



Graduate Student Professional Development Seminar
“My conference abstract was accepted, now what?”
Publishing Your Work

*There is nothing to writing.
All you do is sit down at a typewriter and bleed.*

Ernest Hemingway

M.G. Lipsett
Department of Mechanical Engineering
University of Alberta
February 6, 2019
<http://www.mlipsett.com/teaching/>



Today We Will...

Discuss the process of writing a manuscript for a conference or a journal.

The importance of “writing as you go.”

How submissions are made.

Why peer review is good (and bad).

Some tips on making an effective presentation and for developing the illusion of confidence while speaking.



The Publishing Process

Scientific and engineering conferences and archival journals all have a similar publishing process. Specific ones will vary from this generic description, of course.

Conferences may have a two-part submission process, an abstract first, which, if accepted, leads to invitation for the full paper, or perhaps a poster.

Journals only accept submissions of complete manuscripts. The expectation is that the work is ready to publish.

3



Step Zero: Preparatory Writing

If you only remember one thing from these seminars, make it this:

“Write as you go”

Keep good notes and capture your ideas, progress, and understanding in well labeled electronic files throughout your thesis work. It is hard to remember even important ideas months after the fact.

Writing as you go will make producing your thesis, and manuscripts, MUCH MUCH easier (and faster too).

4



Step One: Planning

- Choose the publishing venue carefully
- Make sure that it is relevant and has the right audience for your work
- Be clear right up front about who is an author (or not), order of authorship, who writes the main manuscript, and who is corresponding author
- Have a schedule for writing
- Set clear expectations on tasks

5



Step Two: Find the Journal Website

Register as an author

Go to the author section of the site

Create a new submission

Use the style guide to create your manuscript

Submit on time (for a conference or a special issue)

6



Follow the Rules!!!

Submissions generally go into a review process

Reviewers get a lot of requests to examine manuscripts

The assessment of the manuscript will result in acceptance or rejection.

Make sure that the submission is appropriate for the venue

Make sure that the submission makes an original contribution and its importance (and limitations!) are described clearly

Make sure that the manuscript is ready. Sloppy, error-filled submissions are usually rejected, even if the actual work is good.

7



Avoid Conflicts of Interest

Authorship

Reviewer suggestions

8



Step Three: Submit the Manuscript

- Once the manuscript is ready (including all image content), create a submission, follow the directions, and upload the material, including the additional material required by the editors (copyright forms, reviewer suggestions, etc.)
- DO NOT expect the reviews to be done in two weeks
- It is okay after a reasonable amount of time to contact the editor to ask how the process is going.
- Some top journals can take a longgggg time.

9



Manuscript Submission & Revision Tips

Be courteous when responding to reviewer comments!

Take the comments seriously. Respond to them all (with input from your co-authors), even if the response simply clarifies why your work is correct.

The response should be a document that quotes each reviewer item in term that needs to be addressed, followed by the response.

Do not automatically assume that a request for additional work much be followed. If the work is complete, then a restriction of claims may be all that is needed to avoid that extra work. Usually minor edits are suggested that improve the writing. Learn from that.

Did I mention that you should be courteous?

10



Preparing a Great Presentation

For a conference, the knowledge dissemination generally includes an oral presentation or participating in a poster session.

Like all successful ventures, a good presentation or poster starts with preparation:

Have something to say

Prepare an outline

Don't try to say too much

Don't try to show too much

Check the flow of your ideas and to build confidence

- Practise your talk
- Have someone check your poster

11



Have Something to Say

This is not a problem

12



Have Something to Say

This is not a problem

You are smart

You have been thinking about your topic
obsessively

You will have an audience that wants to hear
your ideas

13



Prepare An Outline

But you still have to get your ideas across
clearly in a very short amount of time in your
talk (typically only 20 minutes!)

A poster does not have a lot of area either

An outline ensures that all of your KEY ideas get
enough attention in the talk and poster

The Powerpoint outline can be a good tool (but
the section and subsection headings of your
paper are probably better)

Check whether there are style requirements for
the conference and respect those.

14



Don't Try to Say Too Much

In a 20 minute talk, you can convey 3 ideas
That's it

Most people speak for at least two minutes per slide, so you should not have more than 15 slides total, unless you intentionally show some slides for only a few seconds to illustrate a point (this does not apply to professors)

Keep text to a minimum. Try not to have more than 5 bullet points per slide and if you can keep them to one core idea—that's better.

