

## Lecture 4

# Reading Literature

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UNIVERSITY OF AUCKLAND

COMPSCI 289

Prof. Robert Amor

# Learning Objectives

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- Learn an approach to reading research literature
  - Know what should be understood at each pass
- Know what types of information to identify in a paper

# Approaching an Article

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- How did you choose Assignment 1 paper?
- Do you read a paper from front to back?
- We'll look at the following approach:  
S. Keshav, "How to read a paper," *ACM SIGCOMM Computer Communication Review* 37, no. 3, 2007, pp. 83-84.

# A Three-Pass Approach (Keshav 2007)

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## 1. A quick scan

- Title, abstract and (perhaps) introduction
- Section headings
- Conclusions
- Decide if you need to continue reading the paper
  
- Can you answer the following:
  - Category – the type of paper
  - Context – papers it is related to, how was problem analysed
  - Correctness – do they have valid assumptions
  - Contributions – what are its main claims
  - Clarity – is it well put together

# A Three-Pass Approach (Keshav 2007)

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## 2. Reading majority of content

- Ignore technical detail such as proofs
- Examine figures and tables
- Make comments, note key points
- Note useful references
- Decide if you need to continue reading the paper

## 3. Fully read the paper

- Understand it enough you could re-implement the research
- What future work could there be?

# Authority and Currency of the Article

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- What are the author's qualifications?
  - What is the author's experience?
  - Is the author associated with a relevant organisation?
  - Why or how is the person considered an expert?
  - What other material has the author written about this topic?
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- What year was the item published?
  - Is there a more recent edition of this source?

# Relevance and Coverage

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- Who is the intended audience of this work?
  - Is it aimed at a specialised audience or a general one?
- Does the information use simplified terminology or specialised jargon?
- Does the source provide a balanced viewpoint?
- Is it opinion, fact or propaganda?
- Does it contain advertising? Of what type? Does any advertising appear to influence the content?

# Summarising and Contribution

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- How does the article relate to your topic?
- Abstract will provide a concise introduction to the paper (100-200 words)
- Conclusion will identify main outcomes
- What is the main argument or proposition of the article, often detailed in introduction



# Markup and Quotes

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- Underline and highlight points as you go
- Take notes
- Annotate article with queries, points you want to ensure are addressed
- Major claims stated by the authors, might make nice quotes for your summary
  - Though in most cases you'd paraphrase

# SOFTENG 701 Approach (Tempero 2016)

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1. What are the publication details?
2. What is a 1 sentence description of the paper?
3. What are the important concepts and ideas?
4. Are there other concepts you need to understand?
5. What are the claimed contributions?
6. How well is each claimed contribution supported?
7. What assumptions are made in respect to claims?
8. What are the threats to validity?
9. What future work might be based on the paper?
10. What important references should be followed up?
11. Are there other references that might be interesting?
12. Is there anything else of interest in the paper?
13. What other thoughts are sparked by the paper?
14. How is this paper relevant?

# Summary

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- A three pass approach allows decisions on applicability to be made without investing too much time
- Surveyed 14 different questions you can answer about a paper that you read

# Sources

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- K. Davies, "Research Methods," *CONS 7819 & CONS 7821*, Unitec, New Zealand, 2014.
- S. Keshav, "How to read a paper," *ACM SIGCOMM Computer Communication Review* 37, no. 3, 2007, pp. 83-84.
- Purdue, "OWL: Online Writing Lab," 2015, last accessed 26/3/2019, [https://owl.purdue.edu/owl/research\\_and\\_citation/conducting\\_research/evaluating\\_sources\\_of\\_information/index.html](https://owl.purdue.edu/owl/research_and_citation/conducting_research/evaluating_sources_of_information/index.html)
- E. Tempero, "SOFTENG 701: Reading Research Papers," University of Auckland, 2016, 2pp.
- WikiHow, "How to Summarize a Journal Article," 2015, last accessed 26/3/2019, <http://www.wikihow.com/Summarize-a-Journal-Article>