

Effective Posters— *Presenting your Results Clearly and Persuasively*



Courtesy Carlos A. Alvarez Zarikian

Celia M. Elliott
Department of Physics
cmelliot@illinois.edu

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Why do scientists present posters?

Tell an interesting, persuasive story of their work

Disseminate results to the community faster than by publications

Get immediate feedback from other researchers—questions, suggestions, criticism

Get noticed

Talk to other scientists about related work

Meet prospective collaborators, “network”

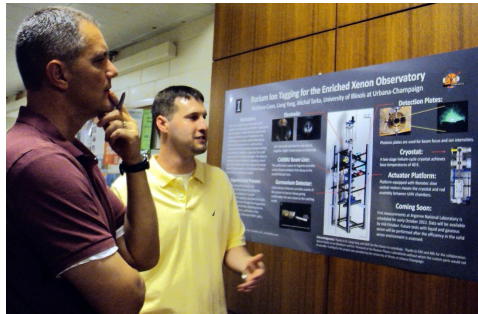
2

Your poster must be tailored to your audience to be effective

Who is your audience?

What do they want to know?

What will capture their interest?



PHYS 499 Posters, October 2012; (l) Kevin Pitts, (r) undergraduate Matthew Coon

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An effective poster must

Attract and engage the audience—

- prominent title
- visually interesting figures (lots)
- clean, uncluttered appearance

Highlight key points so they are *immediately* recognizable

Be arranged logically so a viewer quickly understands the “story”

Contain all elements of a good research paper—motivation, methods, results, discussion, conclusions, acknowledgments

4

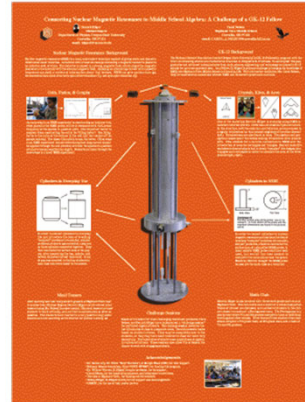
Make your topic “jump off the wall”

**Make the title informative,
descriptive, and
concise (one line)**

**Use at least one eye-
catching graphic**

Use color effectively

Use humor?



**Tip: Your audience will not approach you if your topic
is not clear from a “safe” distance (3 m)**

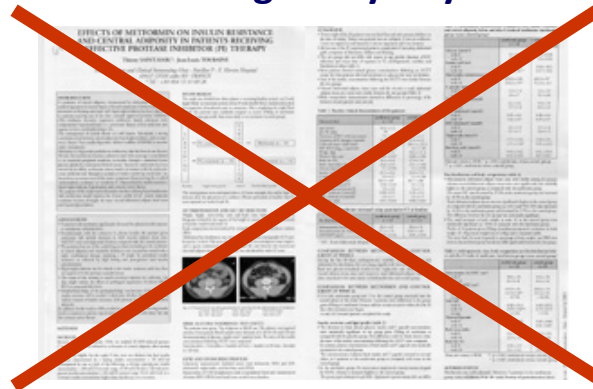
5

Distill your message

Don’t try to tell the “whole story”

Present only enough data to

- support your conclusions and
- show the originality of your work

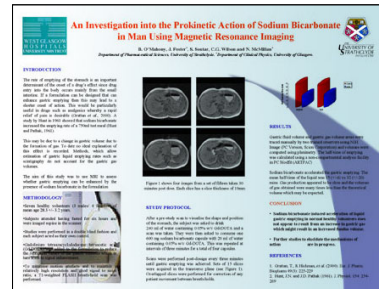


6

Every poster must have a “headline” (title) and a “byline” (authors)

Title—
in 120-pt font
<10 words

Your name and
affiliation—
in 80-pt font



Ask your adviser early about co-authors

Better title?

Prokinetic Action of NaHCO_3 in Humans Using MRI

Tip: If it's important, make it **BIG**

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Include an “abstract” only if your poster is going to be unattended for lengthy periods*

If you're standing there explaining the work, nobody's going to read it anyway

Use the space for something more compelling and visually interesting

If you *must* include an abstract, keep it very brief (<50 words)

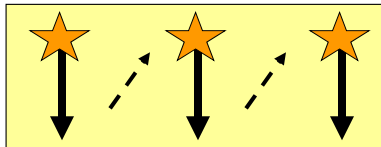
*or if your adviser tells you to...