Most people will tend to read stuff on the slide and will not pay attention to what you're saying (see, you're doing that now, aren't you?)

Help the audience to break that habit by not dominating a slide with text

Check the font size and make sure that people can read it (can you read this?)

Have simple to follow notes to go along with your slides and major talking points. They should serve as a reminder, not something for you to read from.

Prepare more than you can speak to, but also be prepared to be cut short.

15



Don't Try to Show Too Much

Have the right visual material

- organizes the flow of information
- communicates information clearly
- focuses on most important information
- does not have useless clutter

Use a background that is not distracting

- This is important for your poster too

Less is more

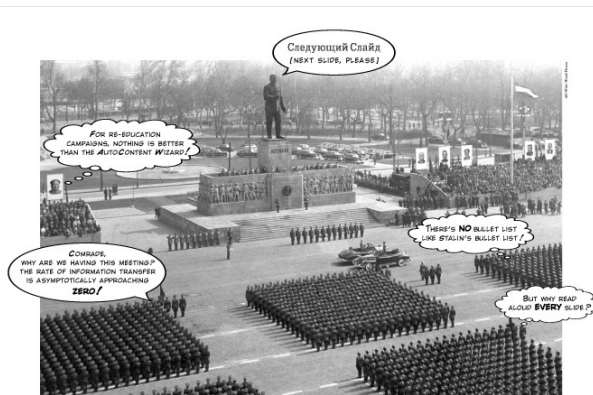
- a clean slide with the institution logo is usually enough, although a slide number can be helpful too

16



Powerpoint Mistakes to Avoid

Edward Tufte offers excellent suggestions on how to avoid the limitations of presentation software



Edward Tufte, *The Cognitive Style of PowerPoint*

<http://www.edwardtufte.com/tufte/powerpoint>

17



Too Much Text

Present information in context

- that is, what is important for decision making, not just showing a bunch of data

Use the slide space carefully, with a readable font, without cramming a huge amount of information onto a single slide

Do not rely on bullets, sub-bullets and so on

- even though this slide does

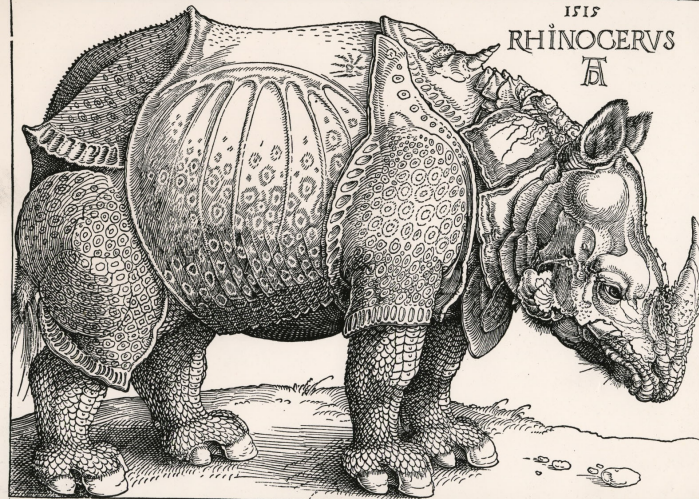
Your talk is a **story**, not a marketing pitch

18



Goofy Pictures

Et lach Choufue geyert. 1713. Jac. 28. / 1713. Sat man den grofsmocheigen König von Portugalt (Emmanuel) gen Lyon pachten auff Johis ein solich lebendg Thier. Das nemten sie Rhinoceros. Das ist byer mit aller seiner gefaltt über den rücken. Es hat an lach rote ein gepacktes Schildkröte. Und ist es diefen Schalen vberlegt fast ist. Und ist in der geöff alle der sechs über den rücken vber den rücken und fast noch auff. Es hat ein scharff hant. Soem von auff der nase. Das beynd es allg zu wegen wo es bey hantem ist. Das beyg Thier ist des sechs fast zu der hant. Der sechs hant es fast vber den rücken. In das Thier mit dem hant. In dem hant bey hantem part und vber den sechs hantem am pacht auff vli erdicht. In der mag er sich mit erwecken. Dann das Thier ist also gepackt das In der sechs hantem nichts tun thut. Die sagen auch das der Rhinoceros Schildkröte fast vber den sechs hantem.



