Title: Writing about science for non-expert readers

Speakers: Scott Johnston, Rose Simone

Collection/Series: Training Programs (TEOSP)

Subject: Other

Date: March 24, 2025 - 2:00 PM

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Abstract:

In this session, we'll discuss the nuts and bolts of science writing for the general public. You'll learn how produce engaging science content for blogs and articles, as well as how to pitch ideas for publication in media outlets.

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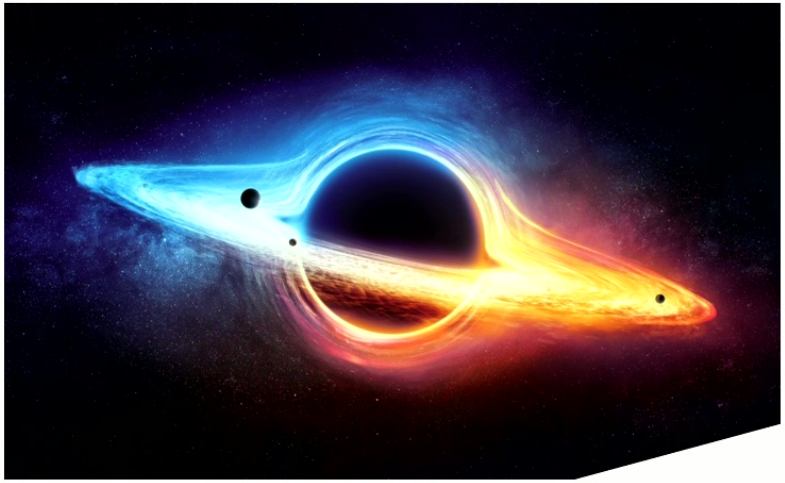
WRITING ABOUT SCIENCE FOR NON-EXPERT READERS

MARCH 24, 2025

Who am I?

What I'm going to talk about:

How to communicate science to non-expert readers (blogs, articles, webpages, etc.)



The current state of science writing

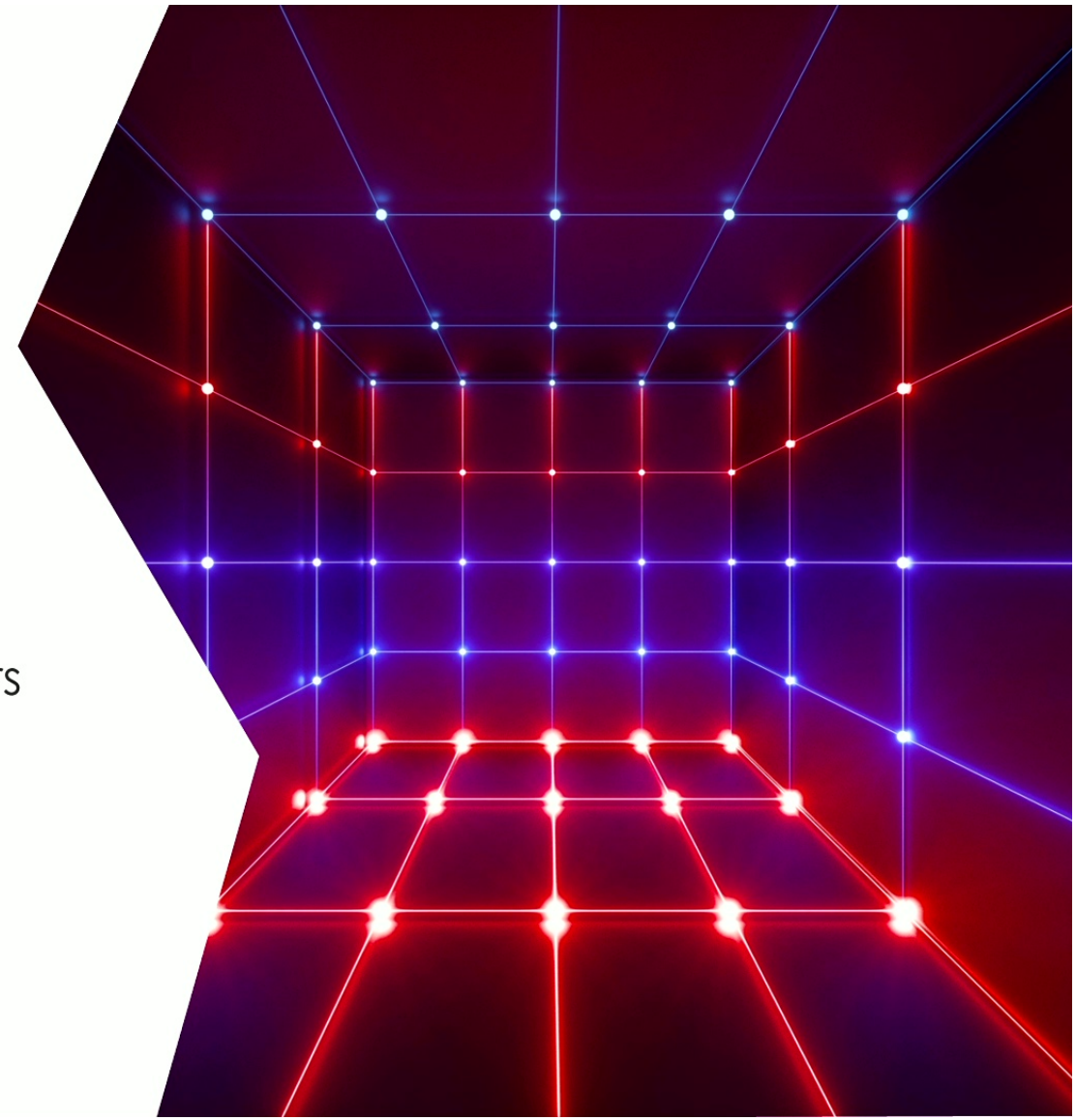
- Traditional journalism is losing subject matter specialization - generalists
- AI has changed the game, but it too remains generalized.
- So…specialization is vital to success.