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Most viewers will start at the upper left corner of the poster and read down and across

**Break up your “story” into columns
(think “newspaper”)**

Put important points at the top of each column



**Tip: Keep lines of text <20 words long.
People’s eyes don’t easily track strings
of text longer than that, even at 30 pt**

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If your poster is laid out in landscape orientation, use columns, not rows, to organize the information

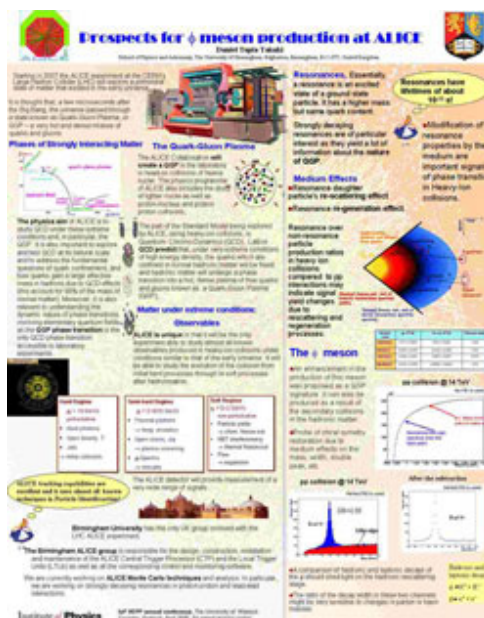


from http://www.soe.uoguelph.ca/webfiles/agalvez/poster/poster_making/entry.htm

The viewer may not be able to fight his way back to the left side to look at the lower rows of your poster; he’ll probably just quietly move on to the next poster

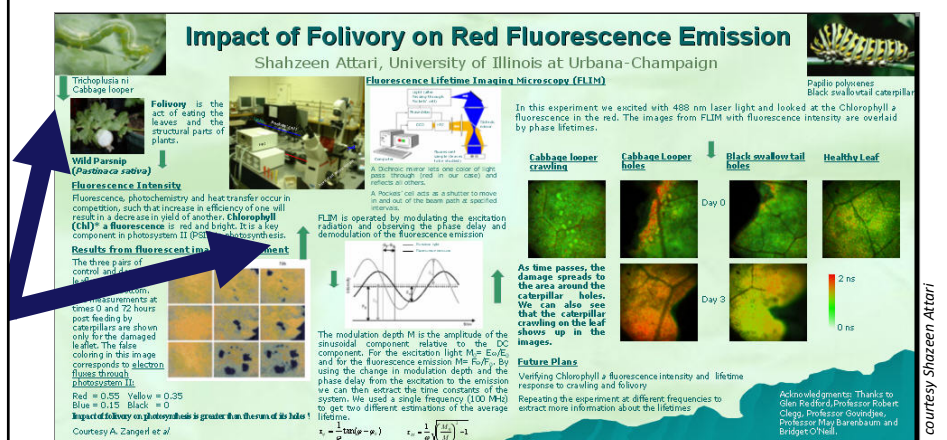
10

How is the viewer going to navigate through this poster?



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This poster uses arrows to guide a viewer through a complex story



Tip: Don't make the viewer guess the sequence

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**Remember
that people
will be looking
at your poster
while standing,
not sitting**



**Tip: Don't put important points
in tiny print at the bottom**

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**The center of the poster should
feature the methods and results**

