Conferences and Journals

for Dummies!

CSCI 8901:
Research & Evaluation Methods

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Conferences

Who has been to a conference?

What was it like?

AAAI

Prestigious conference in Artificial Intelligence
- Accepted ████████████ submissions (24%) in 2018
- About 2,000 attendees
- 8 page papers, double-blind submissions

OSDI

Prestigious conference in Operating Systems
- Accepted █████████ submissions (18%) in 2018
- About 600 attendees
- 12 page papers, double-blind submissions

AAAI

Prestigious conference in Artificial Intelligence
- Accepted 933 out of 3,800 submissions (24%) in 2018
- About 2,000 attendees, 8 parallel tracks
- 8 page papers, double-blind submissions, limit 10 per author

OSDI

Prestigious conference in Operating Systems
- Accepted 47 out of 257 submissions (18%) in 2018
- About 600 attendees, single track
- 12 page papers, double-blind submissions

Conference Timeline

Register abstract before deadline (optional)

Submit paper

Wait 2.5 months for reviews

Write rebuttal within ~3 days (optional)

Receive accept/reject 1 week later

Revise paper with shepherd (optional)

Submit Camera Ready paper 2 months later

Present at conference 1 month later

Conferences

What are the top 2-3 conferences in your field?
  - If you aren't sure, talk to your advisor and others in your lab!

How many papers typically get accepted?

What is the length of papers?

What organization runs the conference?

How big is the program committee?

Who is on the PC and Organizing Committee?

When is the deadline?

Blind?

Single blind: your name goes on paper, but you don't know who reviewed your paper

Double blind: both authors and reviewers are anonymous

Benefits?
- Tries to combat bias in reviewers
- Becoming the norm in many fields

Rolling Deadlines

In the past, conferences had one deadline per year

Rolling deadlines
- Multiple deadlines over course of the year
- VLDB was one of the early conferences to adopt this
- Mixes conference and journal submission styles

Goals:
- Shorter response time
- Don't have to wait for a specific deadline
- Encourage submission of polished papers when they are ready

Challenges:
- Spreads reviewing out over the full year, a lot of work for PC

Why go?

What are the benefits of attending a conference?

Why go?

What are the benefits of attending a conference?

- Presenting your work so they know about it and you
- Learning about other people's research
- Getting to speak to experts in the field
- Getting to speak to you peers
- Getting to help new students entering the field!
- Great time to think about new directions

Workshop + Conference

Workshops are mini conferences
- Shorter page limits
- Fewer attendees
- Less visibility
- Higher acceptance rates

Good way to get preliminary feedback on a paper

Can expand and submit to a conference later
- Will need more content! Avoid excessive copy/paste

Great excuse to attend a top conference!

Same story for Poster and Demo sessions!

Journals

Who has submitted to a journal?

What was it like?

ML Journals

Machine Learning

- Started in 1986, published by Springer
- Impact Factor: 1.47

Journal of Machine Learning Research

- Started in 2000, open access online
- 40 editors from ML quit to join JMLR
- Impact Factor: 2.45

Impact Factor

- Measures average citation rate

$$\text{IF}_y = \frac{\text{Citations}_{y-1} + \text{Citations}_{y-2}}{\text{Publications}_{y-1} + \text{Publications}_{y-2}}$$

Journal Timeline

Submit paper and cover letter

Wait 2 months for first round of reviews (3+)

- Reject
- Major Revision
- Minor Revision
- Accept

Revise and resubmit

Wait 2-3 months for second round

Complete final revisions

Transfer copyright, preprint appears online

Total time: 6-18 months

Special Issues

Some journals periodically have special issues narrowly focused on a specific topic

Pros/Cons:

- Usually has a shorter response time
- Specific deadline to target
- More likely to have a good match for reviewers
- Might have higher visibility than normal journal
- Might not have the opportunity to revise and resubmit

Why Submit?

More civilized review process than conferences
- Allows revisions and iteration with the help of reviewers
- Flexible deadlines open at any time

But… doesn't have the presentation like a conference
- May not gather as much attention

In most CS fields, journals are less competitive and less impactful than conferences
- You should always want your work to have maximum impact!