Physicist have a superpower

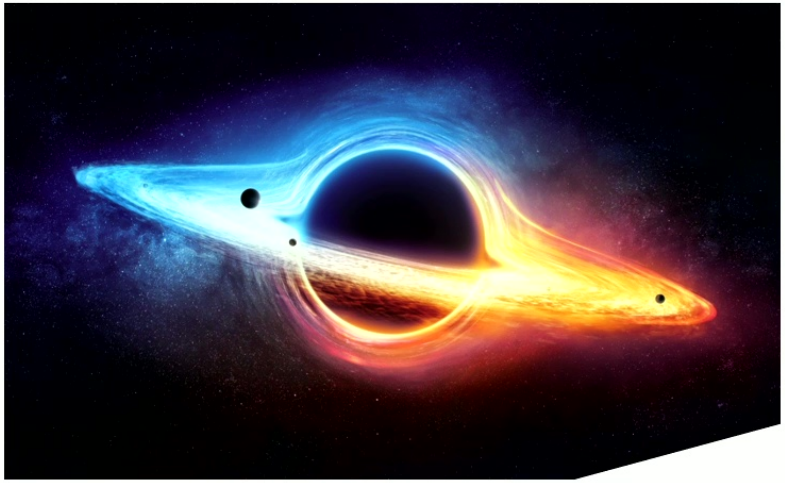
Write what you know, and lean into your niche