**Problem statement, motivation,
objectives**

Methods

Results

Applications or future work

Sources of additional information

Acknowledgments

**Tip: Visually represent the relative
importance of text elements**

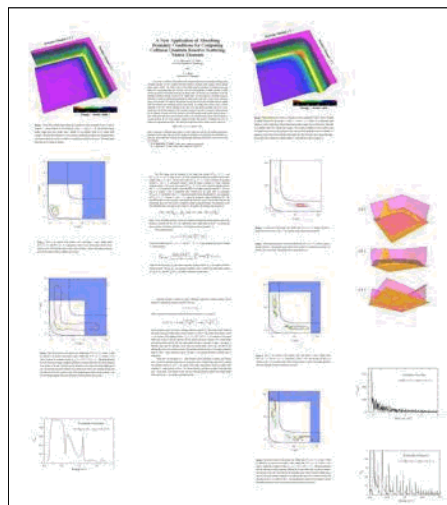
14

Use headings to guide the viewer through the poster

Make your key points immediately recognizable

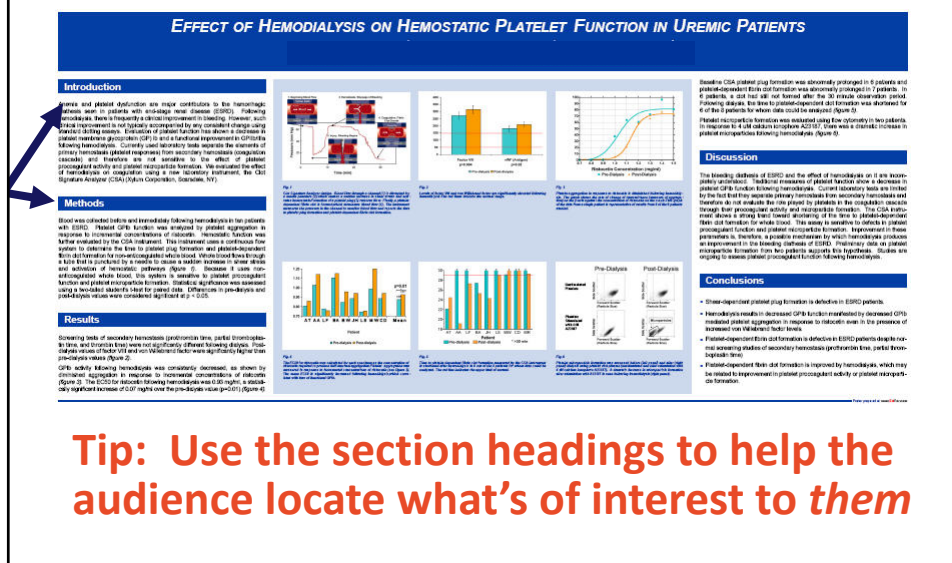
Use headings to create an “information hierarchy”

- Descriptive
- Concise
- Parallel
- Logical



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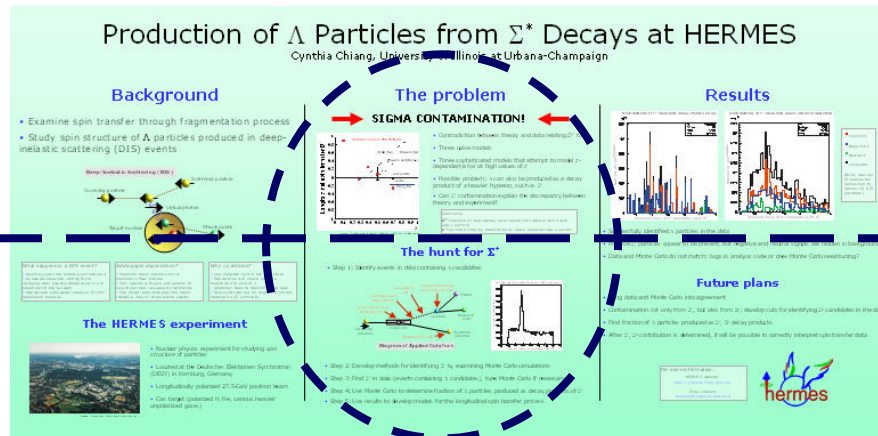
“Categorical” vs. “Informational”? ...depends on the audience



Tip: Use the section headings to help the audience locate what's of interest to *them*

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Position your important points strategically



Tip: Position important information above the midline and in the center

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Use the visual elements of the poster to tell the story

Engage the audience

Emphasize main points

Illustrate apparatus, methods, and results

Summarize numerical data to show trends or reveal relationships



Tip: Keep all text (total) to <400 words

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At least half your “story” should be told in pictures

