<Introduction, TAs>

What is 357 about?

"Numerical methods"

- Numerical? → To do with numbers (in this case, lots of them.)
- Methods → Fun/interesting things to do (with numbers)

So... when do computers work on numbers?

→ All. The. Time.

Squiggles demo

What makes this worth studying?

- The answer is never right. → So how wrong is it?
  → Error analysis
- Computers are fast, but... → Example: 2000^2 linear system
  not that big!
  how long for 4000^2?
  → Efficiency, Complexity
- Inspiration for own work with numbers → two squiggles with different lengths?
  "no problem, I'll use piecewise polynomial interpolation"

Image compression demo

Stuff to mention

- books
  - what, price

- class webpage
  bit.ly/cs357-s14
  do not (yet) bookmark redir URLs
  wet paint → code subm. occasionally time out
  → no grade overview yet.

- instant message feature

- initial contact: linear algebra pre-quiz
  → please take before lecture 2
  → preliminary results
  → will discuss in lec 2

- usually, video + short graded quiz before each class
  posted by midnight the day before

- for lec 2, two things:
  - grading policies intro + quiz
  - starts *tonight* for Thu

- HW0, due next Tue (on web tonight)

- work due + exams generally on Tue

- more material: recordings, notes, demos, scribble PDFs

- Piazza
  - make sure to join
  - questions
    - answer each other
    - we'll answer, too — after a while
  - class announcements

- Python

  3

  Open Free cross-platform
  mature
  modular
  widely used

  numpy

- Virtual machine

Python demo

Numpy demo