Physicist have a kryptonite

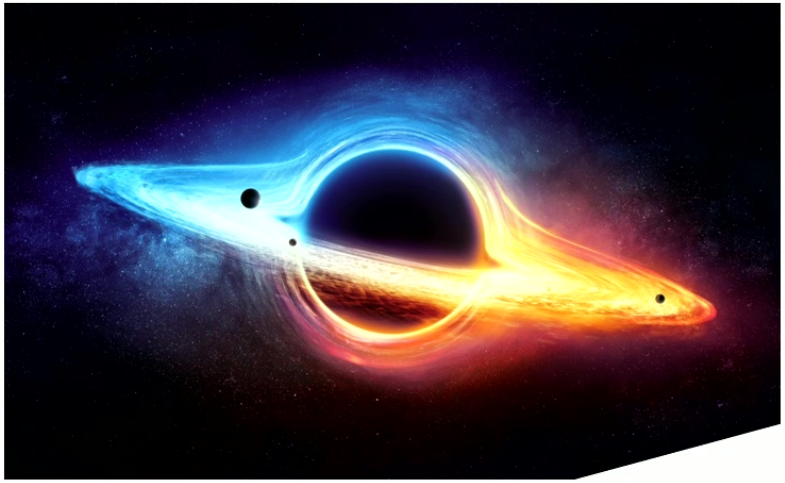
Reduce jargon, and meet readers halfway



How to write well and influence people



Don’t teach, engage



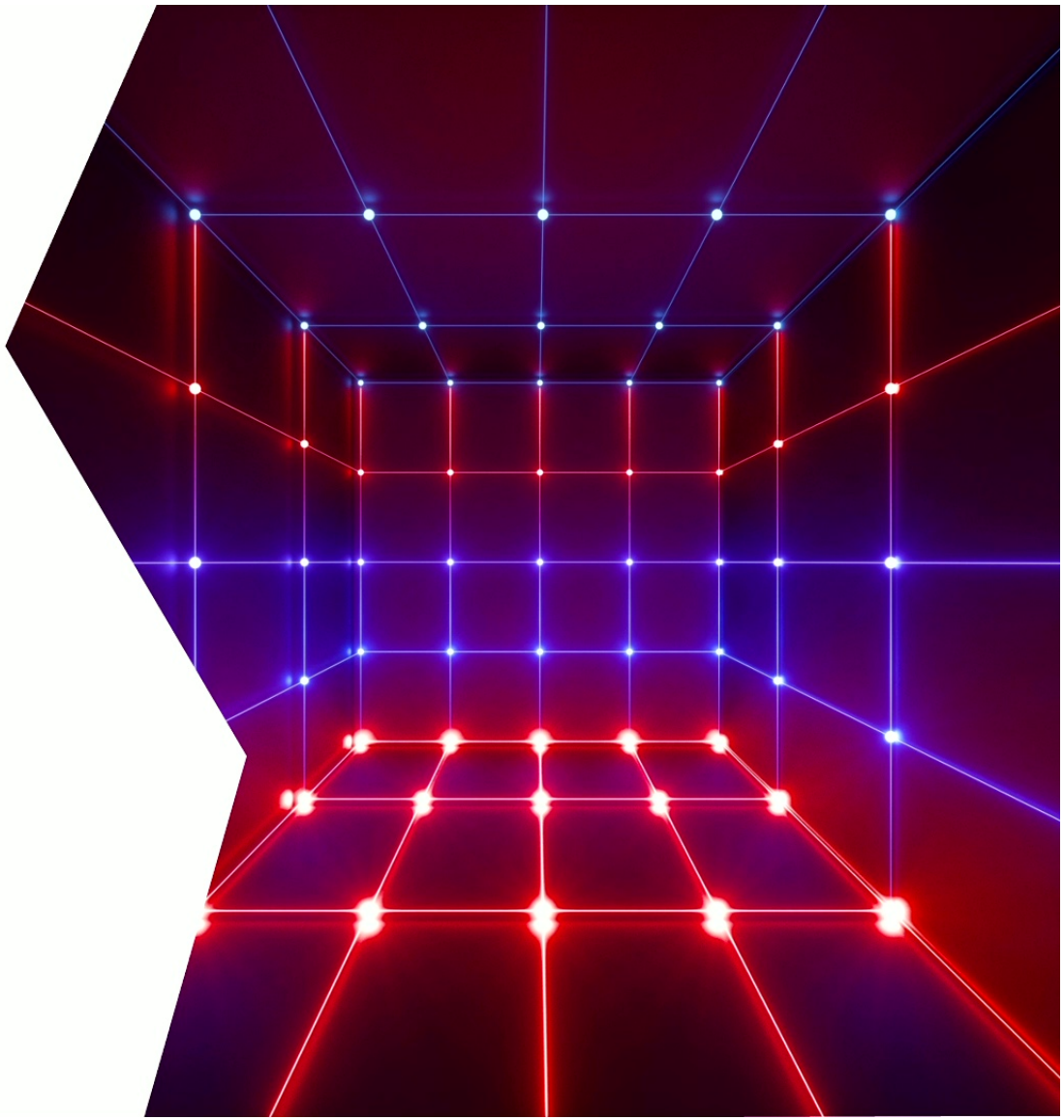
Types of stories

- Discovery!
- Struggle!
- Mystery!
- Transformation!
- Persuasion!

