A Brief Guide to Writing Papers

- …this is extremely ad hoc ☺

Lesson # 1

- Put yourself into the position of the reader!

Lesson # 2

- Motivate your problem
  - Why does it matter?
  - Why is it not solved yet?
  - What impact would a solution have?
  - What contribution did you make?

Lesson # 3

- Make the paper a pleasure to read

Reviewer Background Expertise

Reviewers are not familiar with your area:

- Problem motivation
- State of the art
- Background material
- Notation
- Significant application domains

Reviewers are Overworked

- Don't expect them to pay attention to details
- Don't expect them to read small fonts
- Motivate problem, explain why open, why interesting
- Present one idea, not two, three, ...
- Pick informative title
- A picture is worth 1000 words
- Be concise! Get to the point!
- Run a spell/grammar checker
- Use terminology consistently
- Define abbreviations, avoid them if possible
- Convince reader that experiments fit claims/problem
- Make sure the paper “flows”

Your Final Project Paper On-A-Slide

- Abstract (short is sweet!)
  - Problem, gap, approach, key results
- Introduction
  - Broad problem and impact
  - "scientific gap"
  - summary approach
  - key results
- Approach
  - Background tutorial (if necessary)
  - Your technical innovation (might be multiple pages/sections, with repeated reference to scientific gap)
- Results
  - Main questions that are being investigated in experiments, ref to gap possibly with main results highlighted
  - Data sets, simulator, implementation details
  - Empirical results (might be multiple pages)
- Related Work
  - Don't just say what's been done. Point out how prior work relates to yours and to the scientific gap you set forth in the intro.
- Summary/Discussions/Conclusion
  - Summary problem, approach, result, in past tense
  - Discuss open questions, promising research directions
- References