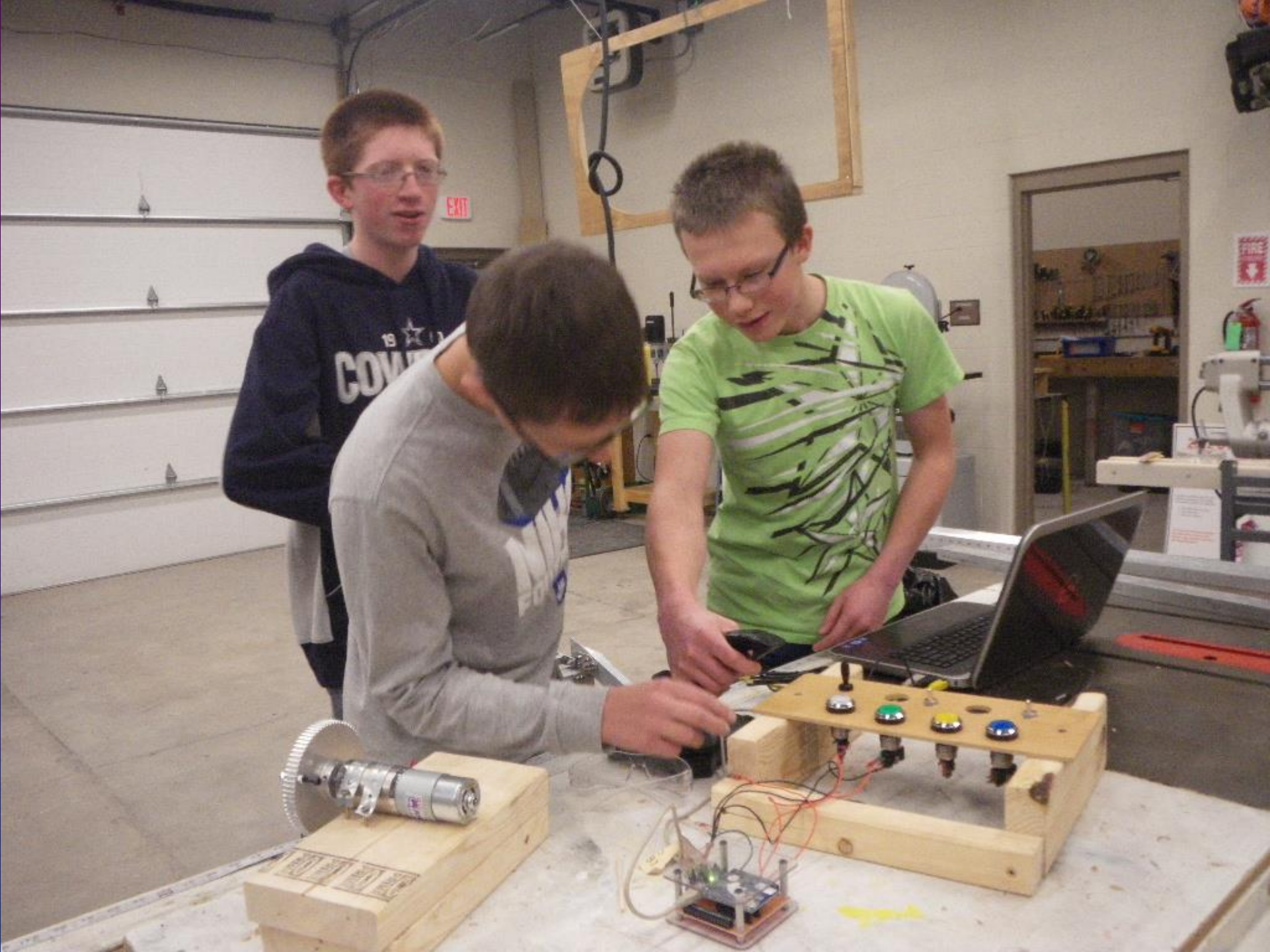








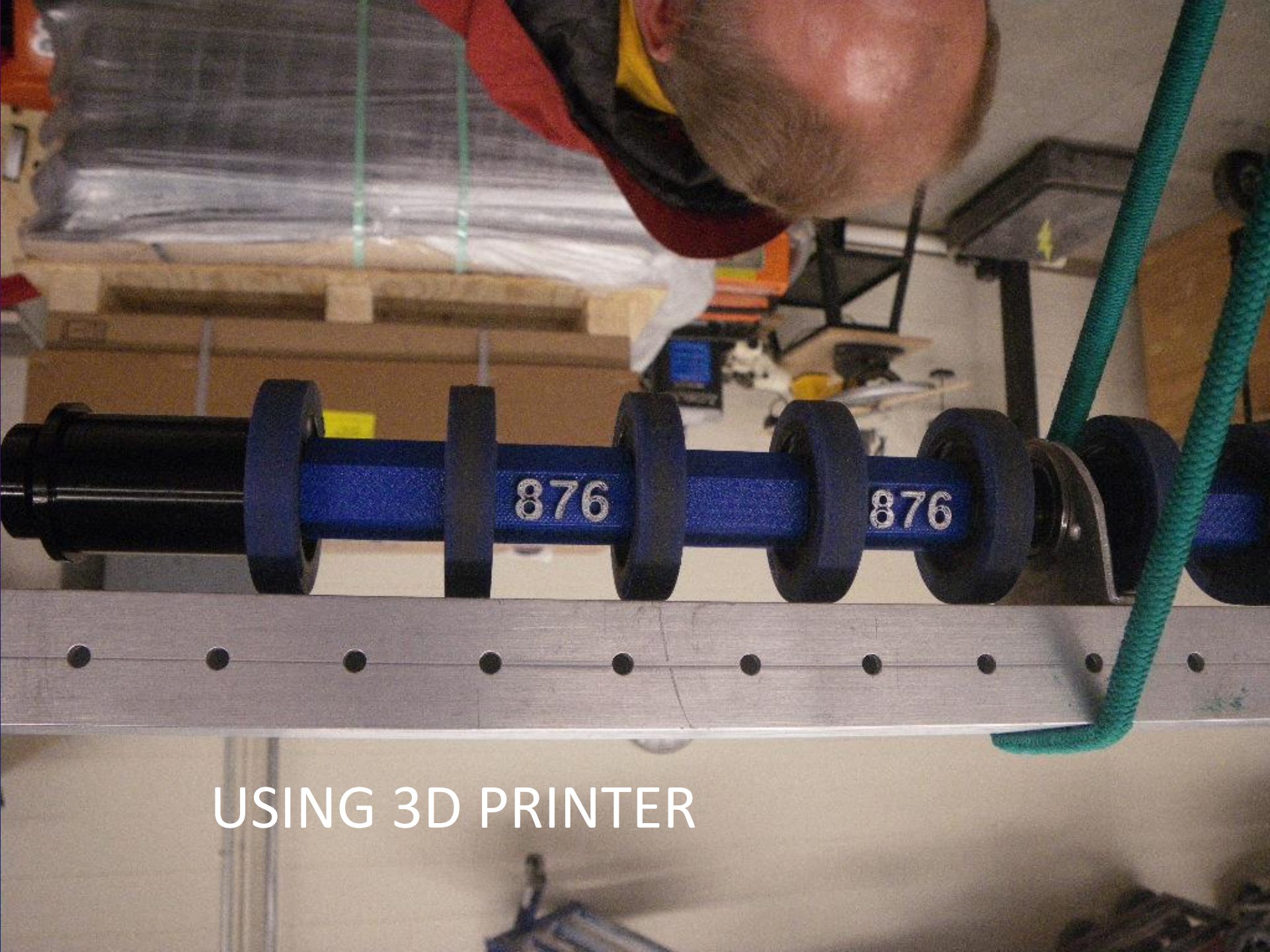




