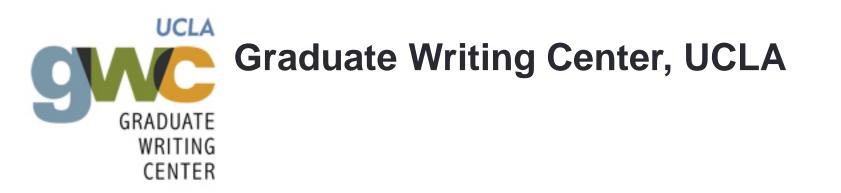
PREPARING A CONFERENCE POSTER IN THE SCIENCES





Outline

- Writing the abstract
- What goes into a poster presentation?
- Format of a poster
- Presenting a poster



WRITING THE ABSTRACT



Types of abstracts

Informative/heading

- Condenses the paper
- Most journal articles

Indicative/descriptive



- Table of contents or a road map
- Reviews, conference reports, etc.

A good abstract will help your poster be selected and ensure interested people will show up!



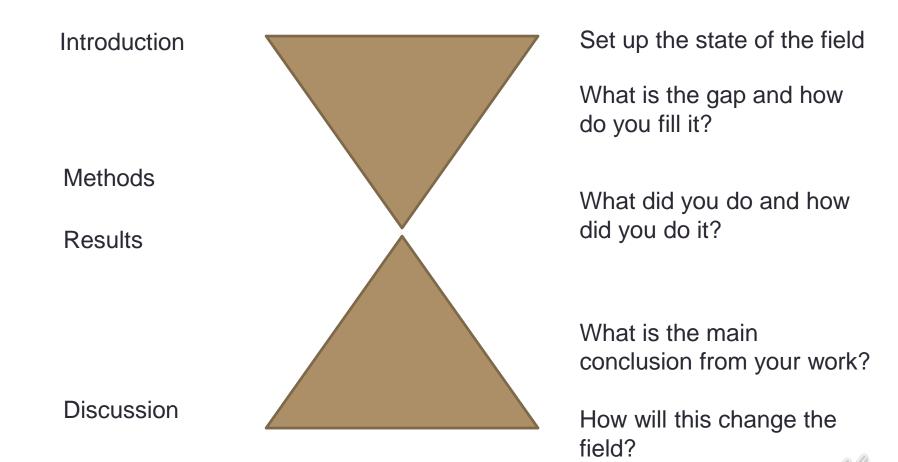
Writing the abstract

Write it first!

- Self-contained
- Clear, simple, and concise
- Focus on key points of your research
- Keep in mind the focus of the conference or meeting for scope



Follow the IMRAD format



Adapted from Lauren Slone's NSF GRFP workshop Fall 2014

Formatting an abstract

<u>Do's:</u>

- Keep it to one paragraph
- Think about the eventual poster structure
- Choose a topic of your research that would translate well to a poster- focus on a few key points
- Keep it relatively jargon free

<u>Don'ts</u>

- Exceed length specified by the organizers (generally 250 words)
- Include literature references (unless asked)
- Include tables or figures
- Use long terms or abbreviations

WHAT GOES INTO A POSTER PRESENTATION?



Title and abstract

The title should be attention-grabbing and engaging

- Broad enough to attract those out of your field, but still interesting for those "in the know"
- This along with the abstract is what gathers interest in your poster
- Like the abstract, your title should fit the level of detail expected of the meeting
- Your abstract should not go on your poster



Introduction or Background

Introduce the nature of your research

- Unlike a paper, you can use figures and eye-catching photos to best explain your research problem
- This should be brief with limited definitions and details
- Give enough context for the rest of the poster
- I like to end this section with a statement of the research problem/hypothesis or the objective of the research



Materials and methods

A section regarding your methods should be included on your poster

- Generally a flowchart of the steps you took or a diagram of a particular experimental set-up will suffice
- It is not expected that you use the same level of detail that you would use for a talk or paper
- Gives context for any experiments you used

Results

The largest portion of your poster will be results

- Comment on if the experimental set-up worked
- Use descriptive wording and include qualitative discussions of results
- Use figures and include descriptive figure legends
- Use charts and tables (with legends) if needed
- If the reader skipped all the other sections, would they understand your results?



