L00CourseLogistics

January 21, 2017

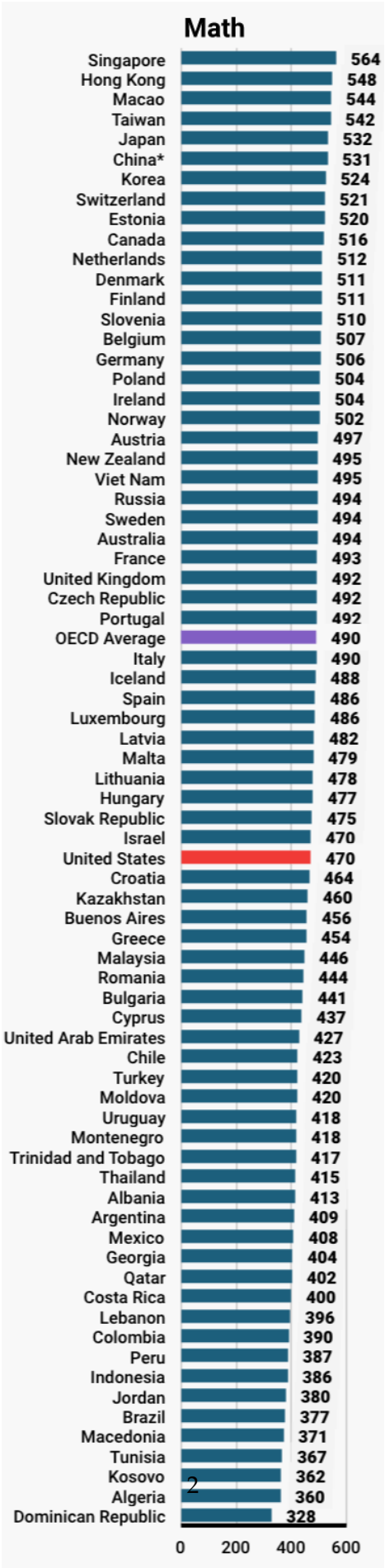
1 Welcome to CS131

Set up useful MathJax (Latex) macros. See http://docs.mathjax.org/en/latest/tex.html#defining-tex-macros Another useful extension is bbox. See doc.

Combinatoric Structures: "Mathematics for Computer Science"

Course goals: 1. Designing and writing mathematical proofs, 2. Mastering basic **discrete** math concepts for Computer Science

Students sometimes find this course *hard*. There is one simple explanation:


Math
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Korea 524
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Italy 490
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Latvia 482
Malta 479
Lithuania 478
Hungary 477
Slovak Republic 475
Israel 470
United States 470
Croatia 464
Kazakhstan 460
Buenos Aires 456
Greece 454
Malaysia 446
Romania 444
Bulgaria 441
Cyprus 437
United Arab Emirates 427
Chile 423
Turkey 420
Moldova 420
Uruguay 418
Montenegro 418
Trinidad and Tobago 417
Thailand 415
Albania 413
Argentina 409
Mexico 408
Georgia 404
Qatar 402
Costa Rica 400
Lebanon 396
Colombia 390
Peru 387
Indonesia 386
Jordan 380
Brazil 377
Macedonia 371
Tunisia 367
Kosovo 362
Algeria 360
Dominican Republic 328
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1.1 Logistics

- Professor Lorenzo Orecchia
- Email: orecchia@bu.edu
- Office: MCS 135D
- Office Hours: M11-12

- Teaching Fellow: Ms. Hannah Flynn
- Email: hmflynn@bu.edu
- Office Hours Location: CS Undegraduate Lab
- Office Hours: Th 2-3.30pm, TBD