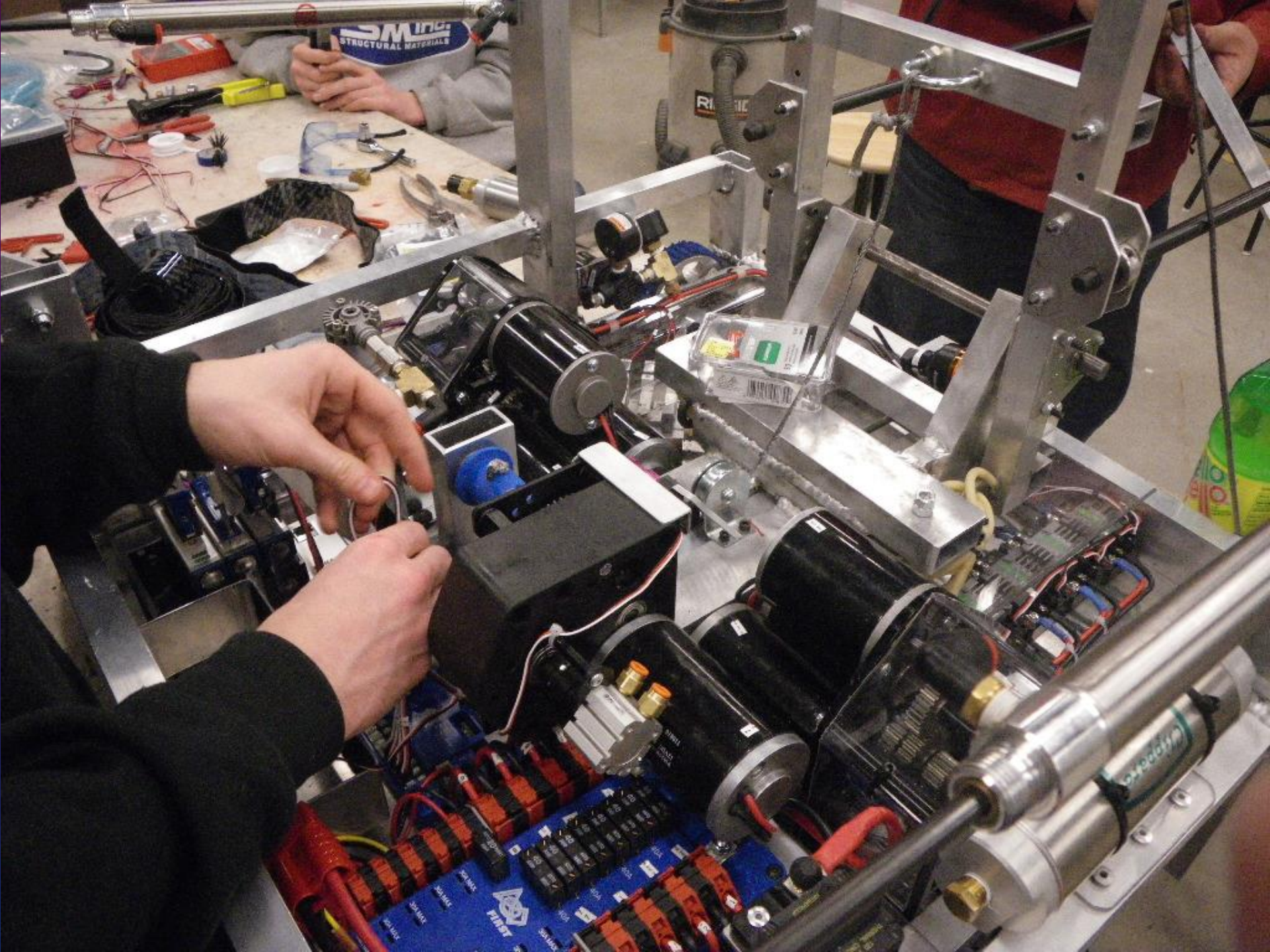
# Follow the Flow Chart!!