Give your story a beginning, middle, and end

A common 5-part story structure:

- The problem
- The State-of-the-field
- Your contribution
- Your challenges
- What's next?



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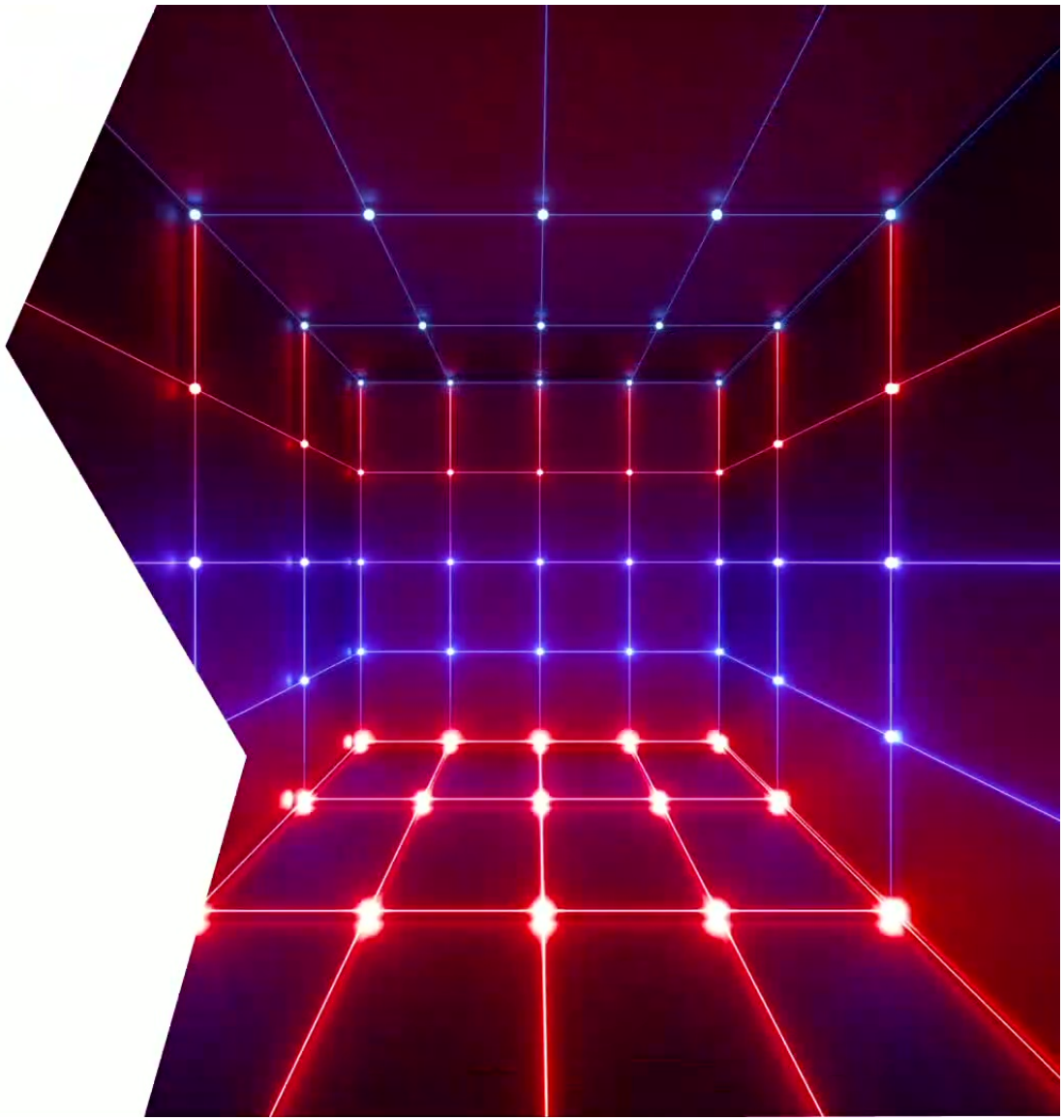

