**CS590 Week 1**

**Different Types of Papers**

There are several kinds of publishable papers in CS.

* conference proceedings papers
* journal papers
* thesis (or a project write-up)

are the main examples.

**Conference papers**

If you belong to professional organizations, you will receive

calls for papers. Some conferences require you to be a member of its

organization. You can also look for conferences by visiting the organizations’ web pages.

As soon as you know what you are interested in, please become a member of the organization for that sub-field of CS.

At a conference, you will present your paper in front of other researchers.

Conferences are good ways of getting feedback from experts in your sub-field. You can also learn what others are doing by attending their presentations and reading their papers.

**What is a conference paper?**

Conference papers are short concise summaries of what you have completed so far. They can be about a completed project or an on-going project as long as you have some results to share with the readers.

Several papers on the same project can be published at conferences by reporting incremental results or by dividing a big project into multiple parts.

**How do publish a conference paper?**

* You submit a proposal or an actual paper given a strict length limitation.
* Reviewers decide whether to accept it or not.
* Most acceptance rates are 25% to 50% but some are more stringent than the others (e.g. 1/30).

**The reviewers look for:**

* relevance of the topic (fits the conference theme?)
* validity of the research
* impact it has on the field
* how well it is written
* The reviewers are supposed to be from the sub-field of your choice; however, this is not guaranteed.

**Upon acceptance**, the final formatted version must be produced.

Most conferences will give you the guideline that you must follow:

margins, font, spacing, title style, indentation, citation/reference formats, etc. The usual length is 5 to 10 pages if single-spaced single-column pages. But usually they are double-columned.

**Published papers** are included in proceedings (hard-copy / CDs / web sites.) You must register for the conference and indicate your commitment to do a presentation in order to be included in the proceedings.

**Other types of conference papers**

**Presentations and Posters:** For preliminary results, you can submit your work to a presentation session or a poster session to get feedback on your ideas. In a presentation session, no paper will be published. If it is a poster session, a short paper may be published in the conference proceedings.

**Opinion Papers:** Opinion papers are not about specific projects. They are for expressing your views on important topics, backed up by some research results. These are published in the conference proceedings.

**Workshops and Panel Sessions:** You can also propose and give a workshop on a topic of your expertise or organize a panel session of experts.

**Journal Papers**

The same organizations that host conferences usually publish journals.

Unlike conferences, you do not have a deadline to worry about.

You can submit a paper almost at any time.

Journal papers are usually much longer (approx. 30 pages or more).

You can include details of what you have completed.

**What is a journal paper?**

Journal papers are about completed projects (or their parts) with substantial results to share with the readers.

Therefore, it is a good idea to publish several conference papers and then combine them into a journal paper.

**How do publish a journal paper?**

* Submit a complete paper to the editor.
* Reviewers decide whether to accept it or not.
* Most acceptance rates are 1/3 to 1/5.
* The reviewers are supposed to be from the sub-field of your choice; however, this is not guaranteed.

**The reviewers look for:**

* relevance of the topic (fits the journal theme?)
* validity of the research and completeness of the project
* impact it has on the field
* how well it is written (this is stringent compared to conferences)

There will be many stages for reviews and edits. Sometimes, it takes a year before your work is published.

**Thesis / Dissertation**

A thesis is a document describing your graduate research work as a master's student.

**Later this semester, we will review the parts of a thesis and the stages you will have to go through for CS698 and CS699.**

For CSUSM, the general format guidelines are found at the graduate studies web site.

You will have to make an appointment with a librarian to make sure your thesis is formatted correctly.

The Computer Science Department currently does not have its own formant guidelines. Your advisor will tell you how to format your thesis.

A thesis is much longer than a journal paper. Some students have produced 150 pages or more.

This is a complete record of your work. Not a summary!!

If you wait until the end of the project to start writing one

* you would have lost a lot of details, and
* you will not have enough time.

Thus, you will have to complete each chapter as soon as you have enough information to do so.

It helps to have all of your committee members read each chapter as it is completed so that when the whole thing is done, everyone has accepted your thesis already.

For Projects (CS698), your advisor will decide what document to produce. However, if it involved any research, your document will look very much like a thesis.

**Dissertation** is for Ph.D. students. A dissertation is much longer than a thesis and the research project has to be new and substantial, making a great impact on a sub-field of CS.

**\*\*\* Any questions about different types of papers?**

**Usual Parts of a Research Paper**

Whether it is a conference paper or a journal paper, the sections

of your paper will be very similar for Computer Science.

**Title**

Make sure it reflects the accomplishments and contributions

e.g. Which one is better?