USING 3D PRINTER

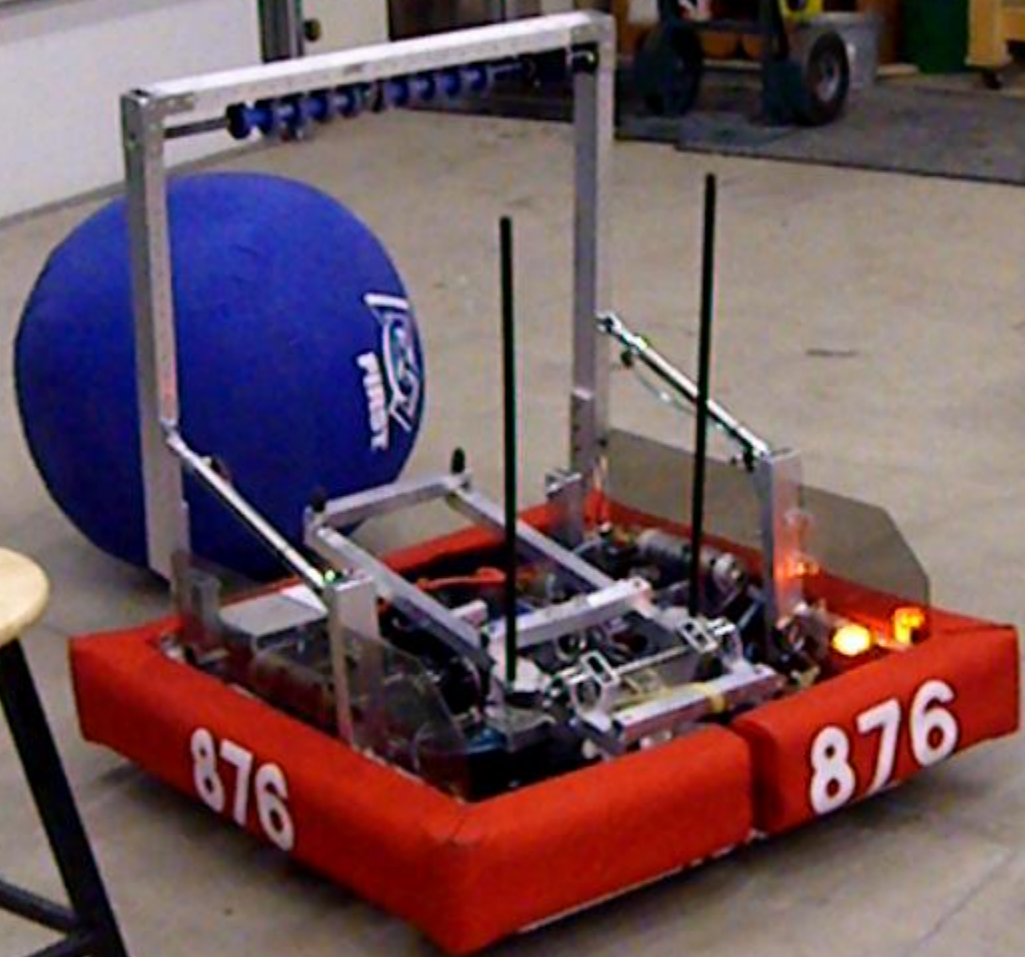


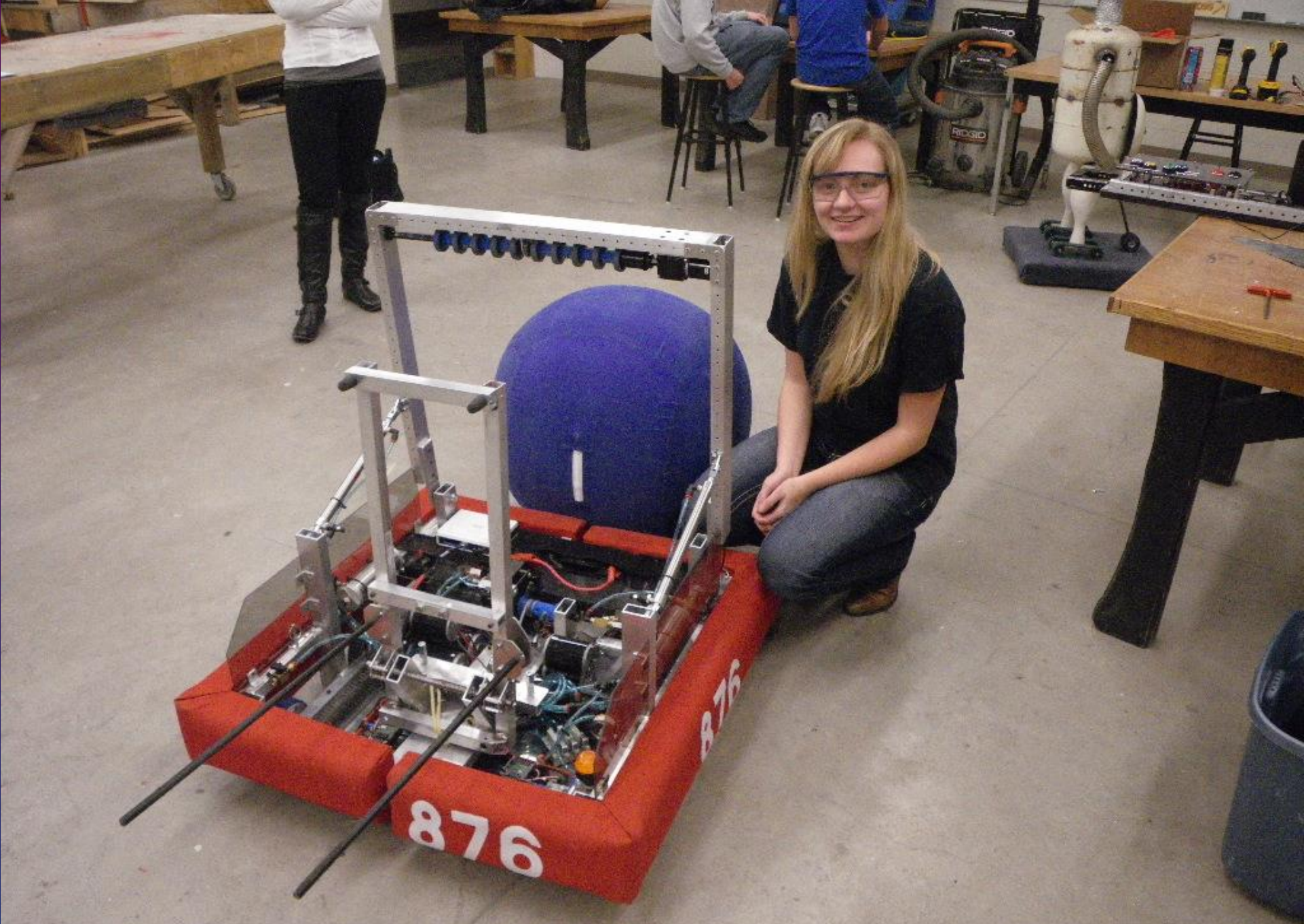


The background features a dark blue gradient with a subtle pattern of white dots. On the left side, there are several circular elements: a large scale with numerical markings from 140 to 260, and several smaller circles with dashed lines and arrows, suggesting a process or cycle. The main text is positioned on the right side of the image.

# PRACTICE, TRIAL AND ERROR

GETTING CLOSER





The background is a dark blue gradient with a subtle pattern of small white dots. On the right side, there are several technical graphics: a large circular gauge with a scale from 0 to 210, a