Related Work

CSE545 - Fall 2006
Introduction Computer and Network Security
Professor McDaniel
Related Work

• Q: What is the point of writing a related work section?
• A: To establish ....
  ‣ Need for work.
    • Why previous works don’t get it done ...
    • The limitations of past work ...
  ‣ Mastery over area.
    • Established bona fides ...
  ‣ Relationship to other scientific areas.
    • How relates to bodies of other works ...
  ‣ Others?
How?

• Common, *wrong*, way to write a paper.
  ‣ Algorithms a, b, c, and d. have been done.
    • A is good because of Blah, bad because of Duh.
    • B is good because of Blah’, bad because of Duh’.
    • C is good because of Blah”, bad because of Duh”.
    • .....  

• A laundry list with no *introspection* about field in which it exists.
Narrative

• Tell a story about the field in which it exists. It should try to organize the field in such a way as you can see how the work evolves from start to finish.

• Ideally, ends with the conclusion that the present work is needed.

• Example:
  
  ‣ (para 1) The early algorithms, A and B, sought to solve the requirements X, Y, and, Z by bit-twiddling. However such approaches eventually lead to blah and duh, to differing degrees.
  
  ‣ (para 2) C, D, and other also tried to solve the same problem, but failed ...
  
  ‣ (para 3) Ultimately, the authors were not attractive enough to solve the problem, so it was left to me.
Related work (summarized)

• A good related work section should include works …
  ‣ If they address the central problem
  ‣ If they address a related problem
  ‣ If they identified the problem
  ‣ If they use the same methodology for a similar problem
  ‣ If your work was inspired by them

• It should be a narrative about the field, its logical relatives, the problems it faces, advances and failures, and motivating articles.
  ‣ Show how the body of work holds together in some philosophical or technological way
  ‣ Demonstrate mastery of subject matter to establish credentials for paper (often a fatality if done wrong)
A related work section for your course project is due on 3/22

- Should cover 25-50 related works beyond just citation
- It should be at least 2 pages long, add figures if necessary and relevant (be legible)
- Writing style counts, so use good grammar (get readers)
- You need to make some critical assessments about what work is relevant and why.
- Assume I know nothing about the project and the area
- This should be ready for publication, so it better be perfect and exhaustive