

ORIE 7391: Faster: Algorithmic Ideas for Speeding Up Optimization

Introduction

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Outline

What topics and why?

Grading

Who's here?

Homework

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

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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_cDgwzxyPobItjU80ZpkdjhWA

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

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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...

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Breakouts

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

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- ▶ 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