# Writing Papers in a 1-Page Nutshell

- Abstract (short, 100-200 words)
  - Problem description, main contribution of this paper, approach, key results
- Introduction
  - Why the problem is relevant
  - Scientific gap (what technical aspects have not yet been solved)
  - This paper contributions
  - Main intuitions and technical aspects of the approach
  - Key results
- Approach
  - Background tutorial (if necessary)
  - Paper contribution, could be a: technical innovation, practical application, comparative study of previous techniques, and so on… (It may have 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

# Lesson # 1
## Some key questions MUST be clear in the paper:

- What are the main motivations of the paper (in theoretical and/or practical terms)?
- What is the main problem that you want to solve?
- What is the proposed solution and the main elements that explain the success of the solution?
- What are the main results and contributions of the paper ?
- What are the future challenges?

# Lesson # 2

A good motivation in the Introduction is key to attract the interest of the reader

- **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

- ## It does NOT matter how you got there
  - "We tried A, it didn't work, then we tried B and it didn't work either, therefore we tried C and it works" (Just include a good explanation of C and forget about A and B)

- ## Document progress, not just achievement
  - "B works"   **X**
  - "B improves over A (current techniques) by X, which is important because of …" ✔

# Other Points to Consider:

- Don't expect the reader might pay attention to details
- Don't expect the reader can 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"