Conclusions

State the final result

- Do not repeat the results section
- Describe significance of work
- Use this section to discuss future directions
- This will be briefer than in a paper or talk



Literature Cited and Acknowledgements

Include literature cited if any

- Should be abridged- about 5-10 sources that are directly relevant to the information on the poster
- Follow the correct citation style for your field (especially if it is a large society meeting)

Thank anyone who helped with the work

Acknowledge funding sources and note conflicts of interest



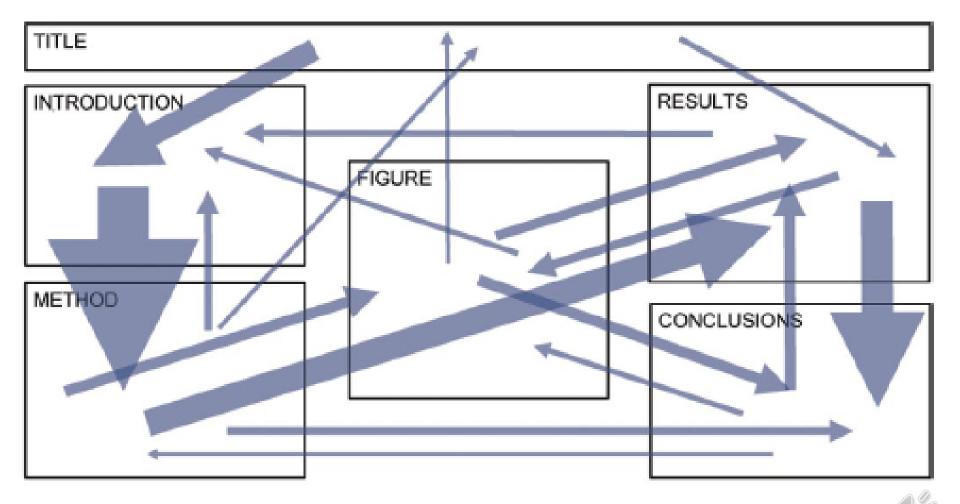
POSTER FORMAT



WHAT MAKES A POSTER EFFECTIVE?



What does your audience expect



Foulsham and Kingstone Perception 2011

Sample format- traditional

Title title

Author, Author, and Author Address(es)

Introduction Blah, blah, blah.	Results Blah, blah	Mere blah, blah	Conclusions Blah, blah
			Literature cited Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. Journal of Slackology 1:1-2. Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. Journal of Slackology 1:1-2. Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. Journal of Slackology 1:1-2.
Materials and methods			
			Acknowledgments Blah, blah, blah. This file from http://collingumington.com/bjps/academic/posterdesign. You can enare that URL, of course.
			Further information © Copyright Colin Purington. You may use for making your poster, of count, but please do not report the template on your own site or uplead to third-party file-sharing sites such as decise.com. This verbiage sounds mean-spinled, perhaps, but IV to had people sighton of my value laite and then claim my content was public domain because they found it via Geogle. (Replace this text with your own

Sample format- traditional results arena

Title title

Author, Author, and Author Address(es)

Introduction Replace the "black black, black" with your own "black, black, black."	Results Blah, blah, blah	Conclusions Blah, blah, blah
Materials and methods Blub, blub, blub		Literature cited Blab, blab, and blab. 2012. Blabing, blabing, and mare blabing. Journal of Sloke logy 1:1-2. Blab, blab, and blab. 2012. Blabing, blabing, and mare blabing. Journal of Sloke by 1:1-2. Blab, blab, and blab. 2012. Blabing, blabing, and mare blabing. Journal of Sloke bay 1:1-2.
		Acknowledgments Bids, bids, bids. This file from http://colignumington.cm/bys/texademic/pestendesign. You can ensue that URL, of course Further information C Copyright Colin Purington. You may use for making your petter, of course, bag pixese do not regreat the template on your over site or uplend to third-pury file-busing stan such as deduce com. This workings results may have be needed to be a standard or the standard of the standard found it via Georgie. (Replace this text with your or the standard found it via Georgie. (Replace this text with your or the

http://colinpurrington.com/tips/poster-design

Sample format- creative results arena

Title title

Author, Author, and Author Address(es)