smaller circular gauge with a scale from 0 to 100, and various dashed and solid lines forming circular paths and arcs. The text is centered on the left side of the image.

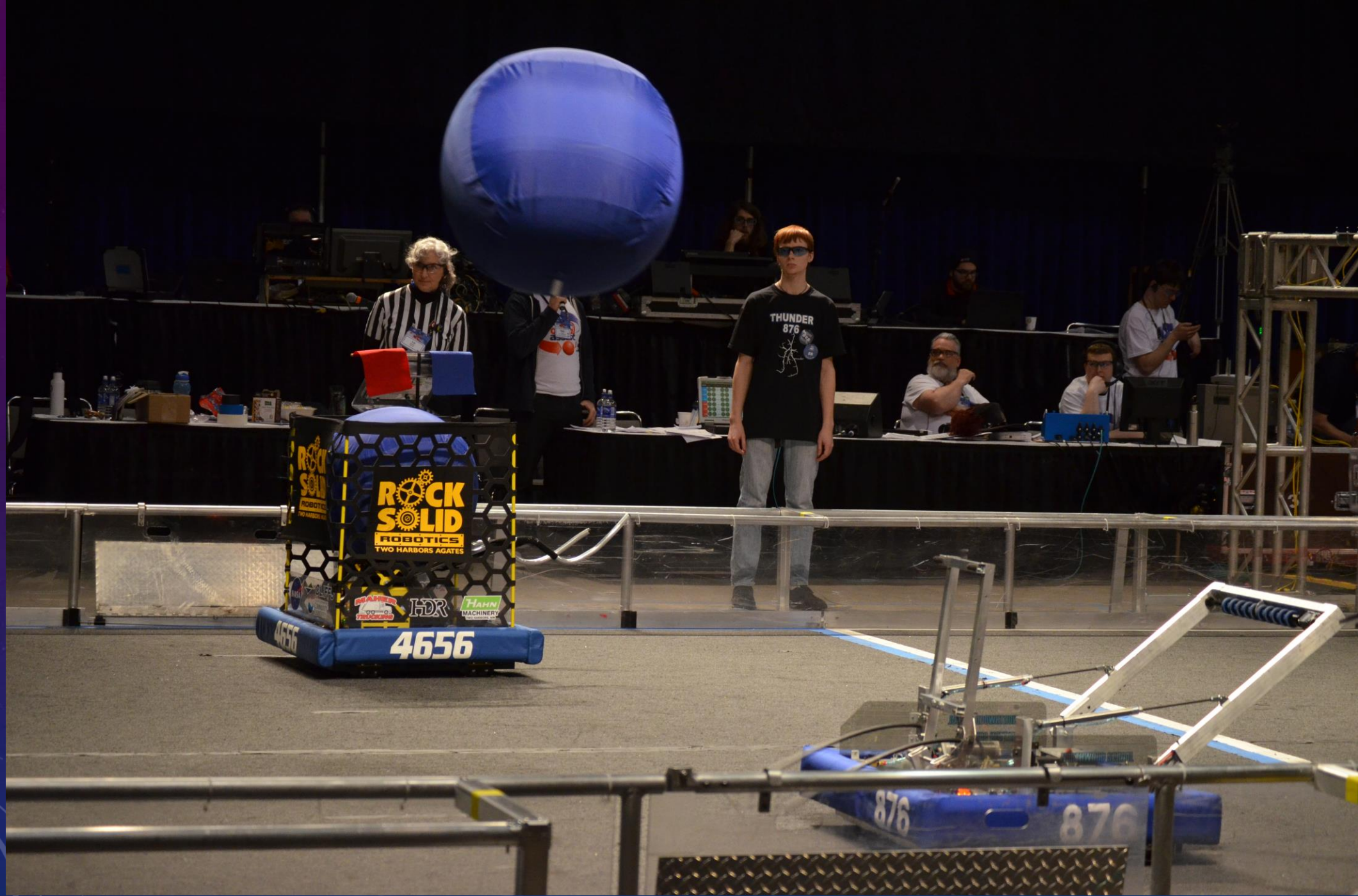
TIME TO BAG IT UP  
GET READY FOR COMPETITION



The background features a dark blue gradient with a subtle pattern of white stars and technical diagrams. On the right side, there are several circular diagrams resembling gauges or dials with numerical scales (e.g., 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210) and arrows. On the left side, there are dashed circular paths with arrows indicating direction. The overall aesthetic is clean, modern, and technical.

