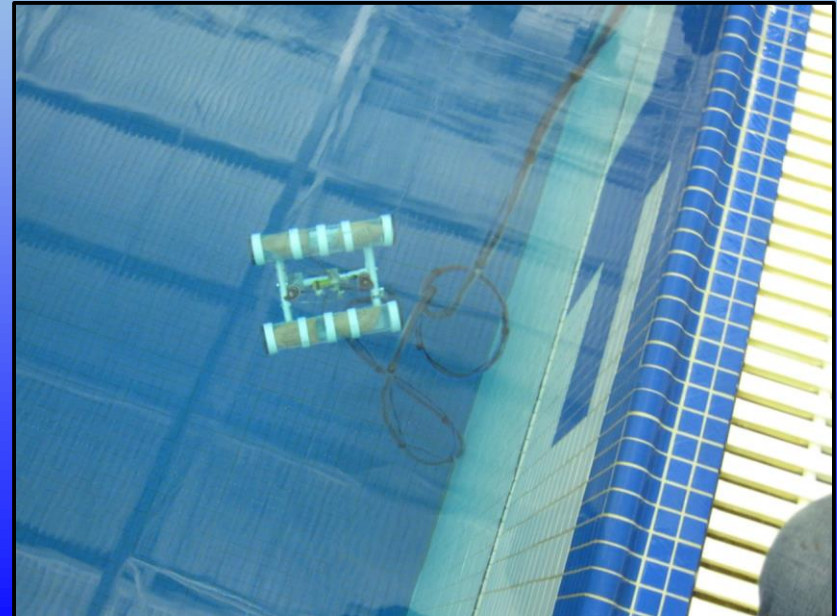
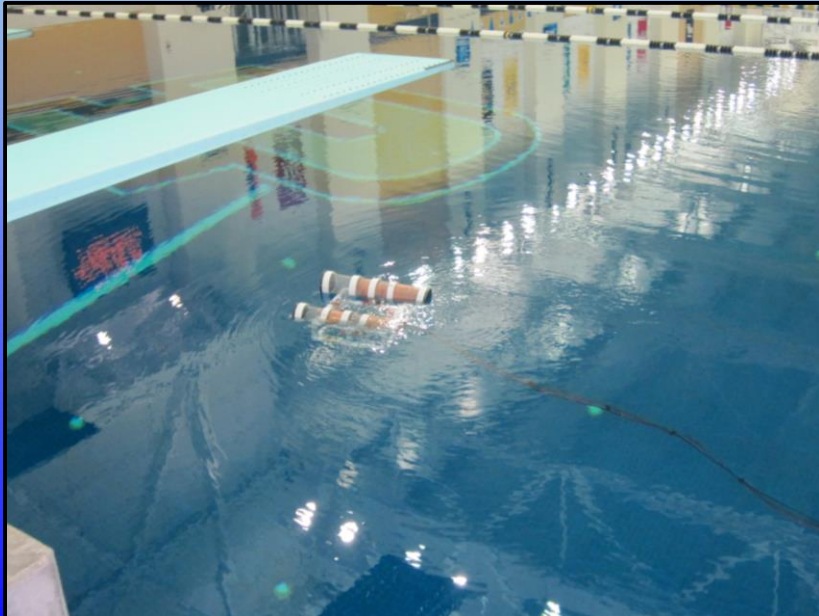
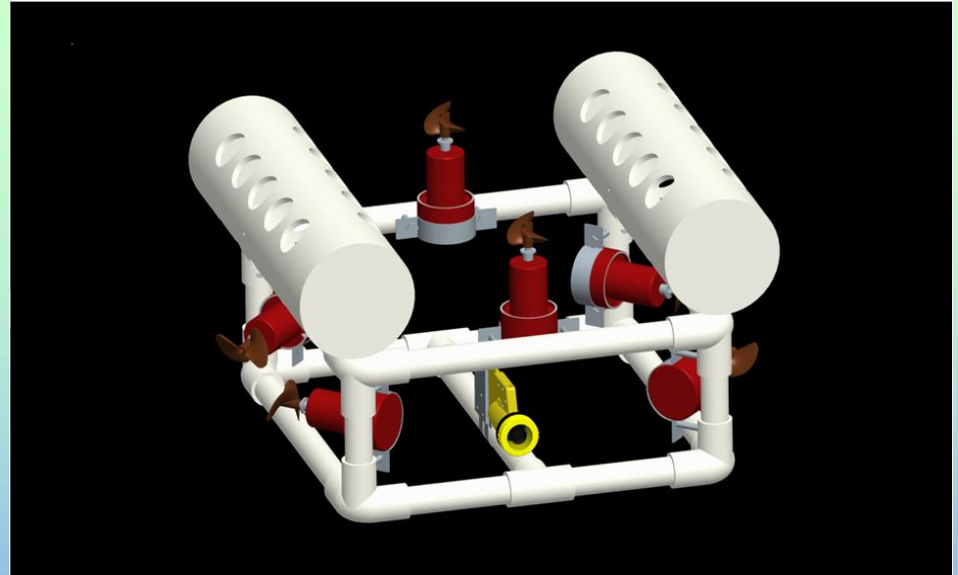