Conference + Journal

Write a great conference paper, then extend it and submit it to a journal

- Best of both worlds!

Can't just submit the same paper!

- This is "self-plagiarism"
- Typically need ~30% new content
- Must cite your prior paper and mention in cover letter

But, conference page lengths have grown and journals have not

- 12 page conference papers, 12-14 page journal papers

Public Speaking 1

Speak for ~2 minutes

Pick one of these topics:

- Describe a memorable vacation or trip
- Tell us about your early experiences using computers and doing computer science

I will record you!

- Don't worry, it won't go on youtube
- Homework: watch your own presentation and think about how you can improve upon it
- Due in 2 weeks

Reviewing

Have you helped review a paper?

Organizers

General Chair(s)
- Manage the overall conference logistics
- Other chairs: Local arrangements, Publicity, Publication, etc

Program Committee Chair(s)
- Manage the technical program
- Assign reviews and make final acceptance decisions
- Also possibly [Senior] Area Chairs if lots of reviewers

Program Committee Members
- Do the actual reviews

Paper Assignment

Coordinated by PC Chairs

1) PC Member Bidding

- Look at abstracts and score interest in each paper (-100 to 100)
- Might be divided by area first based on author selection

2) Automated Paper Matching

- PC members submit their own past papers
- ML algorithm classifies your papers and matches you to similar submitted papers
- Used at really big conferences in AI and Security

How many papers?

Number of reviews per PC member varies by field

AI/ML
- 6 papers per PC member
- 3-4 reviews per paper

Networks/Systems
- 10-20 papers per PC member
- 3-6 reviews per paper

Your area?

Scores

Scores will vary
- Not everyone reviews the same way
- Not everyone will see all papers

Most papers will get low scores
- Typically 1 (reject) to 5 (strong accept)

Leads organize discussion

Shepherds guide revisions
- Rare in some communities, but mandatory in others

Reviews	Leads	Shepherds	OveMer
27	3	1	8 8 5 4 2 2.41 ± 1.28
26	3	1	1 5 15 5 0 2.92 ± 0.74
25	3	1	1 12 8 4 0 2.60 ± 0.82
28	3	2	2 15 7 4 0 2.46 ± 0.84
18	2	1	3 5 2 7 1 2.89 ± 1.28
15			3 4 5 3 0 2.53 ± 1.06
16	2	1	5 6 3 2 0 2.12 ± 1.02
24	1	1	3 10 6 5 0 2.54 ± 0.98
13			7 2 2 2 0 1.92 ± 1.19
24	3	1	5 15 1 2 1 2.12 ± 0.99
26	3	2	5 5 4 12 0 2.88 ± 1.21
27	2	1	1 18 4 3 1 2.44 ± 0.89
25	2	1	1 17 4 2 1 2.00 ± 1.15
26	2	1	9 5 6 6 0 2.35 ± 1.20
27	4	2	8 6 2 8 3 2.70 ± 1.46

Scores

Scores of accepted papers at SomeConference

No paper is perfect!

Most accepted papers had at least one "weak reject"

In Person PC Meetings

Becoming more rare as conference / PC sizes grow

- Everyone sits in a room for 1-1.5 days and discusses all papers that weren't clear rejects. Social get together of the elite…

SomeConference

- 185 total submissions
- 3 reviews per submission in first round
- ~80 rejected
- 2 more reviews per submission in second round
- ~35 rejected
- 5 pre-accept
- ~50 discussed at PC meeting (10.5 hours + dinner)
- 27 accepted (32/185 total accepted)

Online PC Meetings

More common for larger and less prestigious conferences

- PC members add comments (never seen by authors)
- Some papers are obvious, others needs lots of discussion
- Typically ~1 week of active commenting

PC Chairs coordinate and encourage discussion

- Help decide final decisions based on reviews and comments

Project Proposals

Discuss your project proposals with 2 other students (at least 1 must be outside your research area)

- And come present your preferred project to me!

Speaker:

- Explain the problem and why it is important
- Explain the basic idea of your solution and what you will evaluate

Listener:

- Does the problem sound important? What context is missing?
- Can you understand the solution at a high level?
- Do you understand what is the System/Task/Environment?