

What is a literature review?

Gerald Recktenwald
ME 507, Fall 2009

Overview

- What is a Literature Review
- How to organize literature resources
- Tools and tricks

On the shoulders of giants

"We are like dwarfs on the shoulders of giants, so that we can see more than they, and things at a greater distance, not by virtue of any sharpness of sight on our part, or any physical distinction, but because we are carried high and raised up by their giant size."

attributed to Bernard of Chartres by John of Salisbury, Metalogicon, 1159
via Wikipedia on 9 October 2009

On the shoulders of giants

Robert Burton (1621), quoting Didacus Stella

"I say with Didacus Stella, a dwarf standing on the shoulders of a giant may see farther than a giant himself."

Isaac Newton (1676), in a letter to Robert Hooke

"If I have seen a little further it is by standing on the shoulders of Giants."

via Wikipedia on 9 October 2009

Intellectual relationships matter

- Significant work has an impact on others
- How do you communicate that work?
- How do you know it is significant?
- How do you relate your work to the work of others?

Show Respect and Knowledge

- Ethics of attribution
- Show your reader you have done your homework — establish your credibility

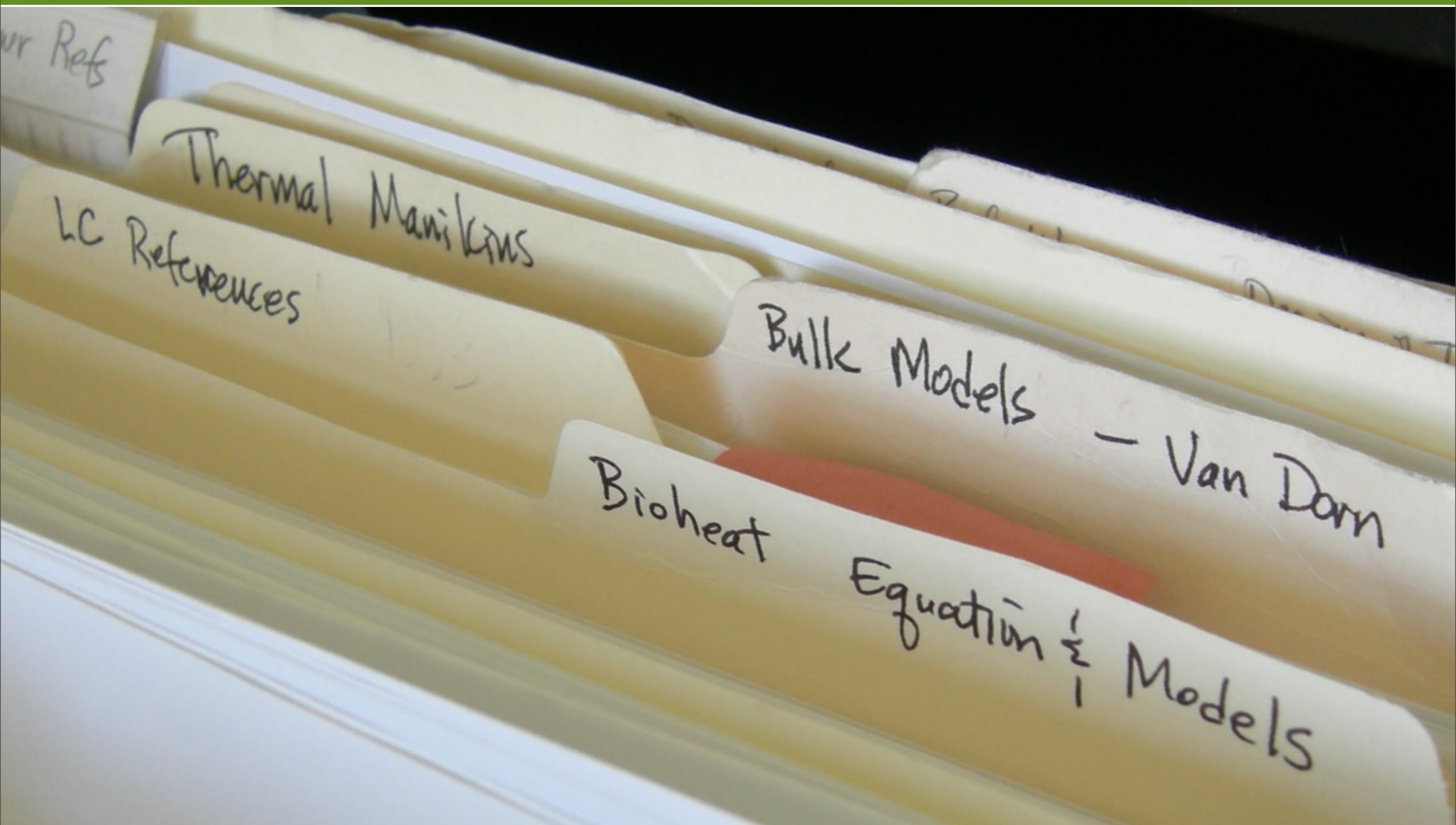
Identify the Gap

- Your work picks up where others leave off
- What is the opportunity for making a contribution?
- Why should we care?

