



## 2. How to Read a Paper

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Based on CCR Article by Keshav (Waterloo)



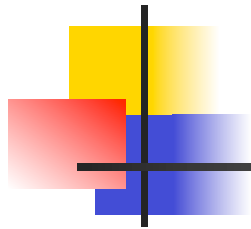
# Stand on the Shoulders of Giants

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And do not stand on their toes

You read other papers so that

- You are learning what papers are like
- You are current in the field
- You may be writing survey (literature review)
- You want to find what to compare with
- We propose a 3 pass reading approach



## Pass 1

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- Structural overview of paper
  - Read abstract/title/intro
  - Read section headings, ignore bodies
  - Read conclusions
  - Scan references noting ones you know



# Pass 1 output

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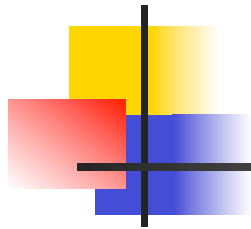
- You can now say
  - Is this a system, theory or simulation paper (category defines methodology)
    - Check system measurement methodology
    - Check expressiveness/fit for purpose of formalism
    - Check simulation assumptions
  - What other papers/projects relate to this?
  - Are the assumptions valid?
  - What are the key novel contributions
  - Is the paper clear?
- Takes about 5 minutes
- 95% of reviewers will stop at pass 1 :-(
  - See Section 3 of this (on writing papers)



## Pass 2

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- Check integrity of paper
  - Look at figures/diagrams/exes/definitions
  - Note unfamiliar references
  - Do not check proofs yet
- Takes around 1 hour
- You should be able to summarise the paper to someone else now
- If it is unclear, you may need to pasuse overnight



## Pass 3

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- Virtually re-implement the paper
  - Challenge all assumptions
  - Think adversarially about experiments, proofs, simulation scenarios
  - Takes 4-5 hours
- You should be able to reconstruct paper completely now



## Reading batches of papers

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- E.g. for literature survey exercise
  - pick topic (hot or cold), and search on google scholar or citeseer for 10 top papers
  - Find shared citations and repeated author names - key papers (look at citation count/ impact too)
  - Go to venues for these papers and look at other papers



## See also

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- Timothy Roscoe's
  - Writing reviews for Systems Conferences
- Writing Technical Articles
  - Henning Schulzrinne's