Giving an effective research talk

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Toronto

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Plan

- Overview: different kinds of talks
- Some guiding principles
- Preparing your research talk
- Delivery: the culmination of your efforts

Some different kinds of math talks

- **Elevator pitch** : who are you, as a researcher?
- ***Research talk** : promote your mathematical result
- **Colloquium** :

> A colloquium is a talk in which:
> - the first 20 minutes are understandable to any mathematical audience,
> - the next 20 minutes are understandable to the specialists in the field, and
> - the last 20 minutes are not even understandable to the speaker. -Kumar Murty

- **Teaching** : student-focussed, detailed, well-paced
- **Public lecture** : engage a general audience and share a mathematical concept

From your experience…

What makes a talk effective?

What makes a talk bad?

Tell ’em what you’re going to tell ’em;
then tell ’em;
then tell ’em what you told ’em.

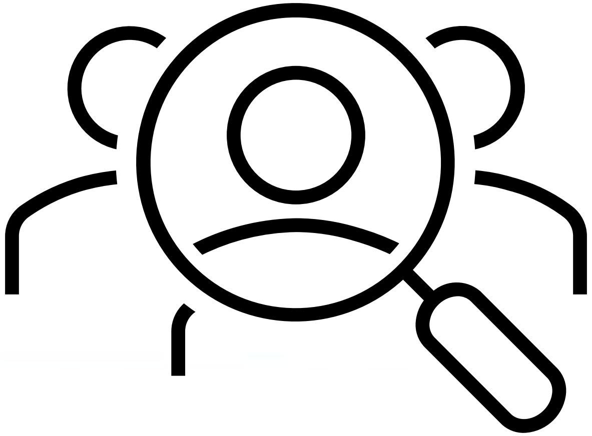
SOME GUIDING PRINCIPLES

1. You are telling a **story** :

❑ Hook	motivation
❑ Introduction	background, literature review
❑ Main plot	your results and applications
❑ Climax	
❑ Dénouement	your future work

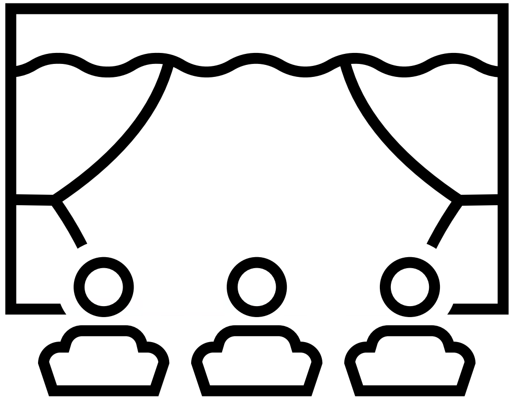
2. You are telling a story to your **audience** :

- Who are they?
- Why are they there?
- What will interest them?
- How can I be more inclusive?
- How do I show the audience my respect?



3. You are **telling** a story to your audience :

- It **is** a performance
- Face your audience and be responsive
- Planning is everything
- Practice your lines!
- Practice for time



SPECIFICS: PREPARATION

What is the value of a research talk?

The expected value of **giving** the talk:

- Promoting your research
- Getting feedback and suggestions on your work
- Connecting with potential new collaborators (or employers!)

The side benefits of **preparing** your talk:

- Discovering the narrative structure of your work
- Asking yourself questions “from the outside”
- Motivating you to get the best results

