## **CSCI 562**

## Closest Pairs Project (50 pts)

Due: September 15, 2010

This problem requires you to solve a simple geometric problem and write a program that implements your solution. You are not allowed to use the internet or consult any references. This is an individual project.

- 1. Problem Description: Available at http://uva.onlinejudge.org. You'll need to register. Then, click "Browse Problems", and go to "Programming Challenges (Skiena and Revilla)." The problem is listed under Chapter 14 and its title is "10245 The Closest Pair Problem."
- 2. Deliverables: Please submit a **hard copy** of all of the items requested below. Please don't send this by e-mail as I would have to print it out anyways. Please also submit an **executable file** to Blackboard's digital drop box.
  - (a) [10 pts]: Describe your algorithm in English or pseudocode and argue that it works correctly.
  - (b) [5 pts]: What is the time complexity of your algorithm?
  - (c) [5 pts]: Submit a print-out of your code. If you are unable to get your code to compile/run, please state this explicitly.
  - (d) [25 pts]: Submit your code/executable to Blackboard to be run on a set of inputs devised by the grader. Your code will be run on an Alamode lab machine.
  - (e) [5 pts]: Submit your code for robot judging and submit evidence that it ran successfully.