Introduction Replace the "blah, blah, blah" with your own "blah, blah, blah."	Results Blah, blah, blah	Conclusions Blah, blah, blah
Materials and methods Blah, blah, blah		

Literature cited

Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. Journal of Slade Jap. 1:1-2. Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. Journal of Slade Jap. 1:1-2. Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. Journal of Slade Jap. 1:1-3. Blah, blah, and blah. 2012. Blahing, blahing, and more blahing. Journal of Blackgap, 11-2. Blab, blab, and Math. 2012. Blab ing, blab ing, and more blabing. Journal of Black lay, 11-2. Blab, blab, and blab. 2012. Blab ing, blab ing, and more blabing. Journal of Blackelag, 11-12.

Acknowledgments

Blah, blah, blah. This file from http://colingumington.com/tips/scademic/posterdesign. You can erase that URL, of course

Further information

C Copyright Cells Parington. You may use for making your porter, of course, but please do not report the template on your own sits or upland to third-party Bo-sharing sites such as do doecond. This verhisgs rounds mean-splittel, portuge, but Cvent all popel sighten off my whele site and then claim my content was public domain because they found it twice loogies. (Replace this text with your own.)

Getting creative- what not to do

ARCTRACT

he ignored benefit of space travel is a potential elimination of overally, a enroyic problem for a growing in Pasing, when a Includ, in make one south cancel while fellow ad libium feiding and sever ever gas at gran, and the why side effect would be the reled to upprodecore? one period of the best live beraher hamful, we tread ear productions with a long term expecteters, in a colone of Guitew pipt. Carls parcetter mentaries do the enteristance Securi ode were housed expandely and given unit anounts of high-colorie feed polents. Fresh hulls and rables vere not available in space so were not stored. Every 30 days, each Games pip was weighed. After 5 jettre, we dound that individuals, brit average weighted nothing. In addition to weighting nothing, no weight appearant to be gained order the duration of the If ephoe continues to be granity free, and we selese that assumption is sound, see believe that sancing the overweight — and those at risk for overweight — to space would be a testing cure.

PIGS IN SPACE. CFFECT OF ZERO GRAVITY AND ID LIBITUM FEEDING ON WEIGHT GAIN IN CAVIA PORCELLUS

Colin B. Purrington 6673'College Avenue, Swarthmore, PA 19081 USA

INTRODUCTION:

The current consist epideficio statem in the equity tarkon with the invention and problemation of estatance and indefed analytic fibers, which revealed versions have the representation of declara and pathwise modelly weight gain without the need to have new cuthts. Interest, everythe binker for human and pathwise models involve only the act of wearing langtchy parts in public, preparative bosons the constructive pressure break till indecules to adopt a more compact langtchy parts in public, preparative bosons the constructive pressure break till indecules to adopt a more compact langtchy parts in public.

Lacking at the same time that fabrics togram statistic, the race to the most between the United States and Russia yielded a capturing the graph in order space is minimal to nonexistent. When grave this zero, objects gase to bottom sergings, more carry instruction and commonsum that is necess thermodyne to the days with states bein and during serging to be an early instruction and commonsum that is necess thermodyne of the transition with states bein and during serging to be an early instruction to weight here see specific thermodulity, will at the time transition and during back that the final series when connectingly such and. Now however, marks comparises are diversible these beins collising and process to increase carry should be added to the more that are also creating and the series of the diversibility of the series and the series when connectingly such and . Now however, marks comparises are provide the series of the series of process or increased actions with the series of the provide the series of the provide the series of the provide the series of the provide the series of the provide the series of the series of the series of the series of the provide the series of the series of the series of the provide the series of the provide the series of the series of the series of the series of provide the series of the series of provide the series of the series of provide the series of the series of the series of provide the series of the series of provide the series of provide the series of the series of

We southd this pointful by following weight gain to Garries sign. Known in Surth as solil of ad Honaer Solding Garries, sign were ening exercised to be the 'Garries page" of space research, this, so they seemed like the obvious choice. Studies on barrans are of course desirable, but we leal the current study will be initial in adjusting the adaption of granting agricults.

