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, December 3, 2021

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
Influential early 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

Place a running outline at the margins of the slide (bottom or right margin)
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<SLIDE STUFF>

Be creative but not distracting
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<SLIDE STUFF>

Theory • InSb Nanowires • 0-energy Peaks • MF Observed • Applications • Critique • Q & A
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<SLIDE STUFF>

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

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<SLIDE STUFF>

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

12
Allow at least 2 min* per slide

Do the math:

12 min total − 2 min for Q&A = 10 min for “talk”

\[
\frac{10 \text{ min talk}}{\approx 2 \text{ min/slide}} = 5 \text{ “content” slides max*}
\]

5 slides + title slide + summary slide = 7 slides

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

How do you divide up your 7 slides?

1. Title slide—problem, acknowledgments
2. Background—what audience needs to know (prior work)
3. What is new and why it’s important
4. Methods
5. Results and conclusions
6. Your critique of the paper
7. Summary slide—reiterate main points
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

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Don’t use a pointless last slide

QUESTIONS?
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  
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Didn’t actually “observe” Majorana fermions; inferred them from electron scattering

*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 seven slides  
Rehearse and revise (shorten); mind the time