

# How to Present a Journal Club Talk



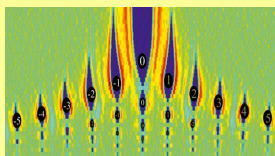
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## Start with a “title” slide

**“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 6, 2024**

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

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## 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)

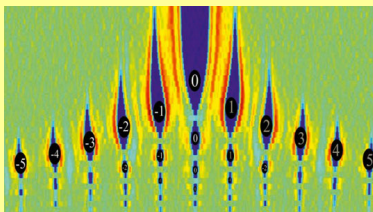
Use this paradigm to organize your presentation

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## 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*)

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

Today we'll discuss

Majorana fermions (MFs), theory background

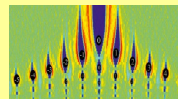
InSb nanowires used as "colliders"

Zero-energy peaks observed; believed to be electrons scattering off MFs

Could be used for solid-state qubits

Weaknesses of paper

Audience questions



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## 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)

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<SLIDE STUFF>

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

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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## 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



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## 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



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## 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



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## 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



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## Allow about 2 min\* per slide

**Do the math:**

15 min total – 3 min for Q&A = 12 min for “talk”

$\frac{12 \text{ min talk}}{\approx 2 \text{ min/slide}} = 5\text{--}7 \text{ slides max}^*$

7 slides – title slide – summary slide = **5 slides**

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

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## How do you divide up your five slides?

1. Problem/motivation/background—what audience needs to know (prior work)
2. What is new and why it’s important
3. Methods
4. Results and conclusions
5. **Your critique of the paper**

**Note #5**—the difference between a standard science talk and a journal-club talk

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## What is different about a JC talk?

### 5. Your critique of the paper

Put on your peer-reviewer hat

- Is the work valid?
- Does it represent a significant advance?
- Is it accessible?
- Are the figures well made and meaningful?
- Is the paper well written?
- How much of an impact has the paper had?

Note #5—the difference between a standard science talk and a journal-club talk

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## 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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Put your contact information on the last slide

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## Don't use a pointless last slide



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

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

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## 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**

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