MATERIALS AND METHODS

One transfered make and one transport female, Swither pgs: Cana constituate www.transported to the International Space Laboratory in 2013. Each pie was individually explanates and deprived of exercise wheels and there but and vegetables for 45 months. Each month, pigs were individually weighted by ducttiging them to an intercrute transport exercise is clight to duct tagking them to an intercrute transport exercises and interface and back on Each, and defined object was limited weighted, that was analyzed by distlicts.

NAMES OF TAXABLE PARTY.

RESULTS:

Mean weight of togs in space was 0.300 ++ 0.0022 -s. Some individuals weighted less their zind semi-more bot heat virtuations were due to reaction, to the out tage, we believe, which reason there to be already and boldy against the loves pilled in the balance. Additional pull boldy against the loves option in the balance. Additional pull boldy against the loves tortiont, gained about 240 gmonth (sine 0.000). Males and families agained a service amount of weight on Earth (no main of families agained and are point devined to bold). Males and families agained a service amount of weight on Earth (no main of families agained as the point devines the tags would be taged and were torbacity at the service and the families for adapt and were torbacity at the service of the families for adapt and were torbacity at the service of the analy-

APPERED BY AND ADDRESS OF ADDRESS

CONCLUSIONS:

Dury view that weight and weight gain would be zero in space was confirmed. Although we have not replicated this experiment on larger animate or periodice, we are confident that our result would be nimmed in after model organisms, we are carriedly in the process of induring recessary flatten that permissions, and shauc have we planned experiment industry within 80 mem, perding reporting to posted or new by local and Entering 80 m.

100

ACKNOWLEDGEMENTS:

I am prainful for genericus, support from the Waldonii Research Foundation, Black Hole Diet Harra, and the High Flucture Bugar Association. Transport rights were standed or BACE-EXER, the consumitian of wakes effectived them: Issueely waitely second-fight starture. I am also grateful for comments on early stable by Markana Athletic Cub. Carple Christi, USA. Finally, sincere hanks to the Cuy Foundation for generously dealers and any comments on way. LITERATURE CITED:

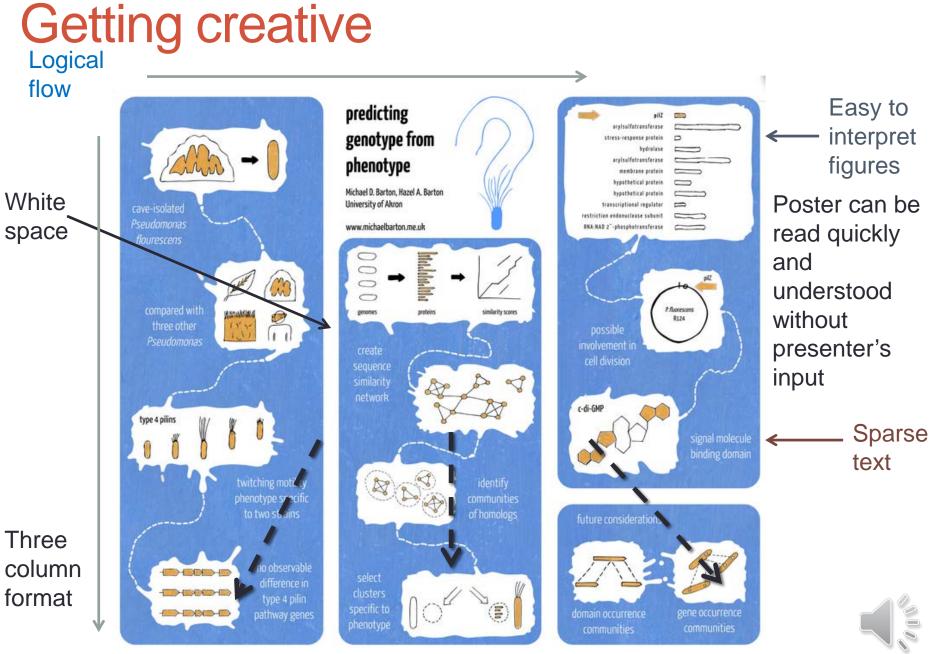
WASA: 1982. Project STS-XX: Duese Pige: Leoled internal memo. Solutio, Scill, D. O., Laket, and N. M. Nasamovit. 2005. The Peter Demol Exercise Use An Astronaut: Gravity Loading Is: Receiving For: The Physiological Development During Gastrid Hart Cli Physicana. Medical Hypothesis. 44:221-226

