#### Template for a Journal Club Presentation



Celia M. Elliott

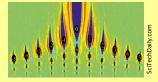
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#### Start with a "title" slide

"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 595, <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

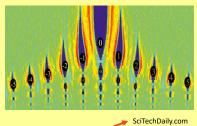
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#### What about an "outline" slide?

#### **Outline**

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



give credit for figures you use

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

Our assessment of the paper

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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)

### 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

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**<SLIDE STUFF>** 

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

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

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

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

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11

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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 at least 2 min\* per slide

#### Do the math:

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

22 min talk 2 min/slide = 11 slides max

11 slides – title slide – summary slide = 9 slides

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

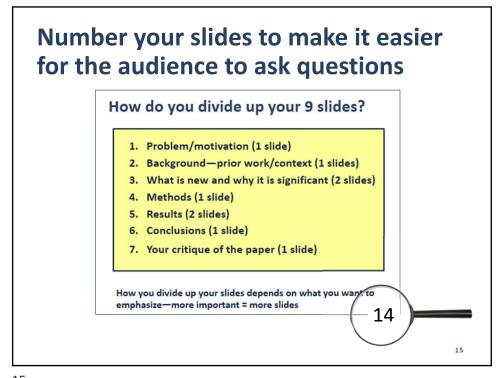
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#### How do you divide up your 9 slides?

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

How you divide up your slides depends on what you want to emphasize—more important = more slides



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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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\*Reiterate your important points and stimulate audience questions
Add your contact information 17

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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

Aim for about 11 slides total

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