**COMPETITION AT DULUTH REGIONAL.  
50 TEAMS FROM 6 STATES**



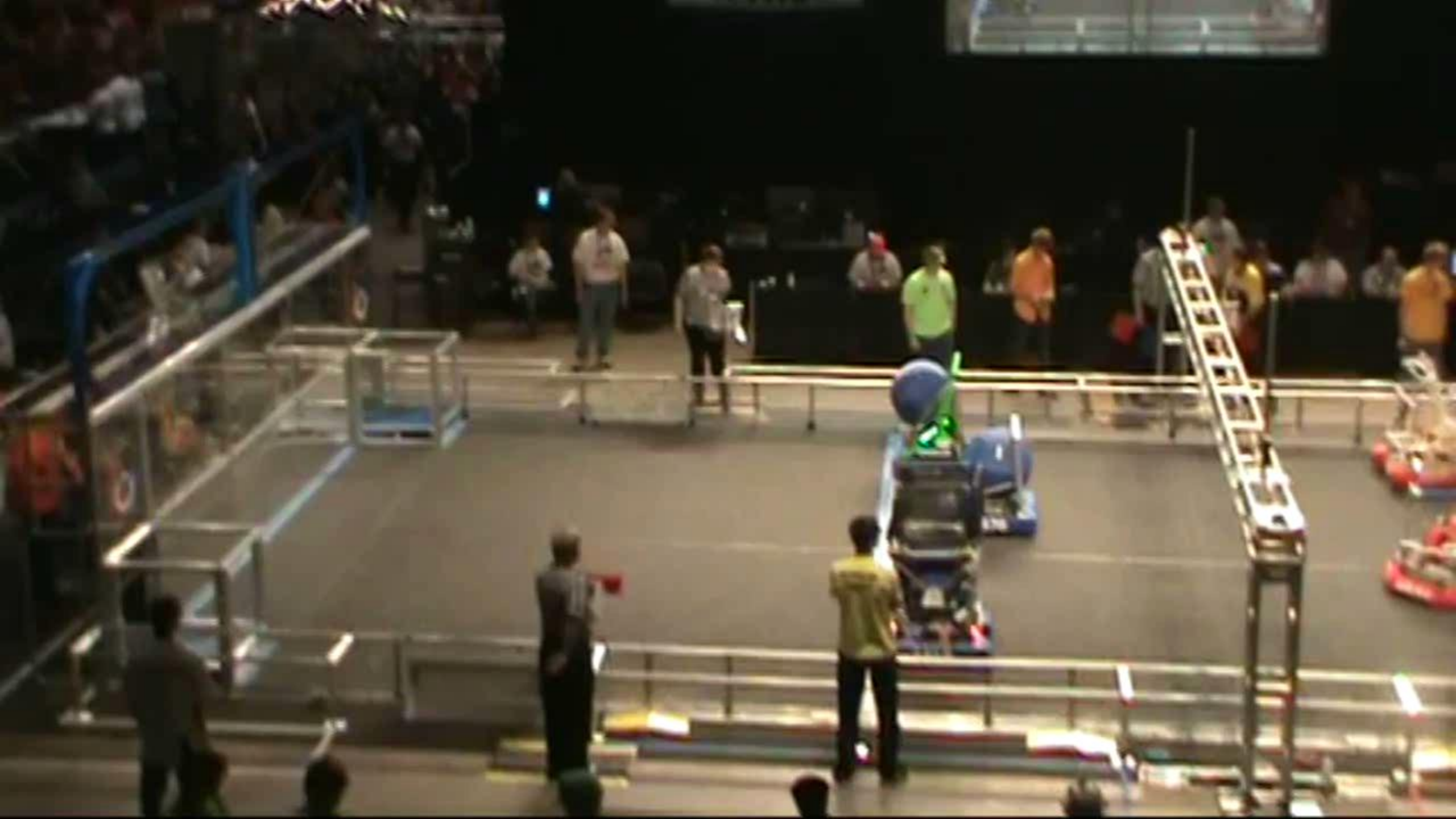




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DULUTH SUPERIOR AREA  
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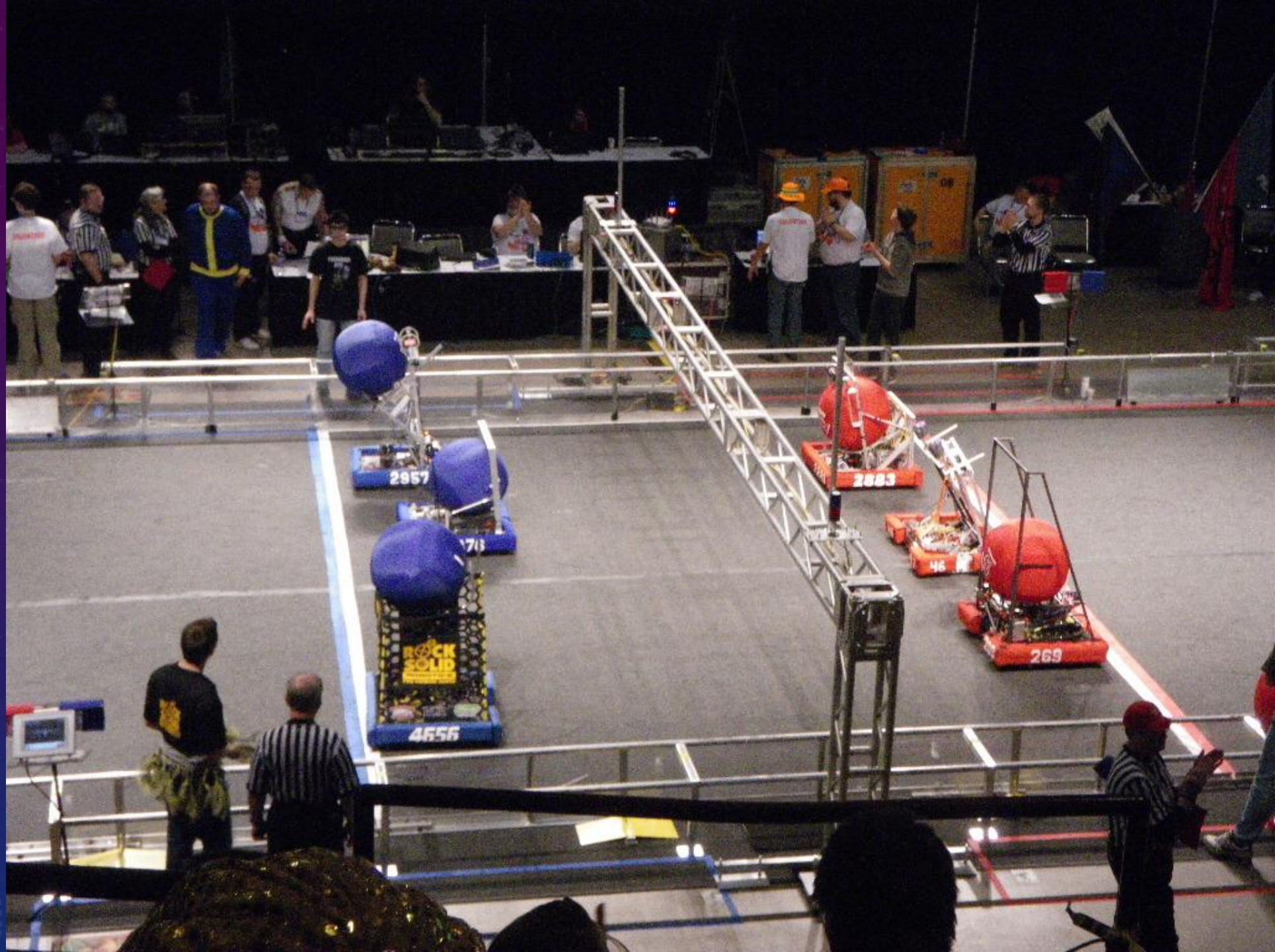
NASA

TEAM  
**4656**  
FRC

TEAM  
**4624**  
FRC

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We finished 3<sup>rd</sup> out of 50 teams and won the prestigious Judges' Award!