19



Goofy Pictures (2)

Sometimes an image with a key word is all that you need on the slide

- IF IT IS THE RIGHT IMAGE

This is a powerful technique in marketing & sales, and for talks to a general audience

- but **not** for a design review presentation

Strive for multi-dimensional images that show the complex relationships within your work

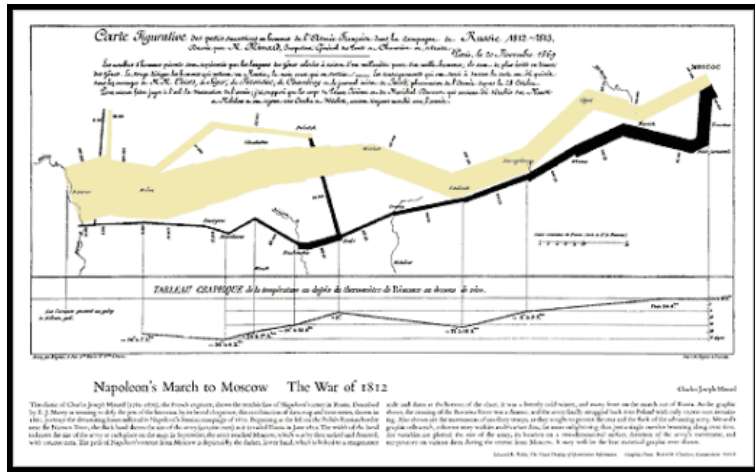
Use supporting visuals that give the same message through a visual medium

- some people will listen, some people will look, some will read, all should get the same message

20



Awesome Images Provide Multidimensional Context

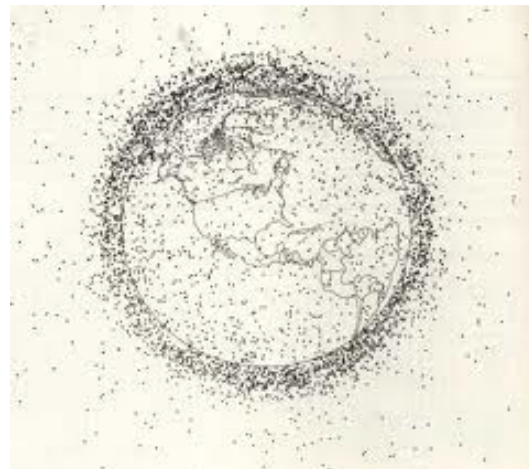


This map gives an impressive **six** dimensions of information about Napoleon's disastrous Moscow campaign during the War of 1812. www.edwardtufte.com

21



Awesome Images Provide Multidimensional Context (2)



This representation of the distribution of orbital space junk is instantly clear. www.edwardtufte.com

22

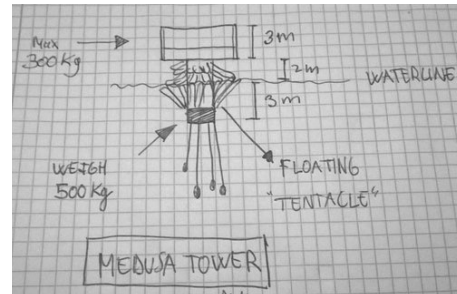
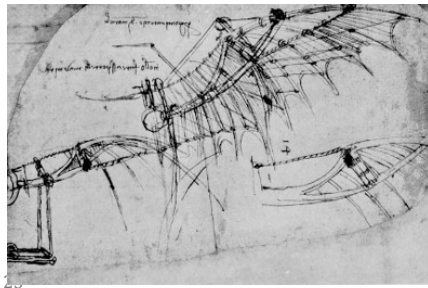
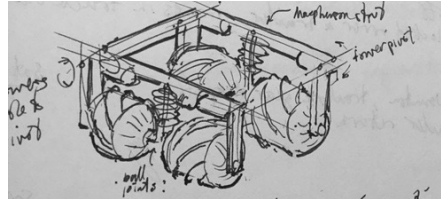


A Figure Needs to Be Complete

Show names of key parts/subsystems *on the figure*

Show how it works

Show loading conditions
or other system stressors



Give the Data!