**No graphic should be smaller than
5 in × 7 in (13 cm × 15 cm), and most
should be larger**

**Crop and enlarge photos and simplify
drawings to focus attention on important
details**

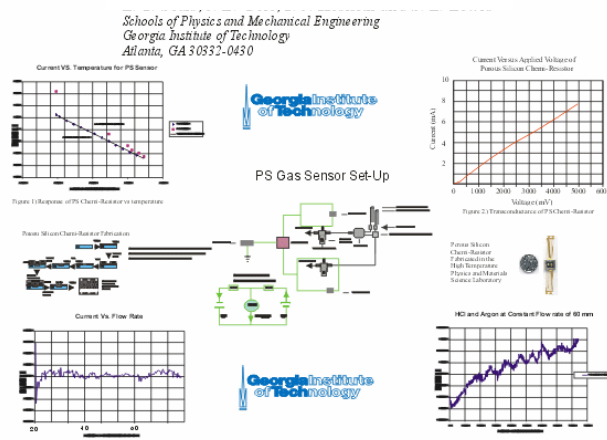
Scan photos at 300 dpi

**Provide a brief caption for every graphic;
tell people what to look for**

Tip: People remember pictures, not words

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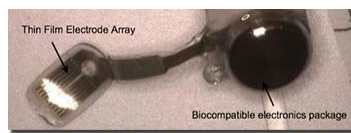
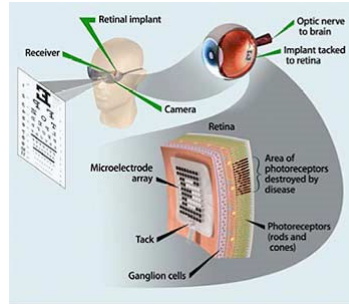
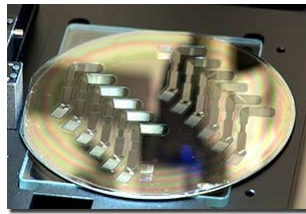
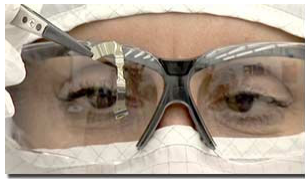
But you have to have *some* text...



**Authors' names have been removed;
the original poster had no title**

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Use figures to attract and explain



https://pubaffairs.lin.gov/news/news_releases/2010/NR-10-02-03.html

Tip: Different types of figures best convey different types of information; use different styles to present the most information in multiple ways

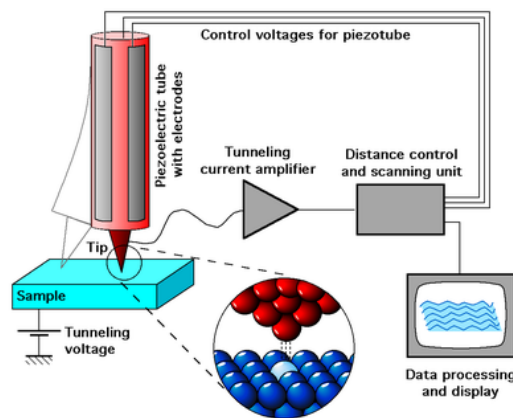
21

Don't use pointless graphics*



http://www.specs.de/products/sm/stm_pics/sm-sm.jpg

While an impressive display of expensive stainless steel and electronic circuitry, this photo conveys zero meaning

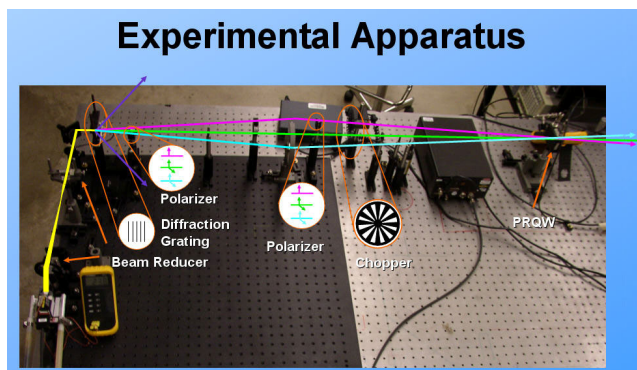


http://en.wikipedia.org/wiki/Scanning_tunneling_microscope

This simple cartoon shows how a scanning tunneling microscope works and what elements are important