* Conflict Resolution Algorithm for Air Traffic Control
* Fast Conflict Resolution Algorithm for Air Traffic Control
* Fast and Reliable Conflict Resolution Algorithm for Air Traffic Control

**Authors**

List the authors and affiliation.

**Abstract**

A short summary of key points of your paper

* Usually about 100 words.
* Make sure it covers all key points and "sell" the unique accomplishments.
* Make sure it says what the paper will cover.
* Usually published in the conference schedule to attract people to your presentation.

E.g.

*AirRes is a fast, reliable.....*

*Unlike previous approaches, AirRes......*

*This paper will discuss \_\_\_ and concludes with \_\_\_\_*

**Now, the main parts of the paper.**

**The following are the usual sections and sub-sections.**

**Introduction**

What is this paper about? This is a longer version of the Abstract.

**Sub-section Background**

- Why is it important to do this research?

E.g. Current Air Traffic control systems rely on human beings to

make quick decisions...

**Sub-section Literature Review of similar projects**

- What has been done in this sub-field so far

- Short comings

- Good features or ideas you could borrow

**Research Design** (with your own section title REFLECTING your topic)

* + What did you conclude from the literature review?

i.e. specific goals of your research project

* + What is the main theory/ideas behind your research project to meet the goals?
  + What were the phases/stages in your project?

**Your Work** (your own section title REFLECTING your topic)

Based on your main theory:

* + Describe your algorithm/design in detail, and/or
  + Describe your system in detail.

There will be many sub-sections.

**Results (testing)** (your own section title REFLECTING your topic)

* + What did you do to validate your theory and/or test/evaluate your system?
  + What were the results? How do you interpret the results?

**Conclusion**

* Summarize your contributions.
* Briefly summarize things you could not accomplish as

**future research areas.**

**References**

All papers you have cited in your paper must be listed in the references section. It is very important to cite others’ works to avoid plagiarism and to help the reader find and read these works.

When do cite? Whenever you discuss someone else’s work. You do not give the full name of the article in the text of your paper but only cite it.

**Very important rule!** Do NOT copy someone else’s words verbatim. If you do, put the sentences in quotes and add a citation. The general rule is to paraphrase and summarize others’ words. But you do not want to misparaphrase. It will take a lot of practice to get this right.

See my notes on citations below.

(See pages 609 and 611 of the textbook.)

**IEEE Guidelines**

Now, we will turn our attention to the IEEE Guidelines.

(see separate file IEEEsample.pdf)

We will use IEEE Guidelines for HW1 but we want to make some changes to the citations and references.

There are two common citation systems used in CS. Both are in brackets.

**Number citation system**

E.g. Allen's algorithm [3] ........

Put a number inside [ ] in the order in which you cite papers.

**Name-Year System**

E.g. Allen's algorithm [Allen 1998] .....

Put the last name and year in [ ] (no comma).

For multiple authors, you can pick the first author’s last name.

**The Number-Year system facilitates editing your paper.**

**Thus, we will use this system in this class.**

**In the references**, list cited papers alphabetically by the citations.

E.g.

[Allen 1998] <....>

[Allen 2002] <....>

[Bork 2002] <....>

[Chien 1999] <....>

**What should be in <....>?**

* Authors names
* Article title
* Year
* Appears in what? (which conference proceeding? Which journal? Which book?)

Standard forms for books are on page 609 (need publisher and editors, too)

Standard forms for papers are on page 611

**However, each publisher (conference) has its own style guidelines.**

**HW1 Part 1 Conferences and Journals [12pts]**

**Pick a major sub-field of computer science and state it.[2]**

**Make sure it is the field you are very interested in.**

(e.g. database, networks, software engineering, AI, etc.)

Visit web sites (do a search) to find:

**Find three conferences [6]**

* their due dates and hosting organizations
* URL where you found the information
* what was the review process? Summarize.

**Find two journals [4]**

* their hosting organizations
* URL where you found the information

**Submission:**

* **Hard copy to be submitted to me on Week 2 Tuesday.**
* **Also email a soft copy to me and class mates at the same time before class.**

**HW1 Part 2 Paper Template [10pts]**

Let’s create a template for your conference paper.

You will need to fill this template starting Week 7.

**Format it** using the IEEEsample.pdf **except for** the citations and references (for these, use the Name Year style)

Put the title, author, “Abstract”, Section Titles, Sub-section Titles

that are found **in this lecture note**.

No content yet, but leave blank lines between Sections.

No need to have actual references but have templates there for different types of papers so that you can use them later to create actual entries.

i.e. edit the IEEEsample.pdf references.

**Submission:**

* **Hard copy to be submitted to me on Week 2 Tuesday.**