Overview: stages of preparation

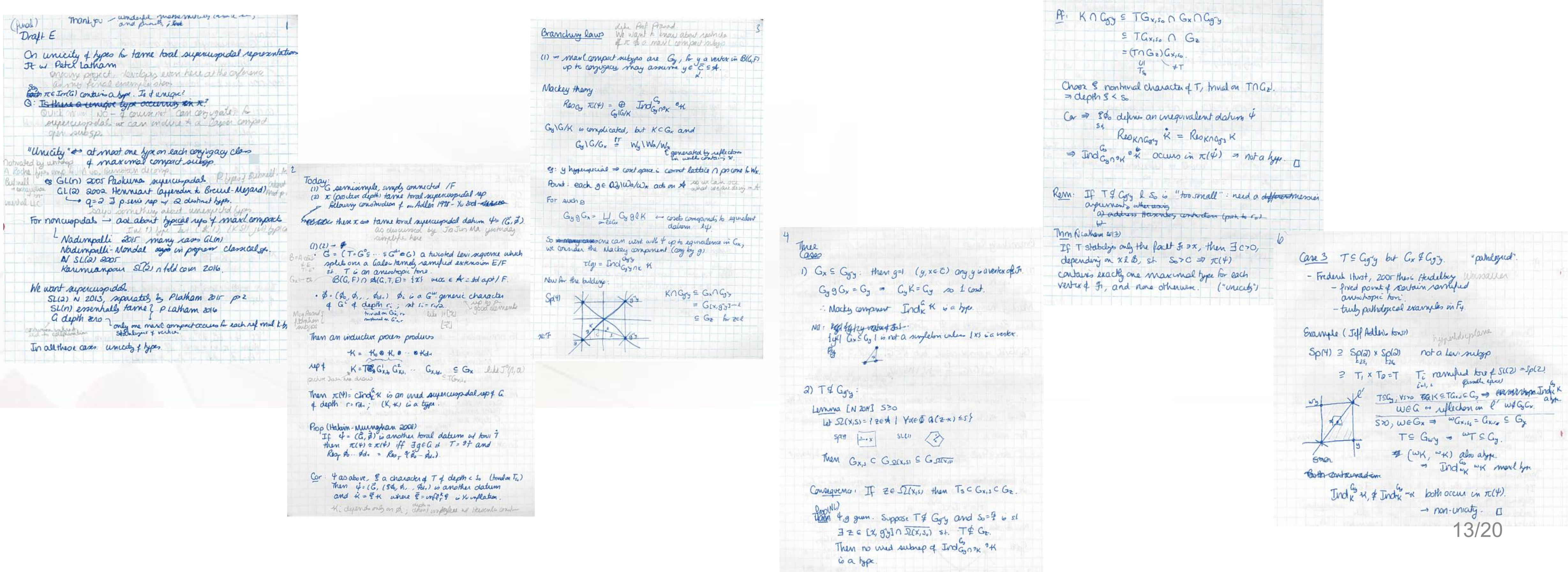
1. Stand up, pretend you are there, and start talking
2. Submit your title and abstract
3. Write out your draft from start to finish (missing details?)
4. Practice: find out what you need to cut
5. Create your slides / plan your blackboard layout
6. Practice!

Slide talks

- **Plan** slides by sketching boxes and filling them in :
  - ❑ One main idea per slide (new topic = new slide); ~7 lines
  - ❑ Minimize what audience needs to memorize
  - ❑ Points, not paragraphs; can an image help?
- **Cut** it down to fit the time. For me: 10 slides : ~ 20 minutes
- **Create** your slides (Beamer is great! Timing with \uncover, \only, \pause)
  - ❑ Write careful statements, check for precision (proofread!!)
  - ❑ Write out abbreviations first time used
  - ❑ Put slide numbers / progress bars

Chalk and tablet talks

- ❑ Plan your chalk/tablet talk by talking while writing!
- ❑ Visualize using the space:



SPECIFICS: DELIVERY

From your experience…

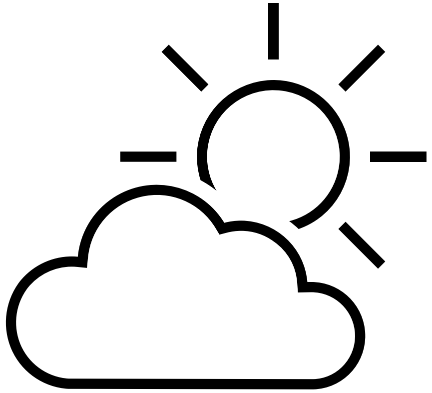
What's a good (bad) start?