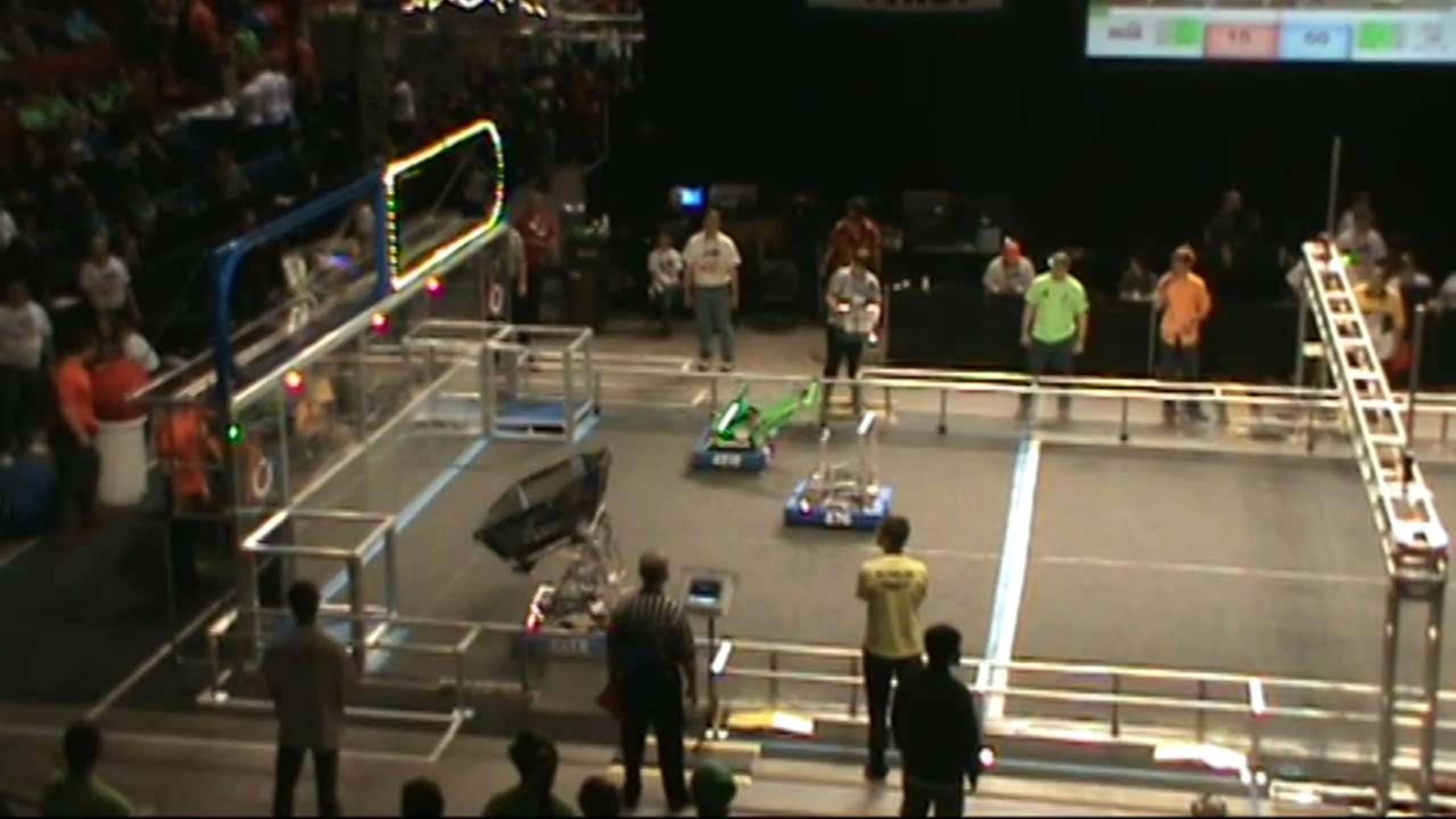




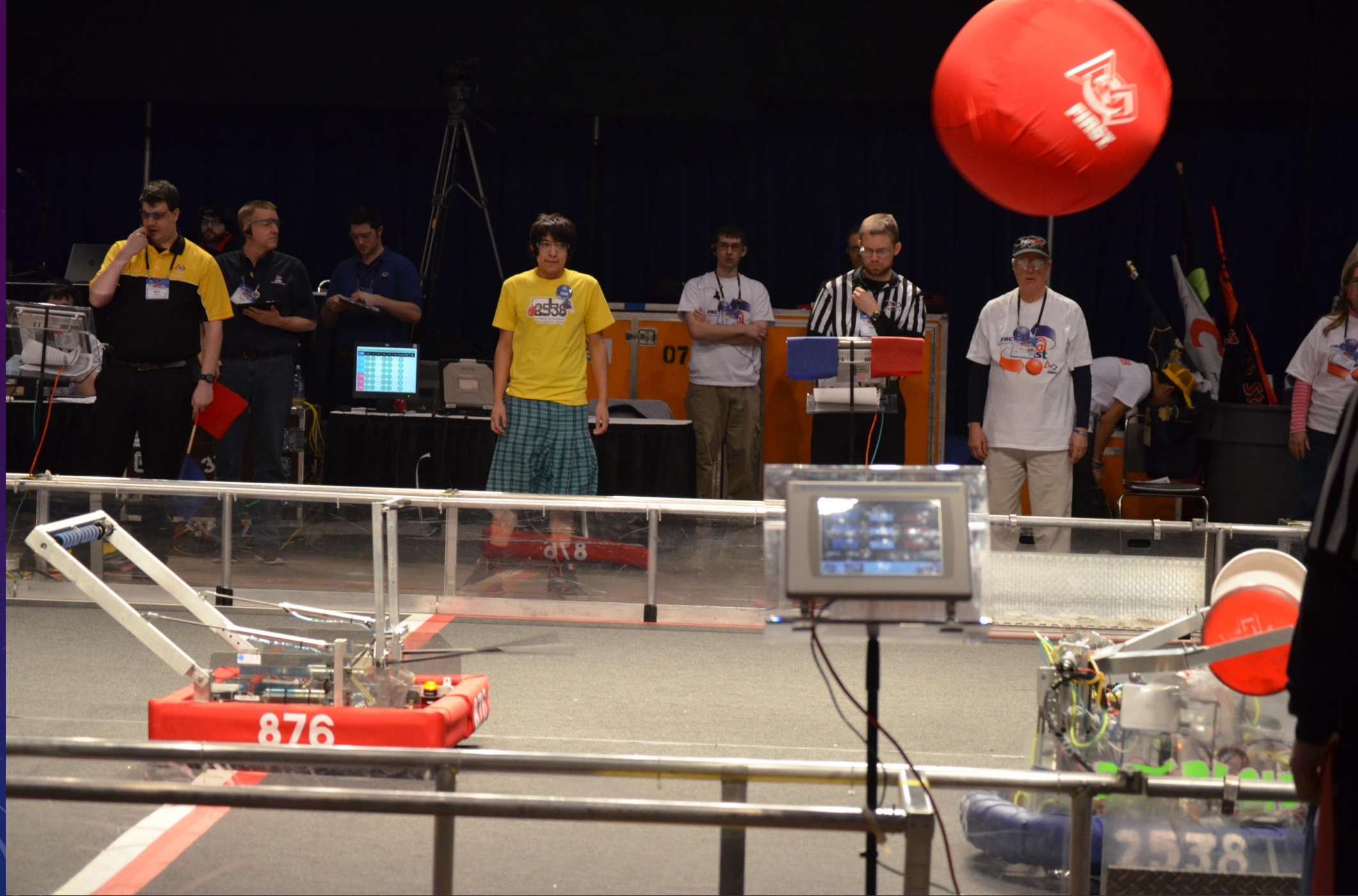
# ON TO THE NEXT REGIONAL TOURNEY IN MILWAUKEE...60 TEAMS FROM 8 STATES.











Thunder Robotics finished 7<sup>th</sup> out of 60 teams and was the only team to beat the eventual Championship Alliance.

THANK YOU FOR SPONSORING  
TEAM 876!!



# COMMUNITY INVOLVEMENT

The background features a dark blue gradient with a subtle pattern of white stars and faint technical diagrams. On the right side, there are several circular diagrams resembling gauges or progress indicators, with numerical scales ranging from 80 to 210. Some diagrams include arrows indicating direction or flow. The overall aesthetic is clean, modern, and technical.



