

# Steven Stangle

November 1<sup>st</sup> 2013

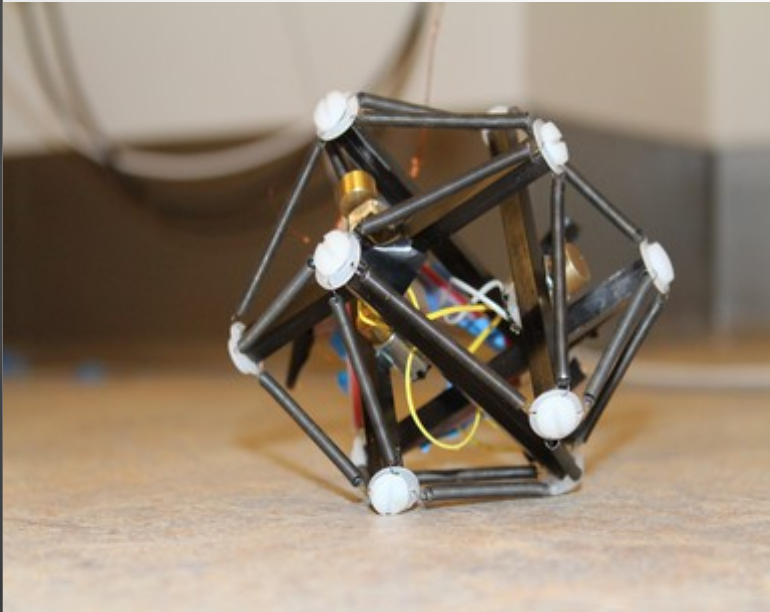
Electrical Engineering and Computer Science  
Union College '14

## Designing a Modular and Wireless Strut for a Tensegrity Robot and Analysis of Motion using a Closed Loop System

Advised by Prof Traver (Electrical Engineering) and Prof Rieffel (Computer Science)

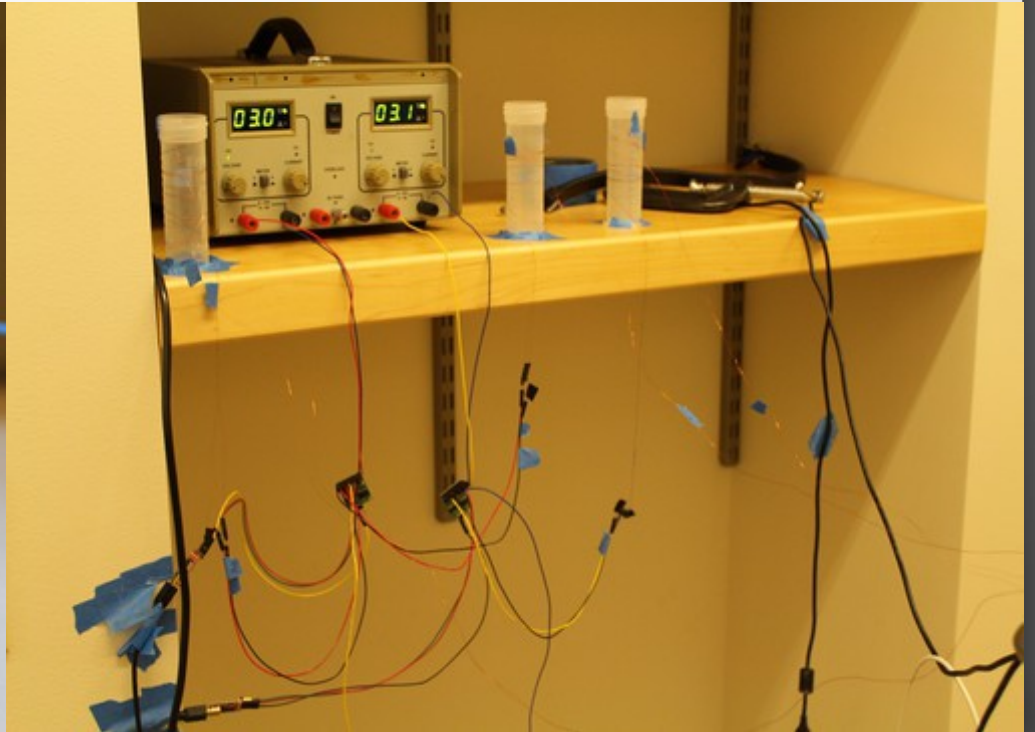
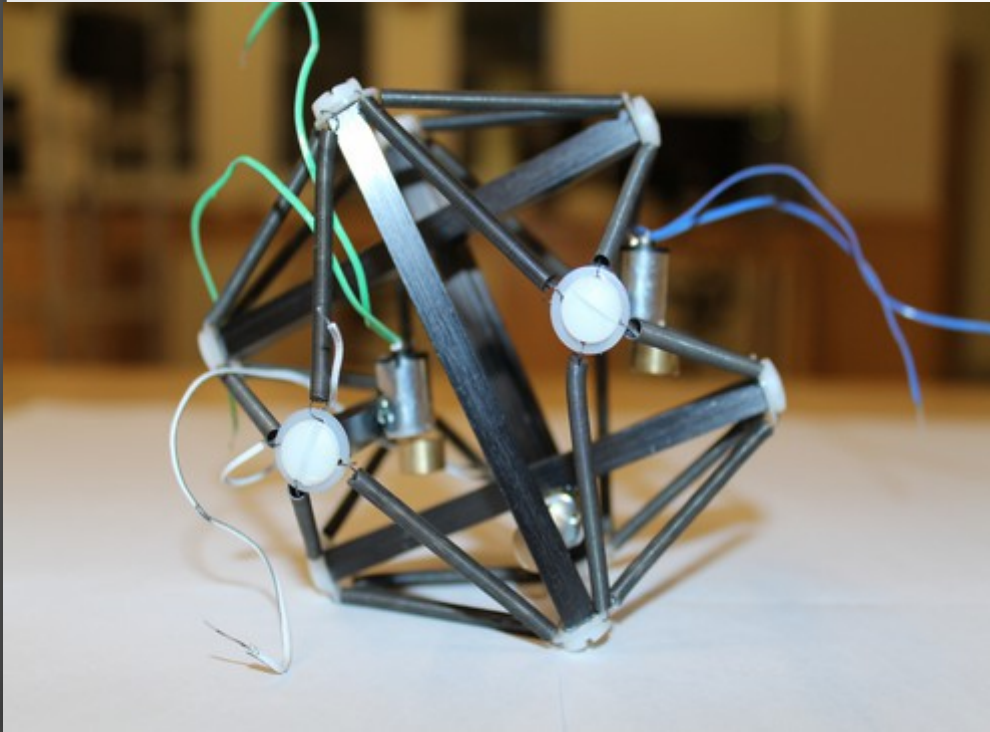
# Soft Robotics

