Technical Communication

THESES, CONFERENCE AND JOURNAL ARTICLES (PART 2)

Journal (and Conference) Articles

- Needs to be a genuine contribution to knowledge
- To do this
  - Arguments have to be original
  - Results should be unexpected.
- Journal articles are generally more novel and more complete than conference articles.

Achieving originality

- Several ways to achieve originality / novelness.
  - Use title that states or implies major findings
  - State major finding in an informative abstract
  - State major finding in a purpose statement at end of introduction.
  - Cite a key visual aid early in your article.
  - Use informative section headings instead of traditional ones like “Results and Conclusions”

Judges

- Always need to address the expectations of the judges.

- Formatting
  - Can be found in a style guide
- Background work
  - Cite key articles
  - Make sure you are familiar with articles in the last several publication of that conference/journal.
- Results
  - What type results are normally shown in that community?
  - What type of results are convincing to that community?
  - What formatting is normally used?

Acknowledging Weaknesses

- All research has some “weakness”
  - Weakness does not mean your research is weak.
  - It means your research and solution has **limits**.
- Types of limits
  - Type of task you are solving
  - The performance of your method
    - how well you perform the task.
    - The speed of your method.
  - The feasibility of your method
  - The dependence of your method on another method.

Structure of Journal, Conference Articles

- Abstract
- Introduction
- Related Works (previous works)
- Method
- Results (Experiments)
- Discussion
- Conclusions (+future work)

Discussion Section

- In a crucial experiment, consider the following questions
  - Were your results expected? If not, why not?
  - What generalizations or claims are you making about your results?
  - How do your interpret these generalizations?
  - Do your results contradict or support other experimental results?

Discussion Section (con't)

- In a crucial experiment, consider the following questions
  - Do they suggest other observations or experiments which could be done to confirm, refute, or extend your results?
  - Do your results support or contradict existing theory?
  - Do your results suggest modifications or extensions needed to be made to existing theory? What are they?
  - Could your results lead to any practical applications? What are they?