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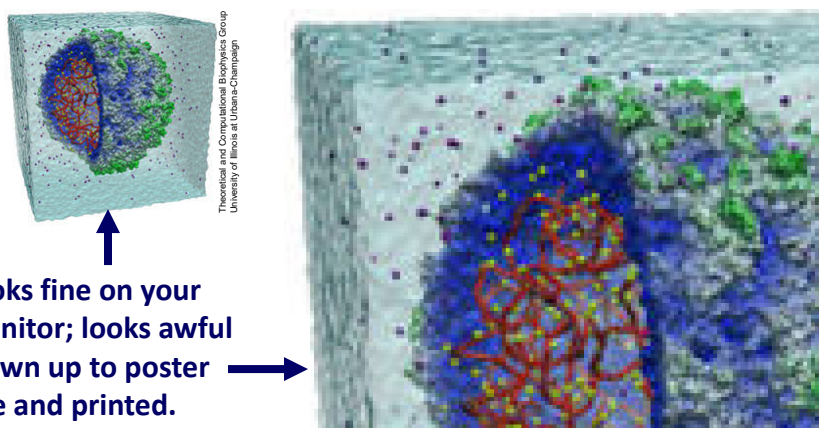
This excellent graphic shows the apparatus *and* the process



Tip: Show pictures of equipment *only* if they are related to an important *idea* that you want to convey

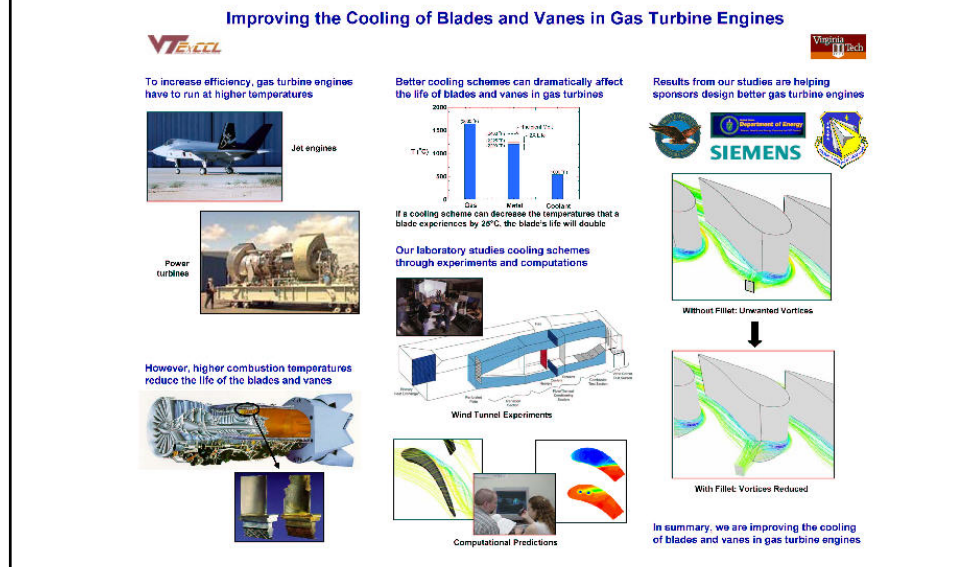
23

Avoid using graphics taken from the Internet; they're too low-res to print acceptably



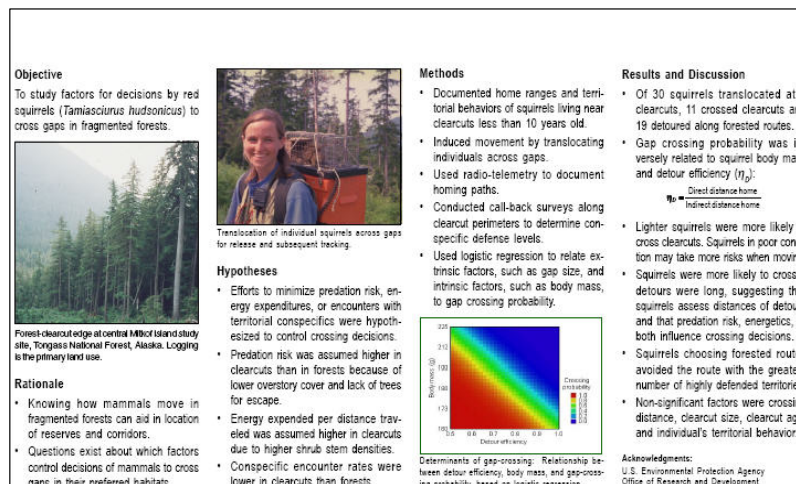
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Make every graphic mean something; avoid “eye candy”



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Critique this poster:



Tip: If you're going to make the viewers read everything, why do they need you???

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Choose colors carefully

Colors affect how easily
your poster can be read

Use a high contrast
between background
and text

“Warm” colors are more
visible, but don’t
overpower with orange
(even Illini orange)

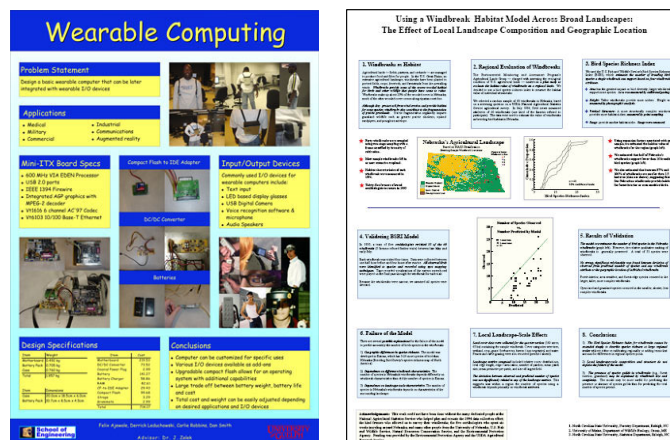
Avoid using red/green
or red/blue

**Tip: Gradient backgrounds that look great
on your monitor may not print properly**



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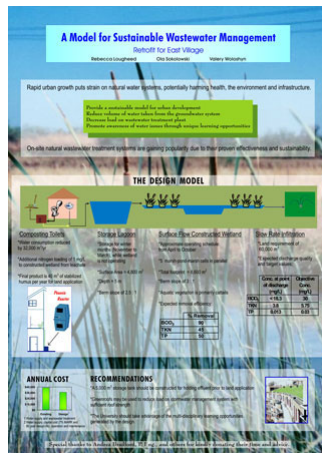
Use color to highlight, separate, or associate information visually



**Tip: People expect color to mean
something; don’t use color randomly**

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Choose neutral, light-colored backgrounds



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Leave adequate “white space”

Effective posters look uncluttered

Use white space to isolate and emphasize important details

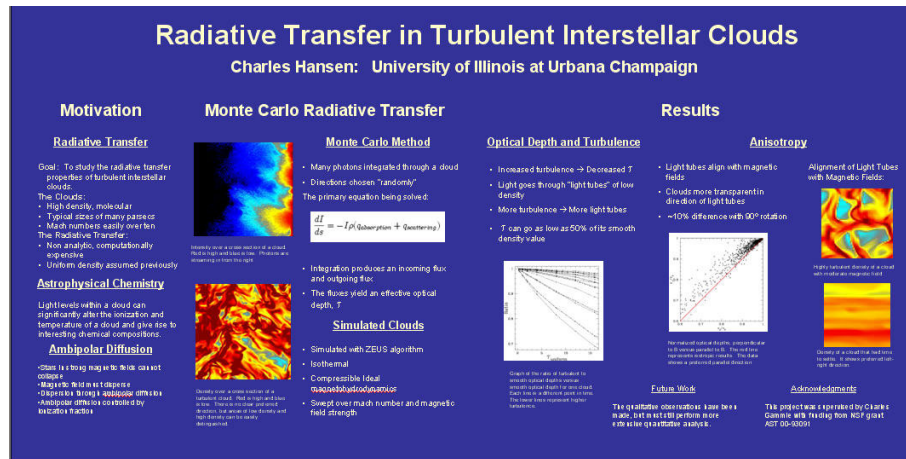
Leave at least 1.5 in (4 cm) of white space between columns