- Why are soft robotics useful?
  - Can be used to reach places humans cant.



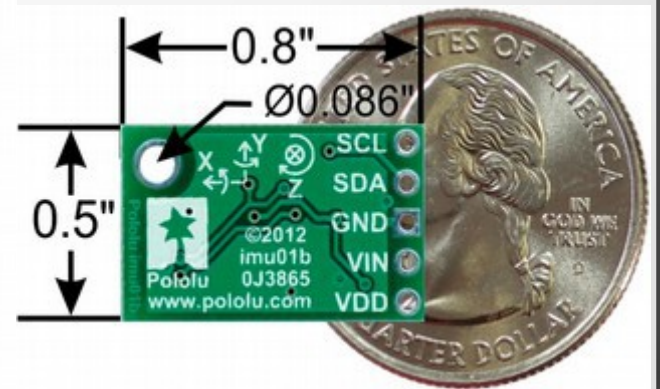
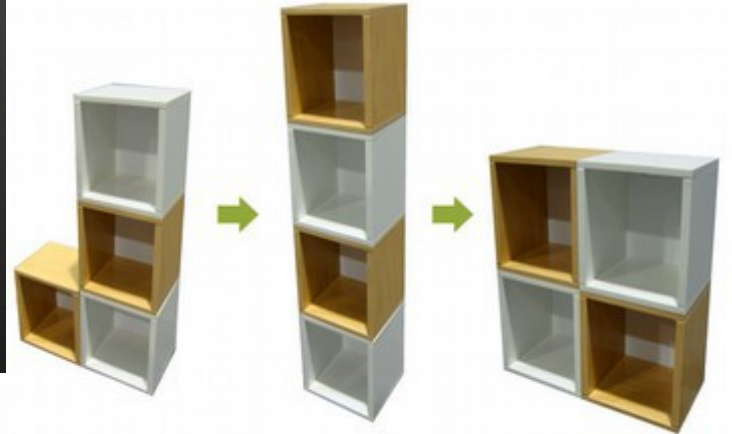
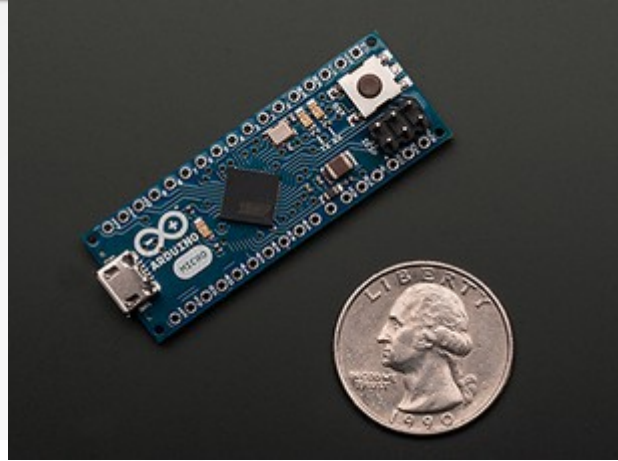
# Tensegrity Robots