Tip: memorize your introduction – it gets you rolling!

What's a good (bad) finish?

Finish on time!

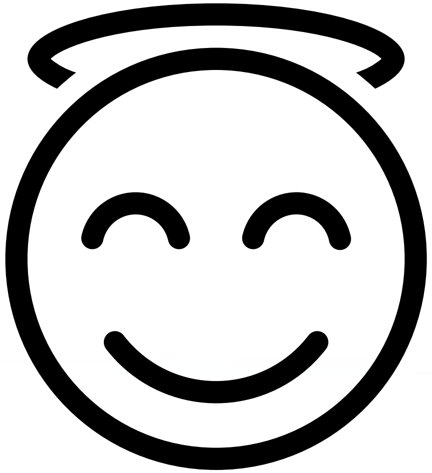
It’s the big day!



- ❑ Dress well!
- ❑ Be tidy, clean your glasses
- ❑ Think through the logistics (USB key? Zoom set-up?)
- ❑ Know what time your talk has to end, or set a timer
- ❑ Face the audience
- ❑ Start with your memorized introduction… and then off you go!

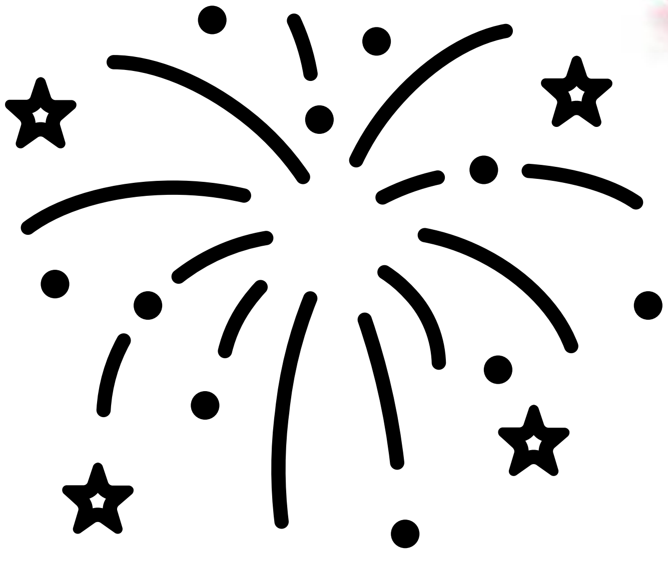
Delivery tips

- ❑ Speak clearly, and loudly enough
- ❑ Be professional and courteous
- ❑ Pause at the end of each slide; look around for questions
- ❑ Keep your toes pointed front!
- ❑ Validate questions
- ❑ Enjoy yourself!



After the talk

- ❑ Make notes!
  - Questions that were asked
  - What was the length?
  - What would you change next time?



- ❑ Follow up with interested people in your audience

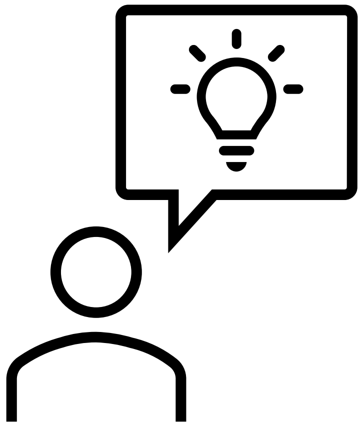
And most important:

- ❑ Write your paper!

SOME CONCLUSIONS

An effective presentation…

- ❑ Is well-organized
- ❑ Is targeted to the right audience
- ❑ Has been prepared well and practiced
- ❑ Is interesting to the speaker
- ❑ Shares a good story
- ❑ Leaves the audience with something to think about



More tips to share? mnevins@uottawa.ca