  More TAs will be available for tutoring and office hours. Stay tuned

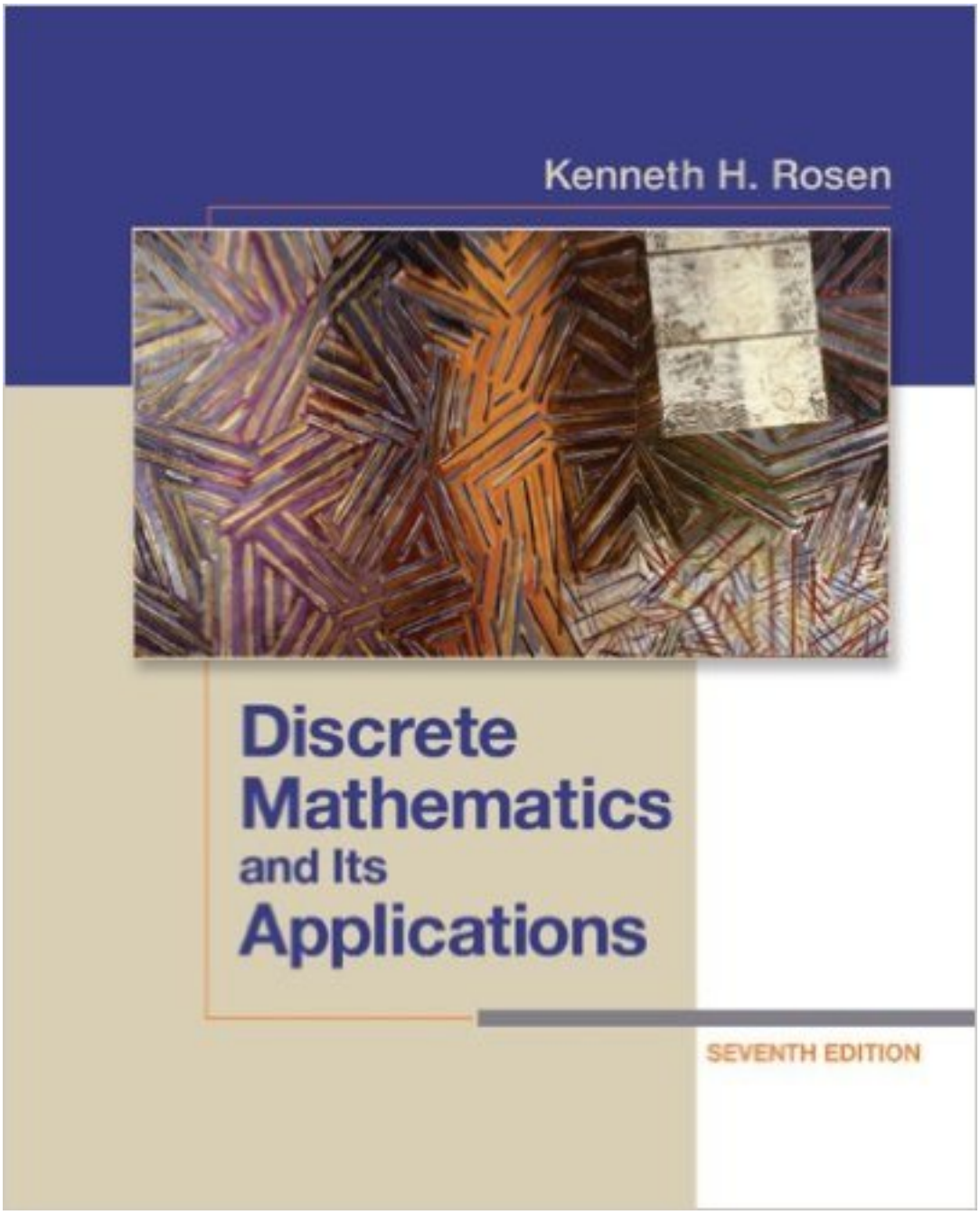
1.2 Important Webpages

- Course homepage: `http://cs-people.bu.edu/orecchia/cs131/course.html`
  - Summary of course policies, syllabus
- *Piazza* homepage: `https://piazza.com/bu/spring2017/cs131/home`
  - Used for **all** communications. Lecture notes and homework repository.
- *Blackboard* homepage: login to `learn.bu.edu`
  - Used for gradekeeping

