[Hanson99a] and [Jamin97b]: Reading Papers: a guide to survival

CSci551: Computer Networks
SP2006 Thursday Section
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What you're up against

- 44 papers
  - about 3 per class (!)
  - plus supplementary if you want :-)
- written for experts
- written for their time (not now)
- all having to show how cool they are
  - as opposed to a completely objective overview

What's on your side

- some overview in lectures
- papers carefully selected
  - when getting a new paper, think about *if* it's good
- read paper in two passes
  - get basic idea & skim paper
  - then read in depth
- think about *why* you're reading the paper
- takes on the content, or in margins
- ways to judge paper quality
  - can review the abstract to get an overview
  - look at the references
    - look for known strong researchers
    - where are they published (Sensys, Infocom, SIGCOMM, etc.)
  - look at who cites this paper, how often
- think about methodology
  - what data used, what statistics
  - do conclusions follow from the data
- is the problem interesting?
  - non-intuitive results (vs. more obvious or straightforward results)
- is the paper idea new
  - or is it just an execution of an old idea
  - or maybe neither…

What about reading *Critically*?

- reading them in depth, analyzing as you go
  - think about if the arguments are really correct or not
  - question what you read as you go
- think about what are the strong or weak points of the paper

What are my extra hints?

- Keep a *database* (bibliography) of all your papers
  - will save lots of time when *you* write a paper
  - will save lots of hair when you want to remember something you read once
- Keep *on-line copies* of all your papers
  - 12 years => 3.5 CD-ROMs

What to look for?

- *new idea*
  - really new? how do you know?
  - *related work & context*
- so you must know *the problem*
  - clearly stated?
- and *how to evaluate*
  - do their experiments back up their claims?
  - are their experiments statistically sound?

What kinds of papers?

- idea papers
  - better have good insight into something! implementable?
- systems building papers
  - is their system really new? solid? insight? lessons? alternatives?
- analysis papers
  - are their models clean? relevant?
- evaluation papers (traces or experiments of existing systems)
  - do they show insight into something new?

Practicing These Approaches

- you will all have to read these papers
- homework 1 (posted today) will look at exactly these things we just talked about

Into the fray

- Good luck!
- xxx