Balance elements on the page

Tip: Leave at least 0.5-in (1.25-cm) margins on all sides of your poster; no plotter prints to the very edge of the paper

30

“White space” doesn’t have to be white



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Use easy-to-read fonts

Sans-serif fonts usually print well and are easier to read from a distance

ORNATE FONTS ARE HARDER TO READ

DON'T USE ALL CAPS, EVEN IN THE TITLE

—much harder to read (and proofread!)

Title—120 pt

Section headings—60 pt

Figure captions—48 pt

Text—36 pt

Text sizes are for a 28-in high by 56-in wide format

Scale the font with the size of the poster

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Present text in lists rather than paragraphs

Figures promote audience interest, provide supporting evidence, help explain complex ideas and relationships quickly, and give the viewer something to remember

Use figures to:

- **promote interest**
- **provide supporting evidence**
- **explain complex ideas quickly**
- **show relationships**
- **give the viewer something to remember**

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Make a timetable for preparing your poster, and stick to it!

Identify your objectives

Analyze your audience

Make an outline of key points

Assemble graphics

Decide on text

Prepare handouts if desirable

Proofread everything *three* times

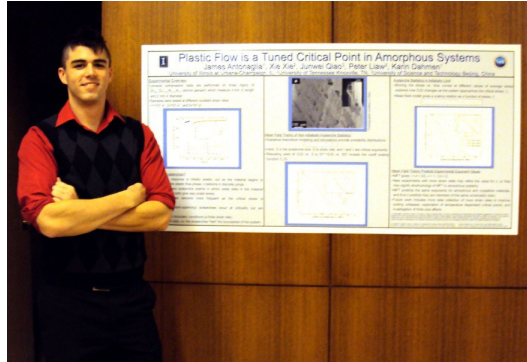
Practice your “stump speeches” (more to come)

Rehearse questions



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Effective Posters



PHYS 499 Posters, October 2012; James Antonaglia

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Goal: Tell a memorable story and teach the audience something



What made a good story when you were 5?

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What made a good story?



Interesting, engaging pictures

Words you understood

A logical narrative with a definite beginning,
middle, and end

Clear, unambiguous explanations

New ideas that stimulated your thinking

Nothing has really changed since you were 5.

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Put your audience first: what they want to know, not what you want to talk about



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Prepare a “stump speech” to introduce your poster

Should be 1–2 min.

Briefly state

- 1. What you studied and why it’s important**
- 2. What methods you used**
- 3. What your principal results are**
- 4. What you think they mean**
- 5. What you’re going to do next**

Prepare two versions—one for experts and one for novices

Be prepared to be interrupted with questions; rehearse possible answers

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Coordinate the elements of your stump speech to the sections of your poster

Stump speech:

- 1. What you studied/ why it’s important**
- 2. What methods you used**
- 3. What your principal results are**
- 4. What you think they mean**
- 5. What you’re going to do next**

Poster:

- 1. Motivation**
- 2. Methods**
- 3. Results**
- 4. Conclusions**
- 5. Future work**

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Rehearse both versions



Out loud

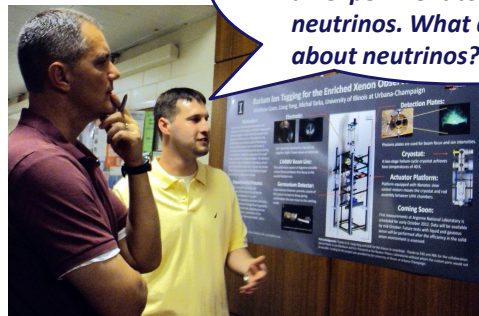
In front of real people

**Okay to write it out first, but practice until
you can deliver your lines without notes**

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How do you know which version to give?

ASK!