Put yourself in the story

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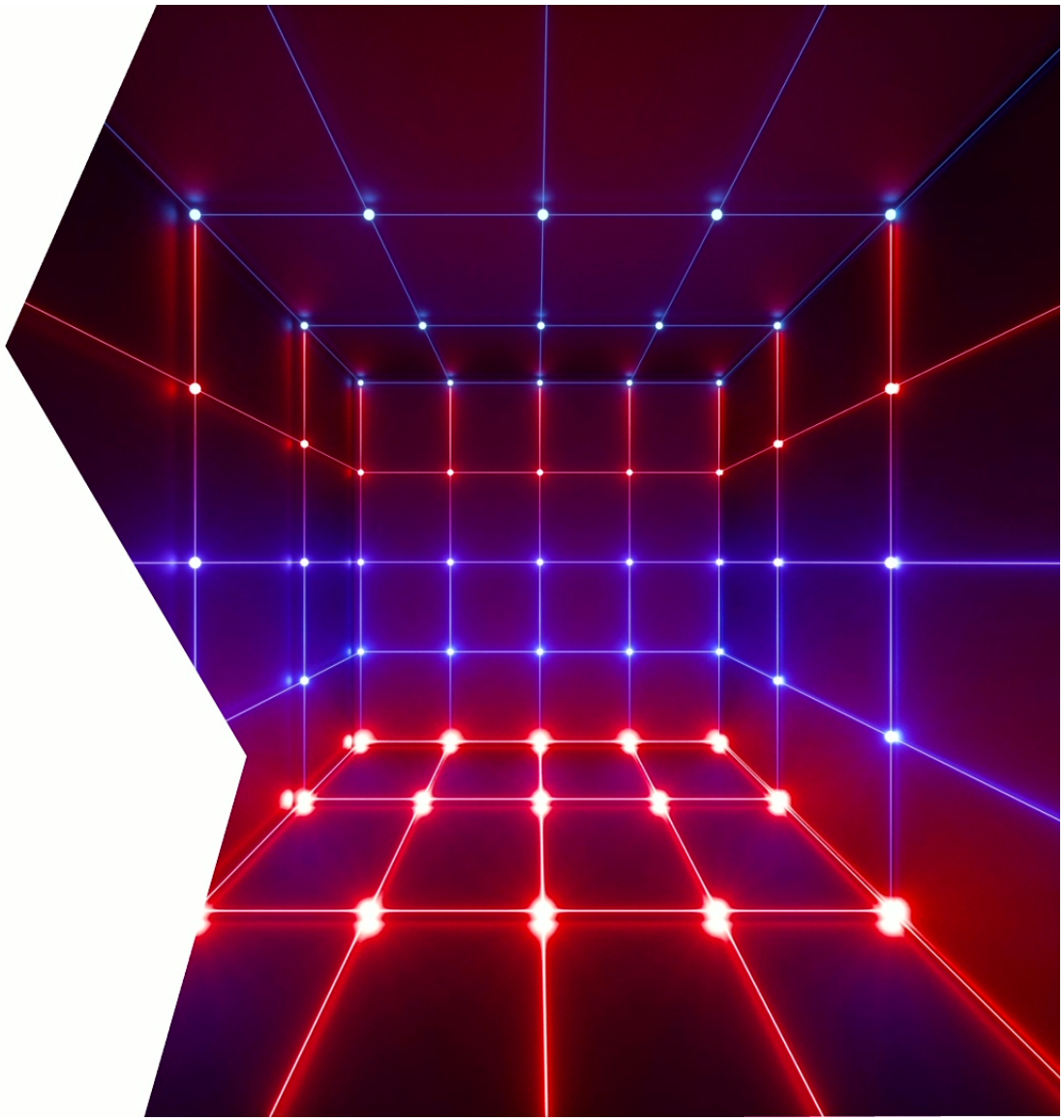
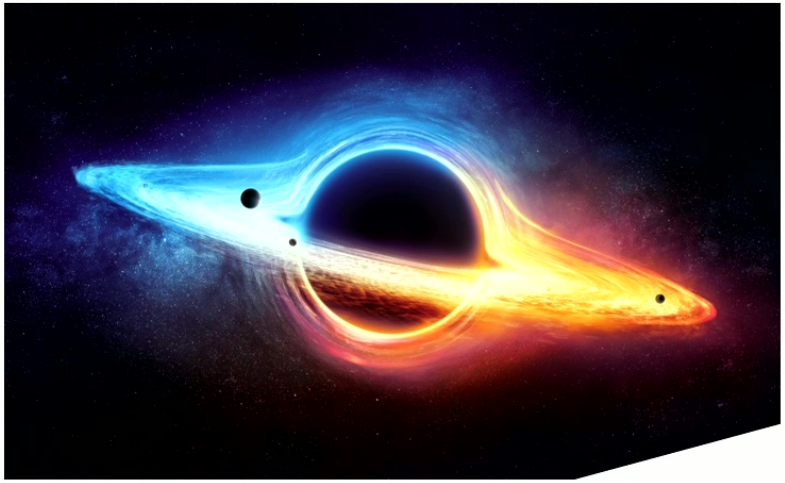
- Your challenges
- What's next?

