# ASEN 5010 Homework Assignment No. 1

Due Date January 31, 2013

**READ CHAPTERS 1,2 & 3**

Note: if you don't attempt to solve a problem or sub-problem, then you'll be deducted the points you would have been given. Yes, it is possible to make negative points. For example, if a problem is worth 15 points, and you chose simply ignore it, then you'll receive -15 points for this part. If everything else is correct in the homework, you'll end up with a 70.

**Problem 1:** S&J, Problem 1.4, solve using Transport theorem and using rotating coordinate frames

**Problem 2:** S&J, Problem 1.12, solve using Transport theorem and using rotating coordinate frames

**Problem 3:** S&J, Problem 1.13, solve using Transport theorem and using rotating coordinate frames

**Problem 4:** S&J, Problem 1.14, solve using Transport theorem and using rotating coordinate frames

**Problem 5:** S&J, Problem 1.15, solve using Transport theorem and using rotating coordinate frames

**Problem 6:** S&J, Problem 3.1,

**Problem 7:** S&J, Problem 3.2,

**Problem 8:** S&J, Problem 3.5, solve this eigenvalue problem by hand and verify using a numerical program like Matlab or Mathematica

**Problem 9:** S&J, Problem 3.6,

**Problem 10:** S&J, Problem 3.7,

**Problem 11:** S&J, Problem 3.8,

**Problem 12:** S&J, Problem 3.9,

**Problem 13:** S&J, Problem 3.10,