The second second second

aver, M. 1985. Elastane Purchases Acoverate Weight Gain in Case control Study, Journal of Obesity, 223-40.

Colin Purrington's example of a 'bad' poster is crammed with text and has a distracting background.

Colin Purrington; reprinted in Nature 2012



http://www.bioinformaticszen.com/post/genotype-from-phenotype/

What was missing?

- Introduction/Background
- Rationale/Hypothesis
- Overall Objective/Bigger Picture or Significance
- Figure legends or data

Knowing the conference would be helpful here



Fonts and Font Size

 Stick to one combination of two fonts

Serif:

- For the body of poster
- Times New Roman
- Georgia
- Book Antiqua

Sans serif:

- For the headings
- Arial
- Calibri
- Helvetica
- Never Comic Sans

Main title:

- 100 point font
- 4 cm high

Subheadings:

- 50 point font
- 1.5-2 cm high

Body text:

- 25 point font
- 0.5-1 cm high

These are guidelines more than rules. The key is to finding a style and size that is readable and large.



Software to use for poster design

Microsoft PowerPoint is the most common

For those of you who are more tech or design savvy:

- QuarkXPress
- InDesign
- Scribus
- Inkspace (free)
- LaTeX (works best for text heavy or equation heavy posters)

For those of you who have no idea how they are going to design a poster:

- Stick with what you know (PowerPoint)
- PosterGenius (free trial)



Edit and revise

Get feedback

- From your labmates
- From your classmates
- From your colleagues
- From your advisor

Print out a copy as a small PDF

- Do the colors complement each other?
- Is the text large enough?
- Is the text readable?
- Is there enough white space?

Look at it in multiple formats

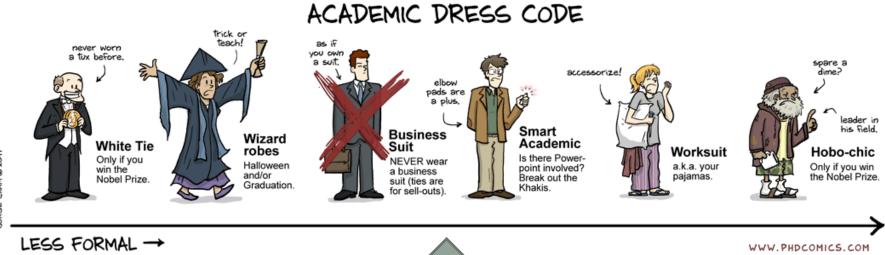
- Both as a PowerPoint or as a PDF
- Does it look right on your screen?
- Does it look right printed?



PRESENTING A POSTER



How to dress



http://www.phdcomics.com/comics.php?n=1446

Presenting the poster

Making the poster is only part of the presentation:

- Think ahead about questions
- Ask questions
- Networking
- Handouts or business cards (if applicable)

This is an opportunity for discussion:

- Find a collaborator
- Learn a new technique
- Get a suggestion for that wall you haven't quite gotten over yet



Do not present the poster in it's entirety

- Poster presentations are more of a dialogue than a talk
- Visitors will come and go
- Helpful to have an elevator pitch, then focus on answering questions



The Elevator Pitch

This should be brief

- Generally a two-sentence overview of what motivated your research
- Helpful to have 30 second, 1 minute, and 2 minute pitches

Focus on the bigger picture of your work

 Should be understandable to a generalist in your field (depending on your audience)

Lead visitors to your main results and conclusions

The Elevator Pitch Structure

AAA Structure

- AND, AND, AND
- "We wanted to investigate this problem, so we generated these data
 AND these data AND the results were like this AND
 I came to this conclusion."
- Typical, but just facts

ABT Structure

- AND, BUT, THEREFORE
- "Here the data are showing this AND this... BUT if we look at these data, we see something very different from what was expected...