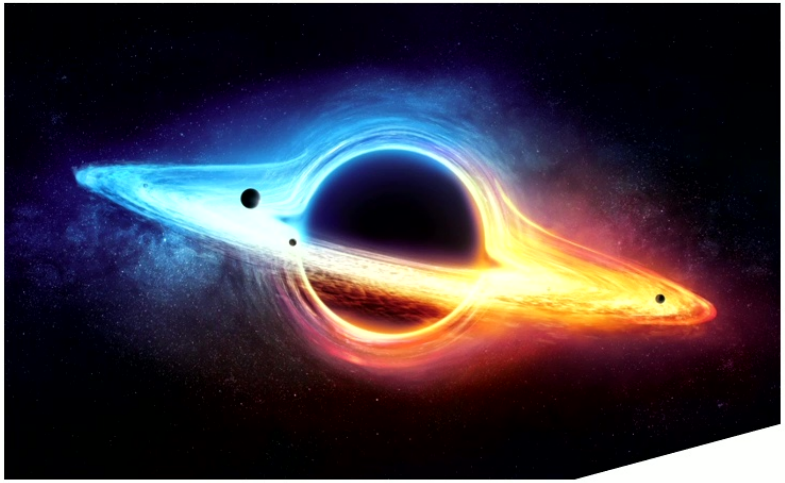




Tips and tricks

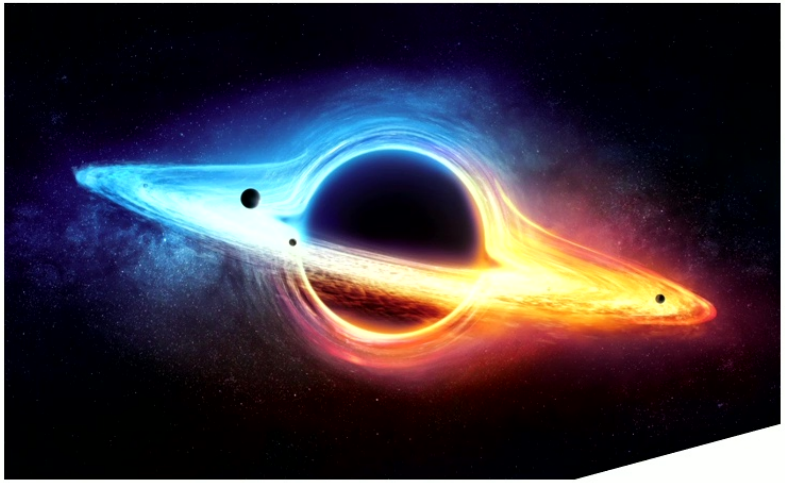
- Don’t bury the lede
- Get a good editor

Interlude: but what if I don't have an editor?