Organizing your references

- Physical
- Topical relevance
- Narrative of the review

Physical Organization

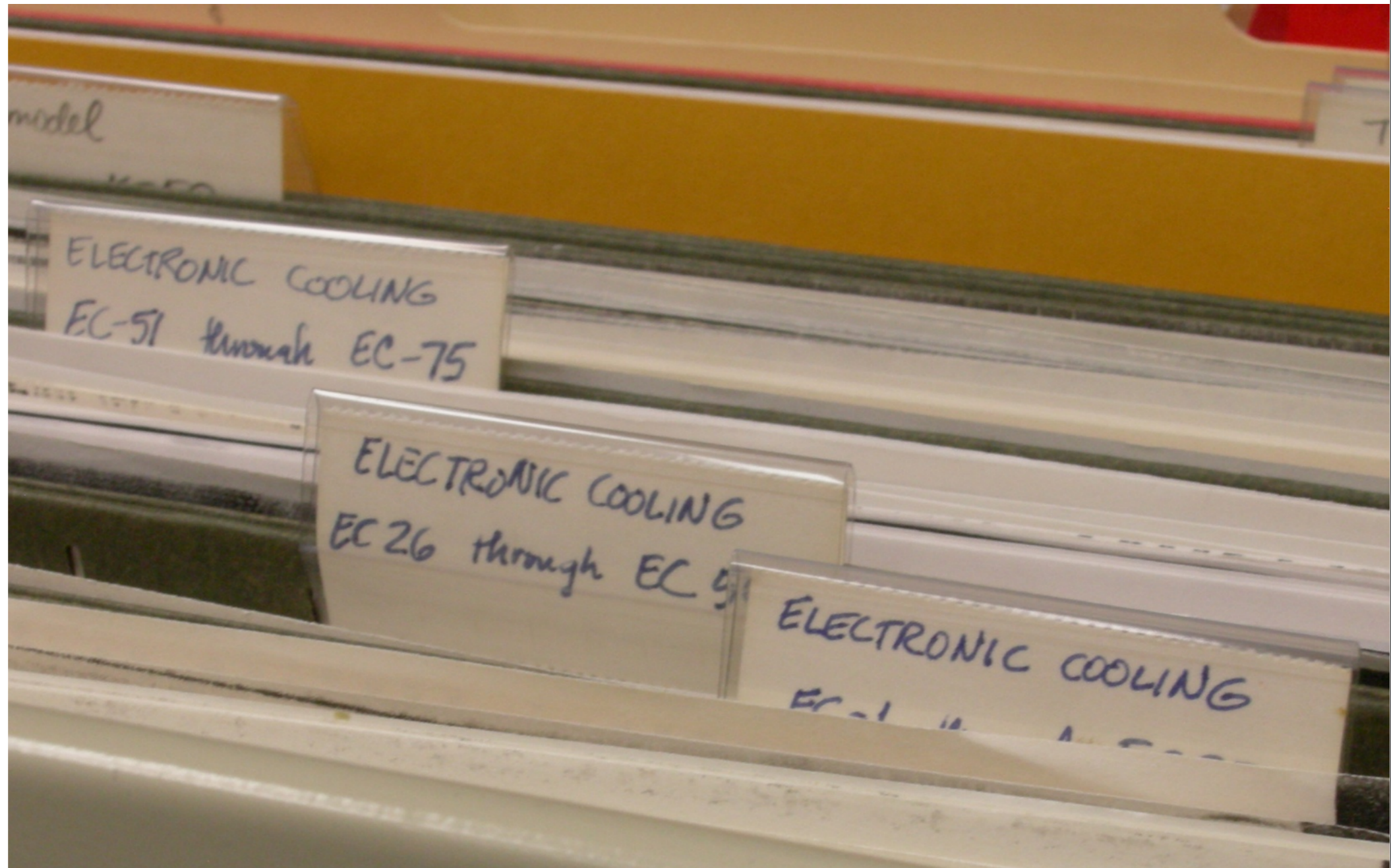


ME 507: What is a literature review?

Friday, October 16, 2009

Tags

Labels on individual papers: EC-01, EC-02, etc.



Electronic tags

- How to label files?
 - ▶ Reference: S. P. Beeby, M.J. Tudor, and N.M White, "Energy harvesting vibration sources for microsystems applications", 2006, Measurement Science and Technology, vol 17, p.R175--R195.
 - ▶ BeebyEtAl2006_EnergyHarvestingVibrationSources.pdf
- How to organize files on hard drive?
 - ▶ By date?
 - ▶ By topic?
- Work with your advisor

Software

- EndNote

http://www.endnoteweb.com/library.pdx.edu/citing_sources.html

- Refworks

<http://www.refworks.com/>

- BibTeX

<http://www.bibtex.org/>

- and many more

en.wikipedia.org/wiki/Comparison_of_reference_management_software

The Search: Work both Ends

- Find a good *current* reference
 - ▶ Read the references - Work backward
- Find a *classic* reference
 - ▶ Use google scholar or a citation index to find who cites this work - Work forward
- Regular visits to Journals
 - ▶ In the library: e-journals on home page
 - ▶ On the web

Writing a review

- In your thesis
 - ▶ Borrow an example from your advisor
 - ▶ Start now
 - * add paper summaries continuously
 - ▶ Reread papers
 - * understanding increases with your expertise
- As a stand alone paper
 - ▶ Example handed out in the seminar