THEREFORE I concluded this."

More narrative and interesting



ABT Structure

<u>AGREEMENT</u>: and, also, equally, identically, uniquely, like, moreover, as well as, furthermore, likewise, similarly

<u>CONTRADICTION</u>: but, despite, however, yet, conversely, rather, whereas, although, otherwise, instead, albeit, still

<u>CONSEQUENCE</u>: therefore, so, thus, consequently, hence, thereupon, accordingly, as a result, henceforth, for this reason, in that case, since

Even though the elevator pitch is simple and ABT is concise, your work shouldn't be "dumbed-down" Retain the key information of your poster



Exercise

 Take a few minutes to write an elevator pitch of a project/study that would translate well for a poster

I am interested in protein modification in the mitochondria. I have used traditional biochemical methods to validate known modifications and I found that these methods were subpar. However, by using a specific yeast strain, I was able to overcome this problem. As a result, I not only have validated known modifications in the literature, but have found new sites in the mitochondria as well. This method can be used for the future study of modifications in yeast.



Exercise

- What was difficult about writing for the audience?
- Could you focus on only a few points?
- What structure did you use?
- Was it difficult to stay broad?
- How do you identify the key elements of your study?

• ABT can be useful for writing poster abstracts as well



Navigating in the moment

What if you find a mistake?

Bring a black pen and white paper to fix any mistakes you find

What if no one is sticking around for more than a glance?

- We have the tendency to walk the audience through our posters
- This isn't as effective and most interested parties don't want to sit through five minutes of you pointing at figures
- Give your elevator pitch, let the reader know that they should feel free to ask questions, and focus on creating a dialogue

What if no one shows up to your poster?

- Be at your poster during the allotted time frame
- Be present and engaging
- Tweet to advertise your poster ("@fancyscientificsocietytwitterhandle Come to poster 114 for a look into mitochondrial dynamics at #bigscienceconference2015")

Resources

- Some departments have their own facilities for printing
 - If yours does not, look into UCLA Mail, Document, and Distribution Services (<u>http://nowprint.maildoc.ucla.edu/</u>)
 - They do large format cloth printing, which is nice if you are traveling with your poster
- http://colinpurrington.com/tips/poster-design
 - Tips, templates, and more
- http://www.postergenius.com/cms/index.php
 - Pre-made PowerPoint templates
- <u>https://galter.northwestern.edu/help/creating-posters-with-powerpoint-windows</u>
 - Step-by-step guidelines for designing a poster with PowerPoint
- UCLA GWC



Works Cited

- Collins, J. Education techniques for lifelong learning: making a PowerPoint presentation. *Radiographics* **24**, 1177–83 (2004).
- Day, R. A. & Gastel, B. *How to Write and Publish a Scientific Paper: Sixth Edition*. (Greenwood Press, 2006).
- Foulsham, T. & Kingstone, A. Look at my poster! Active gaze, preference and memory during a poster session. *Perception* 40, 1387–1389 (2011).
- Hardicre, J., Devitt, P. & Coad, J. Ten steps to successful poster presentation. *Br. J. Nurs.* **16**, 398–401 (2013).
- Olson, R. Houston, We Have a Narrative: Why Science Needs Story; University of Chicago Press, 2015.
- Powell, K. Presentations: Billboard science. Nature 483, 113– 115 (2012).
- Purrington, C.B. Designing conference posters. Retrieved <4/2/15>, from <u>http://colinpurrington.com/tips/poster-design</u>.