Tips and tricks

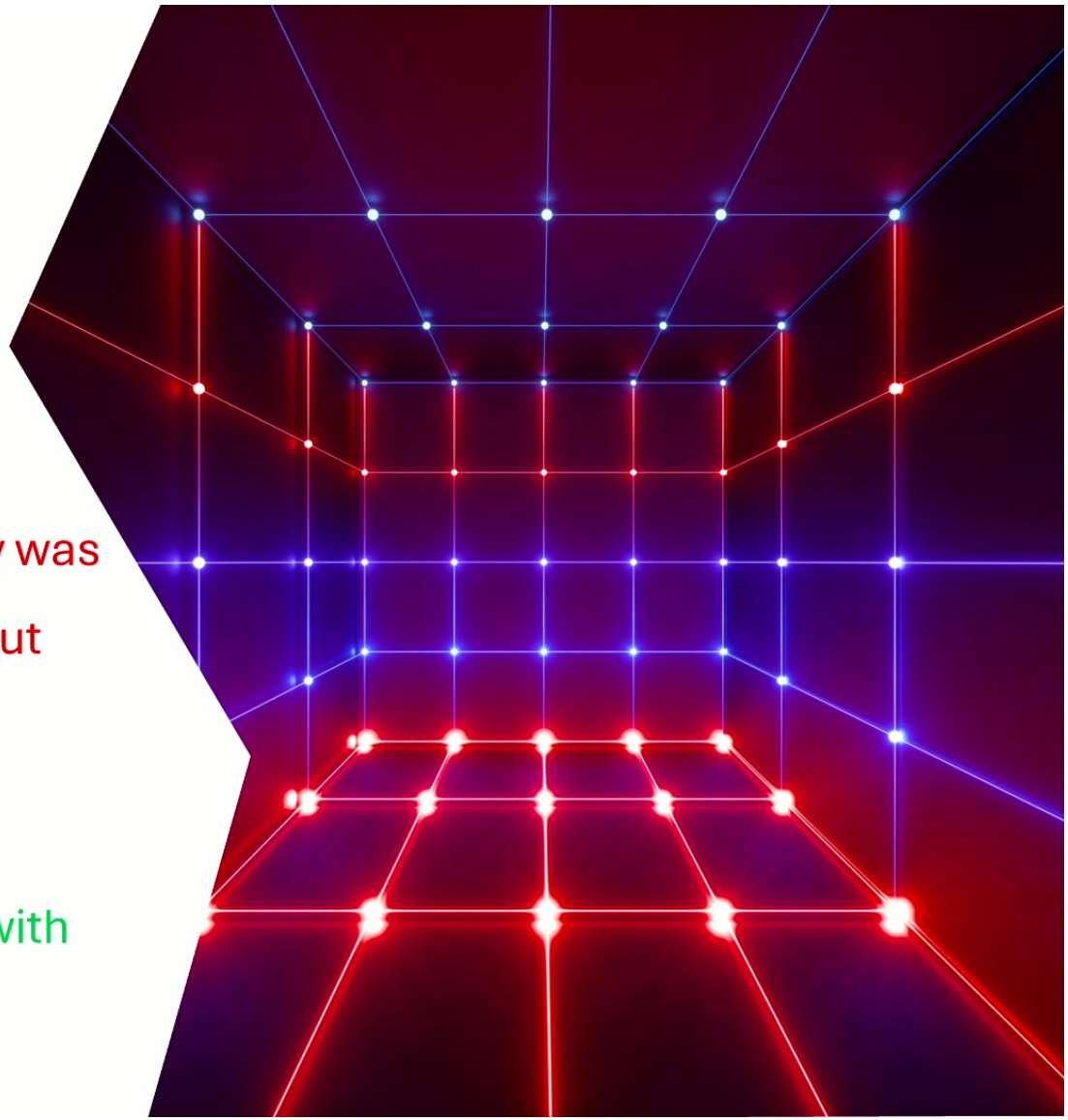
- Don’t bury the lede
- Get a good editor
- Seriously though, get a good editor
- Think about audience



Tips and tricks

- Don’t bury the lede
- Get a good editor
- Seriously though, get a good editor
- Think about audience
- Be accurate but not precise