Underwater ROV

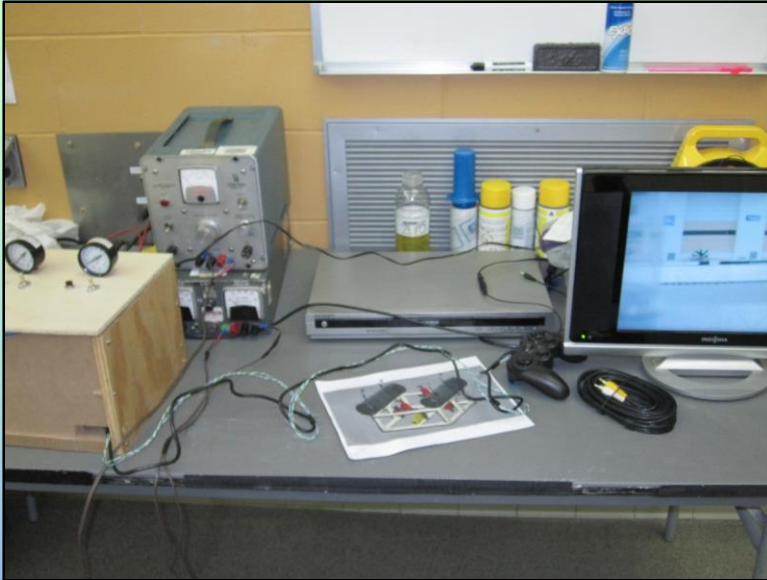
Stephen Campbell, Eddy Jizhai Cui, John Morario, John VanVliet, Jon Wolford

Objectives:

- Design and build a robot for underwater exploration using a video camera
- Movement:
 - Forward, backward, left, and right
 - Up, down, as well as stay neutrally buoyant
- Other requirements:
 - Max depth of about 30 feet
 - Max speed of about 2 feet/second

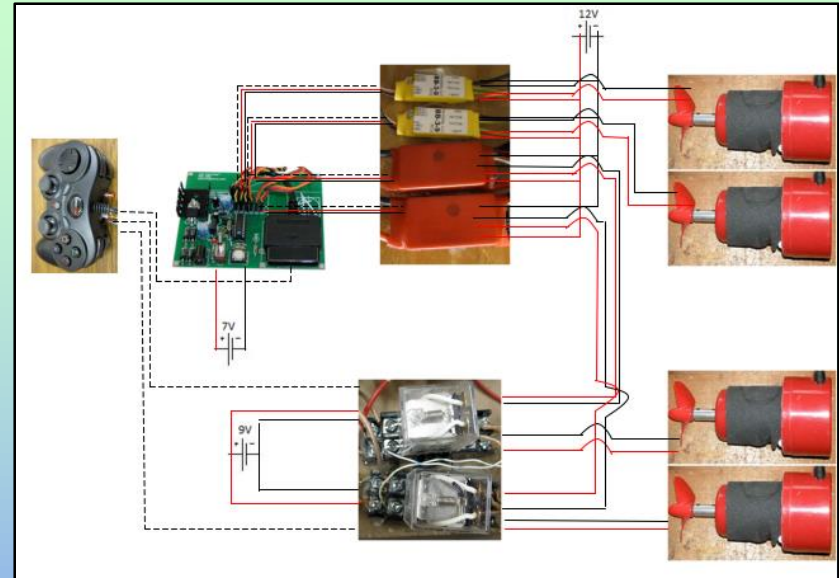


Control Systems



Motor Control:

PS2 controller > Servo Motor Controller
> 4 Speed Controllers > 4 Motors



Ballast System:

Air Compressor > 3/2 NC Valves >
2/2 NC Valves > Pressure Gage >
4-speed Bags used as Air Bladders

Conclusions & Recommendations:

- Successful design parameters
 - Forward, backward, left and right movement
 - Up, down and neutrally buoyant
 - Clear picture from camera
- Recommendations:
 - Develop finer controls for air flow into ballast tanks
 - Incorporate microcontroller to automatically control balance and depth
 - Incorporate more intuitive control system