ORIE 7391: Faster: Algorithmic Ideas for Speeding Up Optimization

How to Give a Talk

Professor Udell

Operations Research and Information Engineering
Cornell

January 24, 2022

Outline

Course philosophy

philosophy:

- ▶ new ideas happen at the boundaries of fields
- ▶ new fields destroy old ones by making their techniques or problems obsolete
- ▶ to find opportunities for creative destruction, we must look across fields

Course philosophy

philosophy:

- ▶ new ideas happen at the boundaries of fields
- ▶ new fields destroy old ones by making their techniques or problems obsolete
- ▶ to find opportunities for creative destruction, we must look across fields

a balancing act. . .

- ▶ let's learn the fundamental math so we can use it
- ▶ let's learn the high level problems and properties of algorithms so we can chunk our knowledge

Topics

let's look at topics on google sheets:
https://docs.google.com/spreadsheets/d/
1dhp6D9WJpbvqckGtqw_cDgwzxyPobItjU8OZpkdjhWA

- ▶ what other topics should we add?
- ▶ by Wednesday, vote for 3 topics you'd be excited to (help) present

Outline

Grading

let's look at the course website:
https://github.com/udellgroup/orie7391/blob/master/README.md

- ► for PhD students, the grading is designed to help (not distract from) your research
- ► for UG/Masters, this course may push you hard…

Outline

Breakouts

- name, program, year
- (potential) research topic
- what's your favorite algorithm (or algorithmic trick)

Outline

Homework

▶ register (Cornell) or add email to signup tab on google doc (non-Cornell)
▶ sign up for slack (Cornell) or wait for invite (non-Cornell)
▶ mark 3 papers you'd like to present by Wednesday on paper selection google doc

Scheduling talks

- I'll assign (many) paper presentations this weekend
- students will upload their assigned paper to CMT
- students will bid on papers to review