



## **MEng Project Opportunity:**

### **Mechanical Engineering – *to develop mechanism for helicopter rescue cable testing***

Advanced Design Consulting is working on an exciting new project with the Navy Aviation Rescue Swimmers to replace the steel cables currently being used in their helicopter rescue hoists with synthetic ropes. Although using a synthetic rope in a hoist application has not previously been possible due to the behavior of synthetic rope under high tension spooling, recent technological developments made by ADC have opened up the door to this opportunity. However, developing a hoist system using synthetic rope creates a multidisciplinary design challenge that will require innovative engineering in uncharted territory. For this reason, ADC is looking to partner with MEng students at Cornell University who are interested in helping to develop this exciting new technology with important real world applications.

ADC is looking for an MEng student to develop a ***mechanism for testing*** the synthetic cable that will be used in the Navy helicopter rescue hoist system. Due to the importance of safety in the use of this rope and the high standards for naval aircraft components, ensuring the integrity of the synthetic rope is crucial to the success of the hoist system. The mechanism that is developed must be able to both test the strength of the rope and apply automated cyclic loading to determine the rope's fatigue characteristics. The system must be able to work with a wide range of ropes as many different samples will be developed and tested throughout the design process. If this opportunity interests you please contact Ms. Rebecca Schindler or Prof Phoenix (slp6@cornell.edu) for more information.

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