PS 1 Lessons
(Plus: Reading vs. Reviewing)

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CS 7001
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Networking Group Open House

- This Wednesday, 4-7 p.m.

- MiRC 102 (across from the entrance of CoC)

- Content
  - Summary of the networking research at GaTech
    - Meet the faculty
  - Presentation from Abhishek Kumar
  - Student posters

- Plenty of food and drink

Agenda

- Administrivia
  - PS 2 deadline extended two weeks
  - More time to come up with great ideas

- Today: Lessons and feedback from PS 1

- Reading vs. Reviewing
  - What goes in a review?
  - How to write for a reviewer?

Lessons on Reading

- What did you learn?

- Did you read/understand every paper?
  - What did you do about the ones you didn't understand?

- Did you re-read any papers? Why or why not?

- How did you divide the work?

- Suggestions for the assignment?

Lessons: Reading

Some Observations: Reading

- Impossible to read the entire proceedings
  - Important to identify good ideas quickly
  - Key: Division of work and help from colleagues

- Questions the writeups didn't always address
  - Is the problem being demonstrated real?
    - Where can you find out? Evidence?
  - Are the claims of the introduction backed up?
    - Is there an evaluation? How credible is it?
  - What is the context of the research?
    - Open new area/perspective
    - "Close the book" on a longstanding problem

Selection: Similar to Review Process

- If you divided the work of reading, shared notes on papers, and argued to consensus...
  - Program committees take a similar approach

- Consider the lessons when thinking about how to present your own research
  - Need to make the reader's job easier
    - People have limited time and patience
    - Your paper is being read late at night by someone who is interested in finishing the task quickly

Reading vs. Reviewing

Reading

- Primary goal: Knowledge transfer
  - Details needed for your own research
    - Front-to-back read is often required
  - Building the arsenal
    - Knowledge of related tools/techniques
    - Keeping up with what's "hot"
    - Knowing what problems are "solved"
- 80% - 90% of papers fall into the second category
  - 40 papers/conf/year * 5 years * 3 conf = 600 papers
  - Your thesis: 100 citations

Reviewing

- Goal: Determine whether the paper merits publication in the venue where it was submitted
  - Must consider appropriateness for venue/audience
  - Different venues have different standards, expectations
  - Often, a front-to-back read is required

- Secondary: Help the authors improve their paper
  - The end goal is not a binary decision
    - If you saw the paper a second time (in submission, or the final version), what needs to be fixed
  - Don't spend longer reviewing the paper than the authors did writing it

What a review should include

What a review should include

- A clear, concise summary of the paper
  - Signals to the authors that you read and understood the main point of the paper
  - If you didn't "get it", helps them understand why
- A clear recommendation
  - Accept, reject, borderline
- High-level, technical comments
- Detailed comments
  - Punctuation, spelling, unclear sentences, etc.
  - Don't go overboard if the paper is very bad

Lessons: Writing Your Own Papers

- Properties of the papers you selected?
  - Contributions clear?
  - Shortcomings acknowledged or addressed?
  - Thoughts on writing style?
    - Declarative or passive tone?

- Did you see approaches you wouldn't take?

Lessons for Writing
(More on this in Later Lecture)

From the Reviewer's Point of View

A Reviewer's Plea
by Mark Allman

I have just completed my first (maybe only!) stint on the program committee for ACM SIGCOMM's annual symposium. ... This experience was eye-opening in that I now realize that the community generates a large amount of **junk**.

And, I don't mean "junk" in the sense of bad ideas. In general, each paper I reviewed for SIGCOMM this year had at least a nugget of an interesting idea. I mean "junk" in the "it took me twice as long to read this as it should have" sense. In other words, the paper was sloppy.

I had a very difficult time trying to figure out what the paper was proposing or what theexperiments were really showing. The following is a short list of *easy* ways to improve your research papers.

Point #1: Spelling and Proofreading

- If you don't care about your paper, why should the reviewer?

- If you are sloppy with your text, what should the reviewer think about your experiments?

- "Sloppy papers indicate sloppy research"

- Your paper must be understood to be accepted
    - Note the difference from reading, here, where often you must understand a paper that's been accepted

Point #2: Background Material

- Consider the audience when presenting background material

- Don't waste time presenting concepts that 90% of readers are likely to know

- At the same time, your coverage of related work must be complete

  – Missing a paper in a major conference or a highly cited paper is not excusable

  – Make certain to cite related work by the PC :)

Point #3: Make It Easy on the Reviewer

- Design plots and diagrams for maximum information transfer
  - Future lecture on presenting information visually
  - Don't forget to label axes clearly, use units, etc., to make it clear what is being evaluated

- Clear, readable fonts and typography help

Suggestions for PS 2

- Perform a literature review to determine whether your problem/approach is important, new, etc.
  - We expect to see references

- Consider how you would *evaluate* your idea
  - Proofs/analysis
  - Simulation
  - Implementation/Real-world deployment