# CS697
# Reading and Reviewing Research Papers

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# Reading research papers?

## Outline

- Different Goals
- Comprehension
- Evaluation
- Synthesis

# Different Goals

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- experimental results
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## mine an area looking for research ideas

- for PhD students or researchers looking for new topics
- future work section is important
- introduction and background sections may also be helpful

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- new experimental method?
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- new methodology? new algorithm? new system?
- new experimental method?
- new proof technique? new formalism?

## substantiation of above claims
- what methodology? major theorems?
- what experiments? data analysis? bench marks?
- what's the conclusion?

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# Evaluation

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- artificial problems?
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## Are the contributions significant?

- worth reading?
- novelty?
- state of art?
- relations to existing literature?

## Claims valid?

- have the authors been cutting corners?
- right theorems? correct proof?
- experiment setup?

# Synthesis

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- alternative approaches to address the problem?
- a better way substantiate the claims?
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## Bottomline

- Can we do better? How?

# Reviewing Papers

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## Peer Reviewing (refereeing) is the quality control system for papers

- Why do it?
- Quality Control/What Makes a Good Paper
- Different Types of Research Papers
- Ethics
- Types of Reports
- What Goes into a Referee's Report

# Why do it?

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## Bad Things

- More Work

# Quality Control/What Makes a Good Paper

- Correctness
- Significance
- Innovation
- Interest
- Timeliness
- Succinctness
- Accessibility
- Elegance
- Readability
- Style
- Polish

# Different Types of Research Papers

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- Breakthrough
- Ground-breaking
- Progess
- Reprise
- Tinkering
- Debugging
- Survey

- Objectivity
- Fairness
- Speed
- Professionalism
- Confidentiality
- Honesty
- Courtesy

# Types of Reports

# Types of Reports

- Subject is Out of Scope
- The Results are Published Elsewhere
- The Problems are at the Level of a Graduate Student Exercise
- The Results are of Minor Significance
- The Paper Contains Major Errors
- The Paper is Boring
- The Paper has High Density per Unit Progress
- The Paper has Poor Exposition
  - Poor job of explaning results
  - Writing so bad it is unclear what the paper is on
- The Paper is Clearly Acceptable with a Few Minor Changes
- And the Rare: Perfect Paper

# What Goes into a Referee's Report

## What Does:

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## What Does:

## What Doesn't: