## How To Read A Scientific

Paper

ASTR 8500 Simran Kaur



#### What is a Scientific Paper?

· Descriptive information that lets Title, Author, readers search for an article. Abstract. Keywords · What is the context for this project? · How does it fit in with other Introduction WHY? research on the topic? What is the research question? · What did the author(s) do to answer the research question? Methods HOW? · What was the answer to the question? WHAT? Results · This is often shown in tables and figures. · What is the significance of this project? Discussion/ SO WHAT? · How does it fit in with what else is Conclusion known about the topic? · Materials the author(s) cited when writing this paper. References

#### **Graduate Students**

- Read abstract and conclusion
- Skim
- Take notes
- Highlight key points



## Dr. Nitya Kallivayalil

Big question: What you

want from paper?

General Idea
Or
Technical Part



# THE THREE – PASS APPROACH

Keshav et al.



1st Pass : Select

~15 mins

Abstract, Introduction, Conclusion

2nd Pass: Understand

 $\sim$ 2 hrs

Methods, Experiments, Discussion

3rd Pass: Implement

~2-3 days

Re-implement in your mind, code

#### 1.SKIM



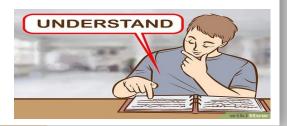
#### 2. RE- READ



#### 3. INTERPRET



#### 4. SUMMARIZE



## Summary

- Read abstract and conclusion to get a general idea of paper.
- Read the paper again and ask question to yourself (what problem is the study trying to solve).
- Read discussion and results, look for key issues and new findings.
- Take notes and highlight key points on the paper.

### Resources

- http://ccr.sigcomm.org/online/files/p83-keshavA.pdf
- https://www.elsevier.com/connect/infographic-how-to -read-a-scientific-paper#:~:text=Reading%20a%20scien tific%20paper%20should,tabs%20opened%20in%20yo ur%20browser.