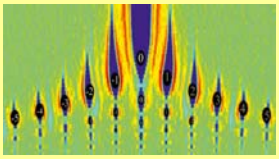
Template for a Journal Club Presentation

Celia M. Elliott
Department of Physics
University of Illinois

Start with a "title" slide

"The Title of the Paper You're Presenting"
Complete Bibliographic Citation



Presented by <Names of Team Members>
Department of Physics • University of Illinois at Urbana-Champaign
PHYS 496, April 24, 2015

The title slide cues the audience "Get ready to listen"

Answer the following questions:

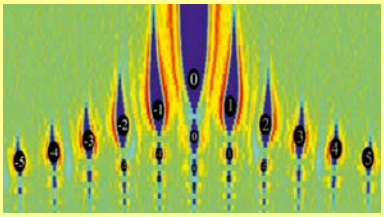
- What is new about the paper? (Introduction)
- Where does it fit in the context of prior work? (Background)
- What methods were used? (Methods)
- What were the primary results? (Results)
- What do the authors think these results *mean*? (Conclusions)
- What is your assessment of the paper? (Critique)

Use this paradigm to organize your presentation

What about an "outline" slide?

Outline

- Background and Introduction
- Methods
- Results
- Conclusions
- Critique
- Questions



SciTechDaily.com

I think the use of "outline" slides is vastly overrated—little meaningful content, eminently forgettable (cme)

If you feel compelled to provide an outline, make it content-rich

Today we'll discuss

- Majorana fermions (MFs), theory bkground
- InSb nanowires used as "colliders"
- Zero-energy peaks observed; believed to be electrons scattering off MFs
- Could be used for solid-state qubits
- Critique of paper
- Audience questions

Consider an "outline" graphic at the bottom of each slide to orient listeners

Motivating statement, written as a sentence and left justified

<SLIDE STUFF>

Theory • InSb Nanowires • 0-energy Peaks • MF Observed • Applications • Critique • Q & A

Place a running outline at the margins of the slide (bottom or left margin)

Consider an "outline" graphic at the bottom of each slide to orient listeners

Motivating statement, written as a sentence and left justified

<SLIDE STUFF>

Theory • InSb Nanowires • 0-energy Peaks • MF Observed • Applications • Critique • Q & A

Be creative but not distracting

Consider an "outline" graphic at the bottom of each slide to orient listeners

Motivating statement, written as a sentence and left justified

<SLIDE STUFF>

Theory • InSb Nanowires • 0-energy Peaks • MF Observed • Applications • Critique • Q & A

Consider an "outline" graphic at the bottom of each slide to orient listeners

Motivating statement, written as a sentence and left justified

<SLIDE STUFF>

Consider an "outline" graphic at the bottom of each slide to orient listeners

Motivating statement, written as a sentence and left justified

<SLIDE STUFF>

Consider an "outline" graphic at the bottom of each slide to orient listeners

Motivating statement, written as a sentence and left justified

<SLIDE STUFF>

Theory • InSb Nanowires • 0-energy Peaks • MF Observed • Applications • Critique • Q & A

Consider an "outline" graphic at the bottom of each slide to orient listeners

Motivating statement, written as a sentence and left justified

<SLIDE STUFF>

Theory • InSb Nanowires • 0-energy Peaks • MF Observed • Applications • Critique • Q & A

Allow at least 2 min* per slide

Do the math:

20 min total – 5 min for Q&A = 15 min for "talk"

$$\frac{\text{15 min talk}}{\text{2 min/slide}} = \text{8 slides max}$$

8 slides – title slide – summary slide = 6 slides

***Allow more time for dense slides, equations, tabular data**

How do you divide up your 6 slides?

Problem/motivation
Background—what audience needs to know (prior work); what is new
Methods
Results
Conclusions
Your critique of the paper

The last slide should be a summary that recaps the main points of your talk

- First observation of Majorana fermions in semiconductor nanowires
- Predicted in 1930s, never before observed
- Used InSb nanowires as "nano-colliders"; zero-energy peaks observed
- Generated quasiparticles of electrons, possible qubits for topological quantum computers
- Didn't actually "observe" Majorana fermions; inferred them from electron scattering

cmelliot@illinois.edu

Put your contact information on the last slide

Don't use a pointless last slide

The last slide will get the longest audience exposure—make it count!*

First observation of Majorana fermions in semiconductor nanowires

Predicted in 1930s, never before observed

Used InSb nanowires as "nano-colliders"; zero-energy peaks observed

Generated quasiparticles of electrons, possible qubits for topological quantum computers

Didn't actually "observe" Majorana fermions; inferred them from electron scattering

cmelliot@illinois.edu

***Reiterate your important points and stimulate audience questions**

To recap…

- **Discuss important points of all aspects of the paper—background, methods, results, conclusions**
- **Emphasize what is new or different**
- **Present a critique of the paper—discuss strengths and weaknesses; estimate its likely impact**
- **Provide a title slide and a summary slide**
- **No more than a total of 8 or 9 slides**
- **This assignment is a collaborative effort; all members of the team should contribute**

cmelliot@illinois.edu