If you show an analysis, provide enough detail that the audience member can understand

For analytical solutions, show the governing equation and what the variable symbols mean

For numerical solution, explain the choice of method and how it was applied

- for example, in FEA, show boundary conditions & loading, explain element type (& why selected), how mesh was refined, and highlight key result (factor of safety)

For experiments, show all the data, or at least error bars

Give a graphical representation of results, clearly showing the range (and a readable scale of what the colours mean)

Explain *verbally* the key aspects of the analysis that ensures your design avoids some failure mode



Animations of Design Functionality

Animation is *highly effective* to show:

- motion of an apparatus as it operates
- dynamics of your system of interest
- a key feature of data put into context using zooming

25



Animations of Design Functionality

Animation is *highly effective* to show:

- motion of an apparatus as it operates
- dynamics of your system of interest
- a key feature of data put into context using zooming

Animation is ***not*** effective when it distracts the audience

- panning over an assembly
- zooming in and out for no purpose
- video of people conducting an activity, unless it is strictly relevant to the slide content

26



Phluff

“Information-free” clutter is distracting :

- irrelevant clip art and photos
- 3D funky text boxes
- swooshing animations of your title blocks and text

Avoid it

27



Phluff

“Information-free” clutter is distracting :

- irrelevant clip art and photos
- 3D funky text boxes
- swooshing animations of your title blocks and text

Avoid it

Please

28



Phluff

“Information-free” clutter is distracting :

- irrelevant clip art and photos
- 3D funky text boxes
- swooshing animations of your title blocks and text

Avoid it

Please

For the love of humanity

29



The Value of a Handout

- Remember that you will say much more than you convey on the slide deck
- A handout (or a hard copy of your conference paper) is an excellent way to give an audience member “the rest of the story”
- This is also very effective when you are presenting a poster at a booth.

30



A Few Presentation Tips

If you do not have a lot of experience at public speaking, practice in front of a mirror, or video yourself (the camera doesn't lie – ouch!)

Better yet, practice your presentation to friendly peers (your team mates, your peers), and ask for their constructive criticism

Have someone check the slidez four spelin errors

Consider using automatic slide timing

Practice techniques to reduce nervousness (e.g. imagining everyone in the audience wearing ridiculous clothing)

31



Tips When Presenting as a Team

When there is a team of presenters, preparation and practice is even more important

Typically this is not done at conferences – this slide is for other situations

Introduce yourselves in the order of speaking

Transitions between speakers must be smooth

—“Um, now over to Joe...”

Try to practice in the room in which you will speak

Avoid moving around the podium too much

Your clothing should not be noticeable, other than telling the audience that you are professionals

- Please don't wear a cringe-worthy matched set of outfits

32



A Few More Tips

Get a good night's sleep the night before

Wear appropriate clothing

- dress up one notch above the audience
- wear clothes that won't show that you're sweating!

Drink some water before your talk

Memorize the first sentence of your talk. That way, you are guaranteed to get a good start

If you must refer to notes, that is okay. Just try not to read your notes exclusively.

Do NOT read your slides!!

33



And A Few More Tips

Try to speak a bit more slowly than normal conversational pace

If you can, look at and talk to individuals

Use your hands for emphasis (but not too much)

- It's amazing how much this engages the audience

Think before you speak & pause after a key point

- give the audience time to catch up

If you start to feel stressed, take a moment to breathe, and visualize a positive outcome

Use a little humour

- it is powerful, if used sparingly and carefully

Try to give a strong final sentence to finish well

34



And One More

Have an updated presentation
of your topic

Including work to date

That way when your supervisor asks you to present to
the research group, or to a visitor, you will be ready!

(It is also a good way to remind yourself that you are
actually making progress)

(Thanks to Prof Andrew Martin for this suggestion)

35



Expectations

Dress for success!

Be ready to present!

Show up for the other presentations!

When you are at a conference, be an active participant:

- Go to all the sessions!
- Ask a question!
- Explain your poster!
- Do some networking!
- It might lead to the next stage of your career!

36



Summary

- Publication is critical to expose our ideas to critique and to archive the knowledge that we create
- Choose publishing venues carefully.
- Be clear right up front about who is an author (or not), order of authorship, who writes the main manuscript, and who is corresponding author
- Have a schedule for writing
- Set clear expectations on tasks
- Follow the rules for the journal (or conference)
- Peer review can be harsh. Don't lose sleep over a poor review.
- Presentations are difficult. Like any skill, it improves with practice.
- This presentation is available online at <http://www.mlipsett.com/teaching/>