- What is the problem?

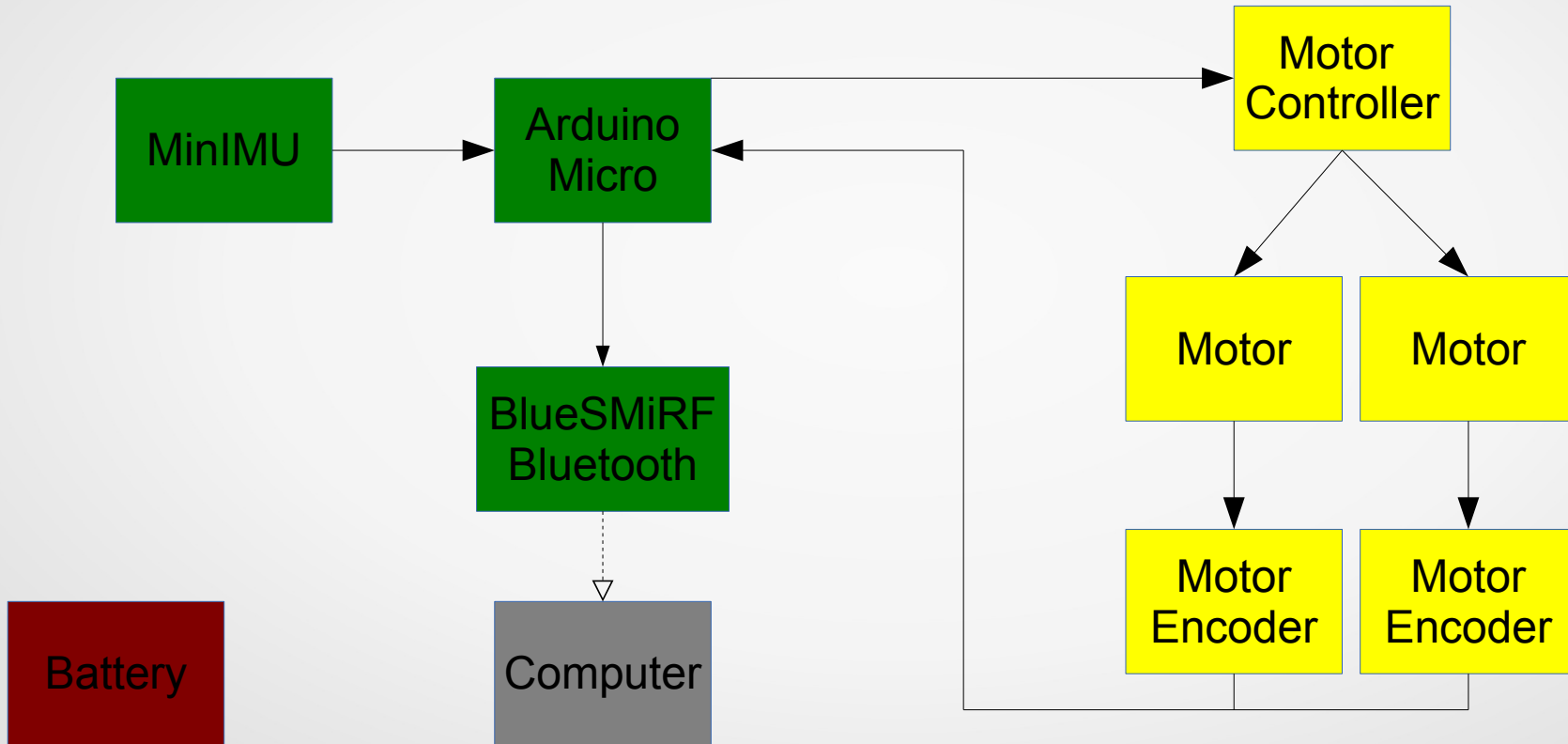


# Project Goals

- Modular
- Wireless
- Good Runtime
- Size



# Block Diagram



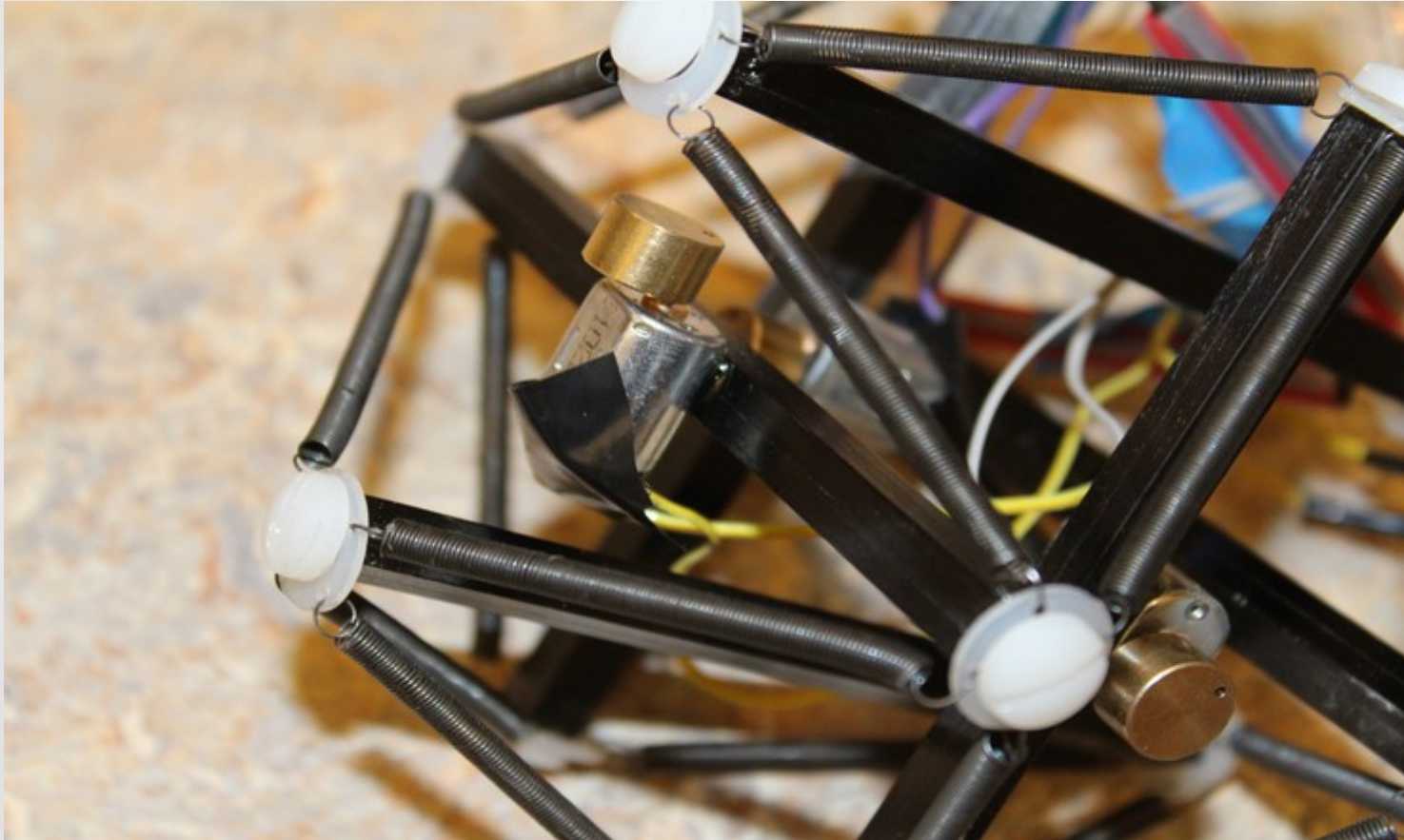
# Reaching Goals

- IEF Funding Obtained
- Sourcing low powered components
- Sourcing physically small components
- Sourcing low cost components
- Interfacing the components together.
- Developing the code to make it work.

# Testing the Design

- Successful Interfacing of all Components
- Runtime > 1 Hour/Charge
- Size < 150% of current model
- Working Hill Climber/Genetic Algorithm

# Questions?



Thanks!