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Be prepared to be interrupted with questions during your speech

Respond to a question as soon as it is asked,
don't just keep rattling off your speech



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Rules for answering questions:

Always be respectful

If you don't understand the question, ask for clarification

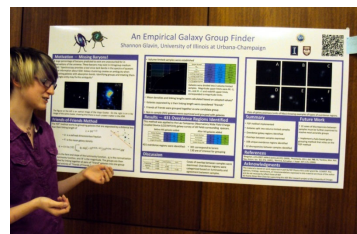
If the question is off-topic, redirect

Don't ever argue with a questioner—you'll just look bad

If you don't know the answer, just say so*

**Make a note of it to ask your adviser!*

**Ask for the person's email address and say you'll find out the answer and send it to him or her.*



PHYS 499 Posters, October 2012; Shannon Glavin

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Find out *before* your session . . .

The location and time by which your poster is to be displayed

What kind of surface your poster will be mounted on

Whether you need to provide your own tape, thumbtacks, Velcro strips...

Whether other needed equipment will be provided (electrical outlet, table, easel)

Tip: Don't expect the meeting organizers to supply you with anything other than space

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Tips for successful posters:

Arrive early (early birds usually get the desirable locations)

Bring your own “poster hanging” emergency kit

Have your “stump speech” prepared to explain your work to visitors

- Give the big picture
- Explain why the work is important
- Have two versions—one for experts and one for non-experts

Greet each visitor with a smile; ask questions to elicit interest and level of understanding



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Be prepared to mount your poster on any surface

Your poster-hanging toolkit should include:

- Push pins or thumbtacks
- Straight pins or drawing pins
- Plastic mounting putty
- Velcro® strips and glue
- Clear PCV tape or masking tape
- Scissors



istockphoto.com—William Howell

Have a permanent marker the color of your text for emergency typo corrections

Have a small notebook and pen handy for notes

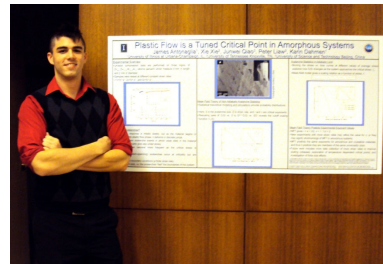
49

Convey your enthusiasm for your research project

Greet people as they walk up to your poster

By your stance and expression, invite them to ask questions

Have your business cards, copies of your paper, or other handouts ready



PHYS 499 Posters, October 2012; James Antonaglia

Tip: Open your hands, lean forward, and smile

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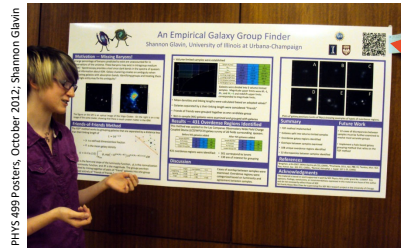
Have hand-outs available

A miniature version of your poster

An extended abstract or a summary

Reprints or preprints

Include your complete contact information



Tip: use a QR code to link to the group's web site or a copy of the paper

Tip: an 11-in × 17-in sheet of paper, folded in half, gives you four pages for additional information about your work in one handout

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Some advice from the experts:

Never ever put *anything* on your poster that you do not thoroughly understand



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**That figure you got from somebody else
and added at the last minute...**



...will be all the audience asks questions about

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Some final advice:

Eat breakfast (or lunch) before your session

**Take a bottle of water with you—it's hard to
talk when your mouth feels like a desert**

Wear comfortable shoes

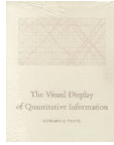
**Wear clothes that are loose enough you can
point to things on your poster**

**Take pride in what you've learned and done—
don't apologize**

Relax and have fun

54

References and further guidance...



Edward R. Tufte,
The Visual Display of Quantitative
***Information*, Graphics Press (2001)**

<http://www.personal.psu.edu/drs18/postershow/>

<http://www.soe.uoguelph.ca/webfiles/agalvez/poster/>

<http://www.ncsu.edu/project/posters/>

<https://www.craftofscientificposters.com/>



cmelliot@illinois.edu

<http://physics.illinois.edu/people/Celia/>