Template for a Journal Club Presentation

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Start with a “title” slide

“The Title of the Paper You’re Presenting”
Complete Bibliographic Citation

Presented by <Your Names>
Department of <your affil> • University of Illinois at Urbana-Champaign
PHYS 598PEN, <Date>

The title slide cues the audience “Get ready to listen”
Include an interesting graphic to grab their attention
Your talk should 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

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 background
- 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 right 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>

Be creative but not distracting

Theory • InSb Nanowires • 0-energy Peaks • MF Observed • Applications • Critique • Q & A
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<SLIDE STUFF>
Allow at least 2 min* per slide

Do the math:

25 min total – 3 min for Q&A = 22 min for “talk”

\[
\frac{22 \text{ min talk}}{2 \text{ min/slide}} = 11 \text{ slides max}
\]

11 slides – title slide – summary slide = 9 slides

*Allow more time for dense slides, equations, tabular data
How do you divide up your 9 slides?

1. Problem/motivation (1 slide)
2. Background—prior work/context (2 slides)
3. What is new and why it is significant (1 slides)
4. Methods (1 slide)
5. Results (2 slides)
6. Conclusions (1 slide)
7. Your critique of the paper (1 slide)
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

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Don’t use a pointless last slide

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

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*Reiterate your important points and stimulate audience questions
To recap...

Discuss all aspects of the paper—background, methods, results, conclusions

Be selective; distill your message to the essentials

Emphasize what is new or different

Present a critique of the paper—discuss strengths and weaknesses; evaluate its likely impact

Provide a title slide and a summary slide

No more than a total of 11 slides

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