1.3 Textbook

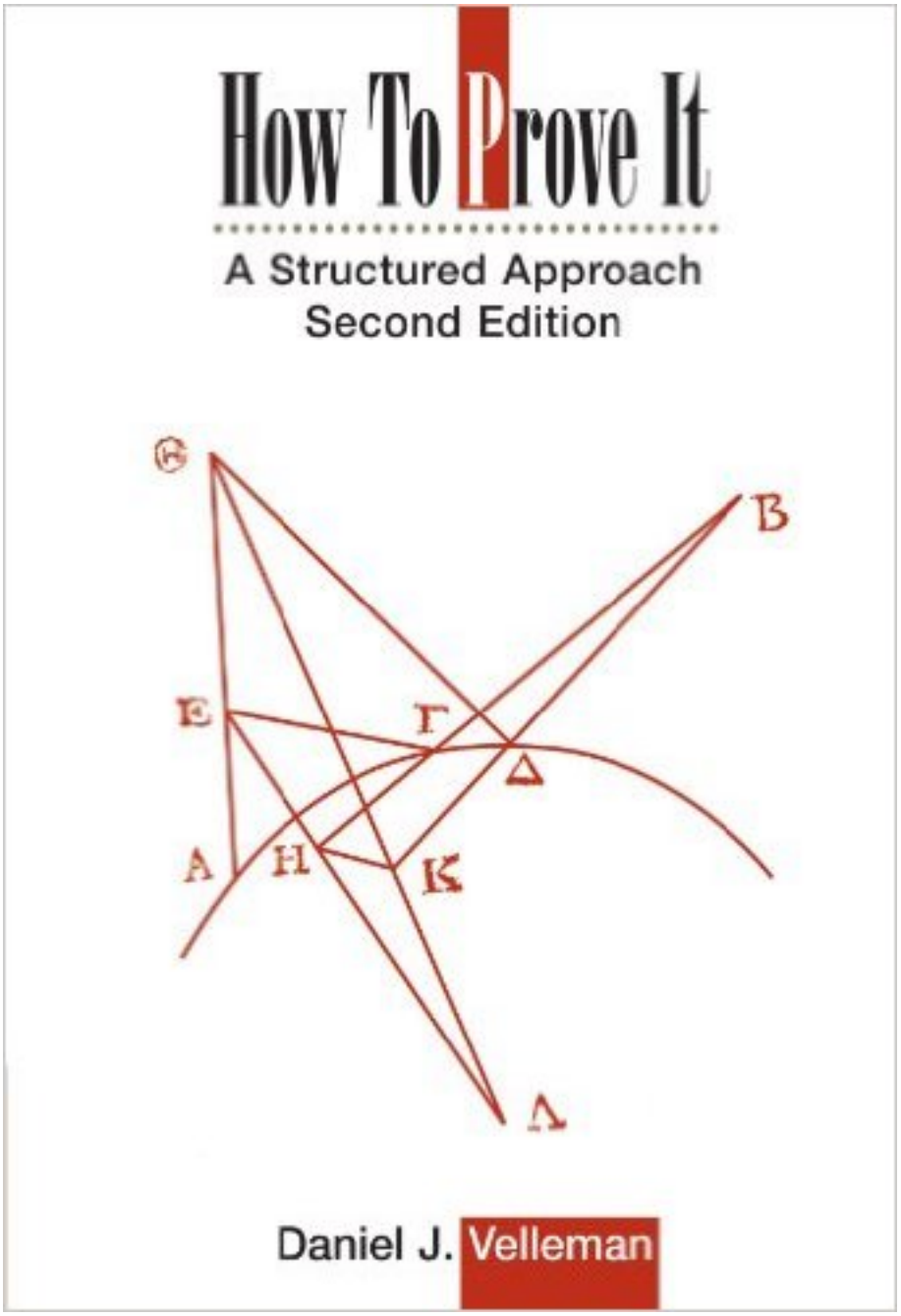
Required Textbook: `Discrete Mathematics and Its Applications (7th ed.)` by Kenneth Rosen

- A comprehensive reference with loads of exercises



Optional Textbook: `How To Prove It: A Structured Approach (2nd ed.)` by Daniel J. Velleman

- Recommended if you have no experience with mathematical proofs



1.4 Classwork

1.4.1 Homework

- Weekly assignments due on Thursday at noon in CS Homework dropbox on the first floor of MCS
- Graded homeworks will be returned on the shelves above the dropbox
- New homework will be out on Thursday night - a short one will be out tonight

- No homework on midterm weeks **NEW THIS YEAR**: `FERPA` does not allow us to leave identifiable graded material unattended. As a result, you will be assigned a *random number*, which will serve as your identifier for the rest of the class. > Mark your homeworks with this and only this identifier.

1.4.2 Two In-class Midterm Exams

- February 16
- March 23

1.4.3 Final Exam

- Scheduled by College; Date/Location TBA

1.4.4 Grading

- Problem sets: 20%
- Midterms: 40%
- Final exam: 35%
- Participation: 5%

FINAL GRADES: Is there a curve?

