

Writing Tips / Checklist

1. Formal writing should not use contractions. Find and remove all contractions. (eg “don’t” becomes “do not”)
2. In creative writing you often want to vary your language to keep interest. In scientific language you do exactly the opposite. Define a small set of words to describe your work/problem, and then repeatedly use those words again and again. This gives clarity in meaning. (eg use either state or vertex or node, but don’t mix between the three. Sometimes you might distinguish between a state (which is unique) and nodes, which represent states, but might contain duplicates.)
3. In creative writing you might save a surprise for the end of an essay. In scientific writing there should be no surprises. Clearly describe and name all algorithms and contributions in the abstract and the introduction, and use the names consistently throughout the paper.
4. Avoid generic terms like “our algorithm” or “our approach”. When future authors want to refer to their work, it is much better for them to be able to name the exact approach being used, then to have to refer to the approach described in the whole paper. (Which also makes it hard to distinguish between different approaches described in the same paper.)
5. Paper titles should describe the work in the paper precisely. Generic titles should be avoided. (See this [awful example](#) for which I didn’t understand how bad the name was until later.)
6. Be sure to write your problem definition down clearly. (1) What is the input? (2) What is the output? (3) How is the quality of the output measured/evaluated?
7. Algorithmic papers work best when (1) they have pseudo-code and (2) worked examples that demonstrate how the pseudo-code runs on a specific problem instance.
8. Check all references to ensure they are complete and correct. This includes page numbers, and consistent naming of journals/conferences. (If one of my papers is missing page numbers in the bib reference, please look them up and send them to me.)
9. If you want to check if your writing is clear, I suggest reading the writing out loud, one sentence at a time. After each sentence, you can ask yourself if every word in the sentence was well-defined, consistent with past usage of the term, and if the overall meaning is clear. It is easy to skip over sentences/paragraphs that you are familiar with, and this forces you to read them carefully and check for clarity.

After acceptance and when preparing for publication:

10. Make sure that all funding sources are acknowledged in final paper versions.
11. Make sure all affiliations are properly acknowledged. (For Nathan: Amii and CIFAR AI Chair.)
12. List my name on papers as Nathan R. Sturtevant.