# ADULT MENTORS WITH STUDENTS



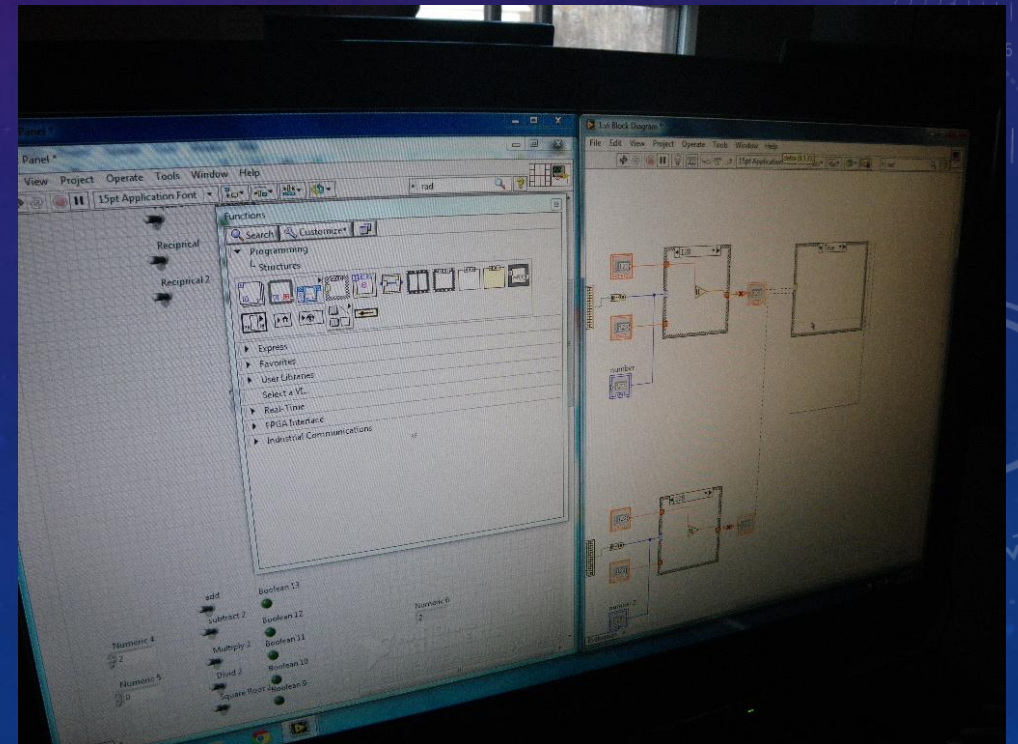
# HOOF AND WHEEL SUPPER AND DEMO



# REPLACING TREES LOST IN TORNADO



# Teaching Area Schools Programming



# DEMONSTRATIONS FOR HOSPITALS



# PARADES

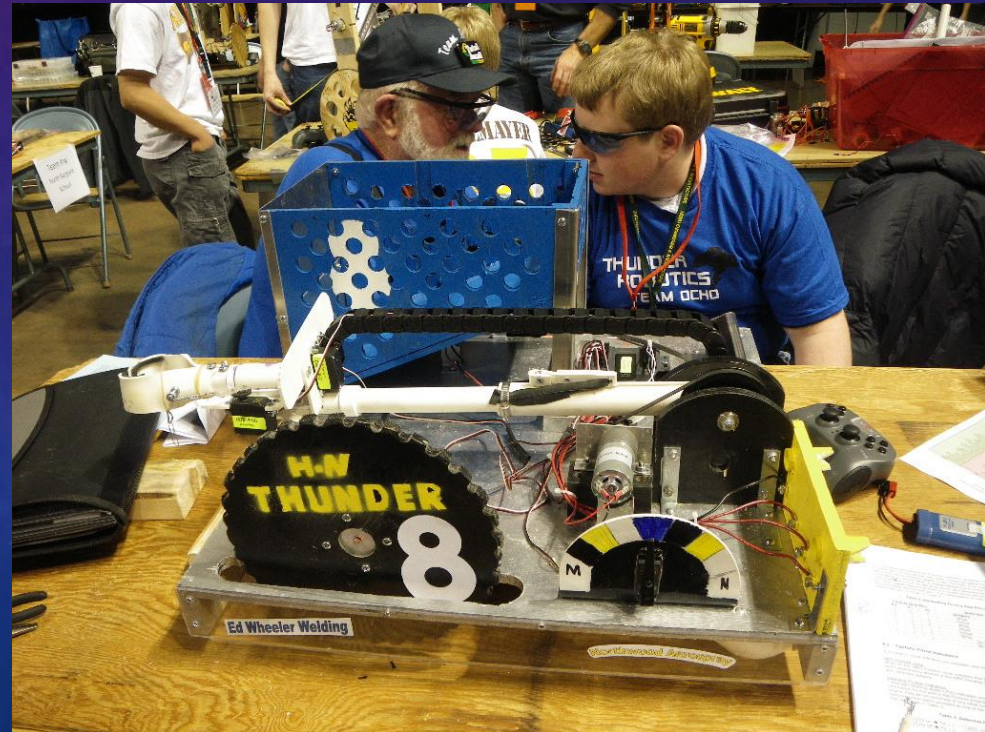


# OTHER ROBOTIC GROUPS

## LEGOS



## FTC



## BEST ROBOTICS

# INVOLVEMENT LEADS TO EXCITING CAREERS

- ENGINEERING
  - COMPUTER
  - MECHANICAL
  - ELECTRICAL
  - CHEMICAL
- TECHNOLOGY
- MEDICAL
- SCIENCE
- MATHEMATICS





# LET'S MEET DAVE!!

