Altaeros Energies seeks an aerospace or mechanical engineering intern to develop a design methodology for ducted wind turbine rotors for use in its breakthrough Airborne Wind Turbine (AWT). The Altaeros AWT uses a helium-filled, inflatable shell adapted from proven aerospace technology to lift a wind turbine up to 600m in the air, harnessing winds over five times as strong as those that a tower can reach. The company recently completed and successfully tested a half scale prototype and is seeking to scale up to a commercial product.

The position will focus on developing a rotor design methodology for the optimization of ducted wind turbine rotor geometries. Ducted rotors produce peak power at a significantly lower rotor loading than traditional turbines operating in free stream, and thus a novel design approach is needed. One possible approach is to modify a traditional blade element/vortex method with a loading distribution suited to ducted turbines, in order to determine the appropriate chord and twist distributions. Once the basic methodology is established, the intern may investigate three-dimensional effects and the impact of local airfoil section design on robust performance.

The internship will start at the beginning of the summer and will last 10-12 weeks. The position will include both cash and equity compensation. Altaeros is particularly interested in meeting candidates that may wish to remain involved with the company after the internship ends.

Qualifications
- Junior, Senior, Graduate Student, or recent graduate in Aerospace or Mechanical Engineering or similar field
- Familiarity with aerodynamic principles and design
- Programming experience (Fortran preferred)
- Ability to work independently to achieve deliverables
- Passionate and fun attitude

Responsibilities/Activities
- Determine optimal rotor loading distribution in ducted wind turbines, incorporating radial velocity profile
- Develop basic rotor geometry development methodology
- Analyze three-dimensional effects and local airfoil section design
- Opportunity to take on short-term projects in other areas to learn about management of a startup company

About Altaeros Energies, Inc.
Altaeros Energies is an early-stage company working to bring the first airborne wind turbine to market. Altaeros turbines hold the potential to deliver cheap renewable energy to rural, island, and offshore sites that face high electricity costs. Founded in 2010 by MIT & Harvard alumni with a background in aerospace, energy, and industrial gases, Altaeros has received seed funding from private investors, the U.S. Department of Agriculture, the California Energy Commission, and the Maine Technology Institute. Altaeros Energies is located in the Greentown Labs incubator in Boston, MA.

If interested, please email your CV and a one paragraph statement of interest to Adam Rein at jobs@altaerosenergies.com.