Answer: It's complicated… - All components are scored without a curve (absolute scores) - The total final score is turned into a letter grade by combining the relative score (i.e., curved) with a small contribution from the absolute score

To make life easier: I will strive to give you a *predicted letter grade* after each midterm exam, i.e., before the drop deadlines.

1.5 Course Help

- Labs:
  - Solve practice problems in groups
  - Get your questions answered by TF
- Tutoring hours:
  - We will have 1-2 UAs providing help. Times TBD.
- Piazza:
  - First place to get help from us and from your peers!

Who should I contact if I have a question about course material or administration?

1. Ask on Piazza if not private
2. Google it!
3. Ask UAs (only for course material)
4. Ask TF (course material **AND** administration)

(5). Of course, if nothing really works, you may ask me :)

1.6 Lecture in this class

1.6.1 Traditional lecture

- The instructor summarizes what you need to know.
- Readings are assigned, but may not actually be done!

Lecture: The process of transferring notes from the teacher to the student without passing through the minds of either.

1.6.2 Limitations of the traditional approach

- You get little or no immediate feedback
- In reality, little is actually learned from passive listening.
  - You need to actively engage with the material
- Homework provides active engagement, but ...
- After college, you'll need to continue learning on your own.
  - Should get good now at learning from a textbook.

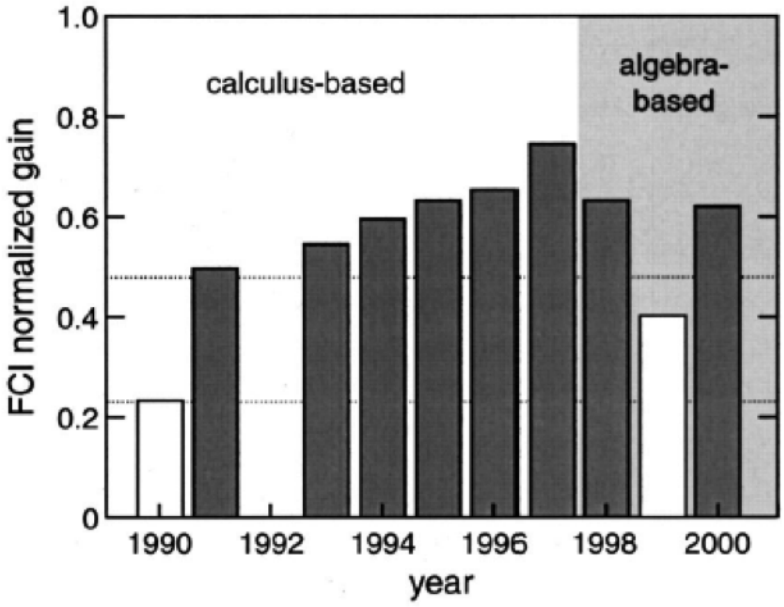
1.7 Benefits of Peer Instruction

- Based on an approach called *peer instruction*
  - Developed by Eric Mazur at Harvard
- Basic process:

1. Question posed (possibly after a short intro)
2. Solo vote (no discussion yet)
3. Small-group discussions (in teams of 3)
   - explain your thinking to each other
   - come to a consensus
4. Group vote
   - each person in the group enters the same answer
5. Class-wide discussion
   - Why is the correct answer correct?
   - Why are the wrong answers wrong?
   - Possibly some clarification by me

But the real reason is:

- It promotes increased learning.
  - Explaining concepts to others benefits you!



Crouch, C., Mazur, E. *Peer Instruction: Ten years of experience and results.*

1.8 Clickers

- For this to work, you need a TurningPoint license and a clicker or your smartphone.
  - I will post instructions on how to get set up on Piazza. You should have your clicker/license by next Tuesday.

1.9 End of Logistics

1.9.1 A task list for you

By Tuesday: [] If you do not have one already, get a TurningPoint clicker/clicker license from the bookstore. [] Set up your clicker or smartphone (I will post instructions on Piazza). [] Come to class ready to click!

By Thursday: [] Make sure you have access to required textbook. [[Complete Homework 0 (To be posted tonight).

And don't forget: [] Labs start on this Wednesday. Please attend the lab you have been assigned to. The rooms are small and close to capacity.