CS 886
Foundations of Social Computing
January 7, 2013
Introduction

• Kate Larson
  • Associate Professor, Computer Science
  • Member of the AI research group

• Research interests include
  • Multiagent systems
  • Game theoretic models
  • Group decision making
Introduction

• Focus of this course is social computation

• Research area at the intersection of computational systems and social systems

• Focuses on supporting computations that are being done by groups of people
This is not a new idea

- Clairaut 1758: computed Halley's comet orbit by dividing the numeric computations across three astronomers
- Maskelyne 1760: astronomical almanac with moon positions (for navigation). Two people did the calculations and one verified
- De Prony 1794: hired hairdressers to create logarithmic and trigometric tables
- ...
More recently: Online Labor Markets
Games with a Purpose
Q and A Forums
This Course

• We will focus on the analysis and design of social computing systems

• A particular interest will be incentives
  • How can we motivate people to participate and contribute
  • How can we aggregate information in meaningful and robust ways
Topics

- Crowdsourcing
  - Task routing, Workflow control, Structuring incentives,...
- Games with a Purpose
- Prediction Markets and Scoring Rules
- Peer Prediction and Reputation
- Social choice
- Social networks
Structure

• A few introductory lectures on relevant background material (4 lectures on game theory, mechanism design, social choice)

• Two invited speakers

• Seminar-based course covering recent research papers

• Student Expectations
  • Paper Presentations: 20%
  • Class Participation: 20%
  • Course Project: 60%
Course Project

• The goal of the project is to develop a deep understanding of a topic related to the course

• The topic is open
  • In depth literature review, theoretical work, empirical work, etc
  • Can relate it to your own research
  • If you have trouble coming up with a topic, come and talk to me

• Projects will be presented in class at the end of the semester
Paper Presentations

• Ideally two presentations per class
• 40 minutes total:
  • 20-25 minute presentation (conference presentation)
  • ~20 minutes to lead the discussion
• Presentations are peer-reviewed
  • After each class everyone will fill out a survey
  • Anonymized results will be given to the presenter
    • Be constructive in your feedback!
• Note: I decide the presentation grade, but will take into consideration the peer-reviews
Class Participation

• This is a seminar course: you must participate!

• Part of participating is being prepared to discuss the papers

• Each day of class, you need to submit reviews of both papers being presented by noon

• Forums on learn.uwaterloo.ca
Paper Reviews

Your short review should address the following questions:

- What is the main contribution?
- Is it important? Why or why not?
- What assumptions are being made?
- What applications could arise?
- How can it be extended?
- What was unclear?
- Did you find the paper interesting?
- ...

Wednesday, December 19, 2012
Other Info

• Class time: Mondays and Wednesday 2:30-3:50
• Class room: DC 3313
• Webpage: www.cs.uwaterloo.ca/~klarson/teaching/W13-886
• Office hours: By appointment