More Tips and Tricks



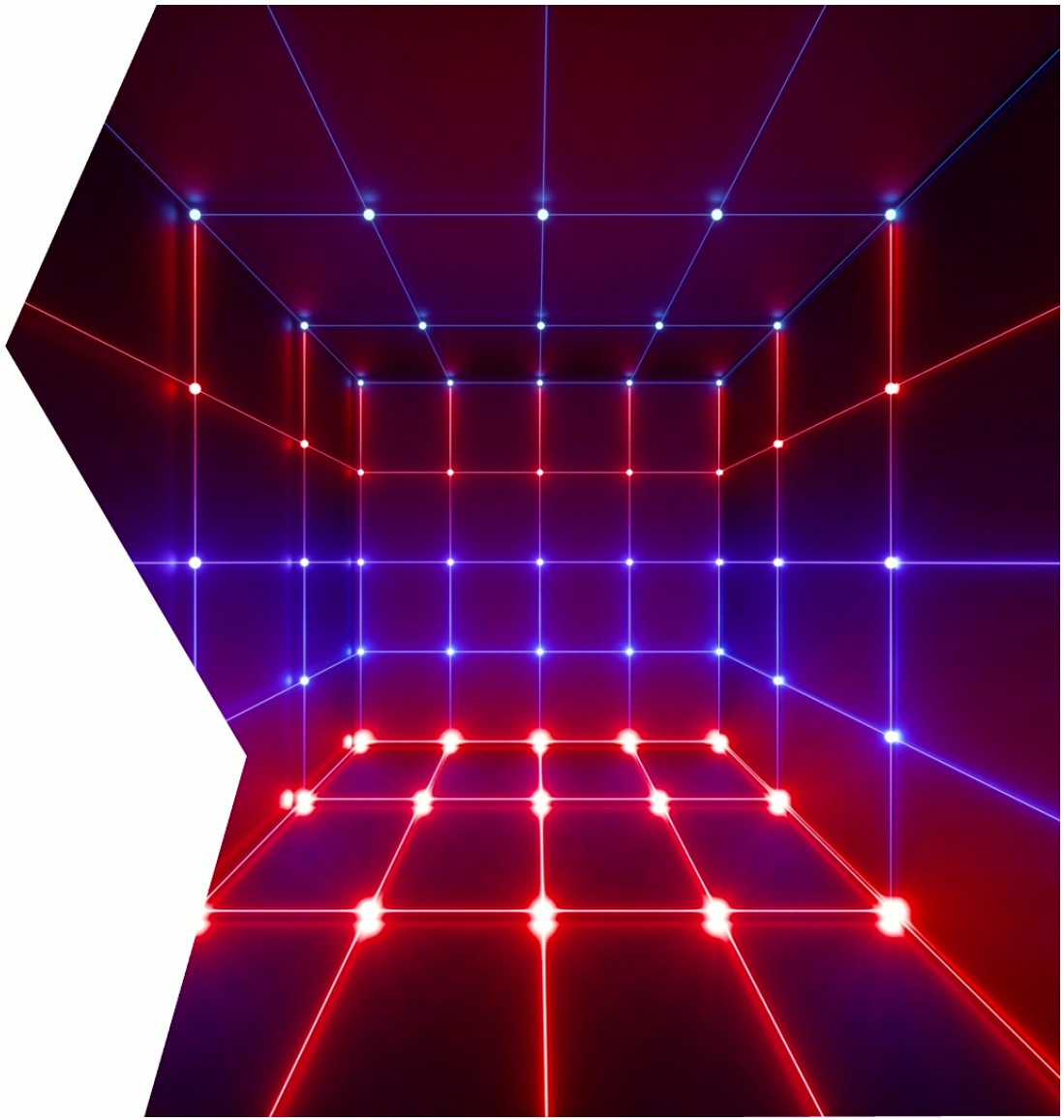
"I believed very strongly that the theory was not testable with current technology, but was pleasantly surprised to be proven wrong."

"I believed the theory wasn't testable with current technology. I was wrong."

More Tips and Tricks

“The homework was eaten by my dog.”

“My dog ate my homework.”

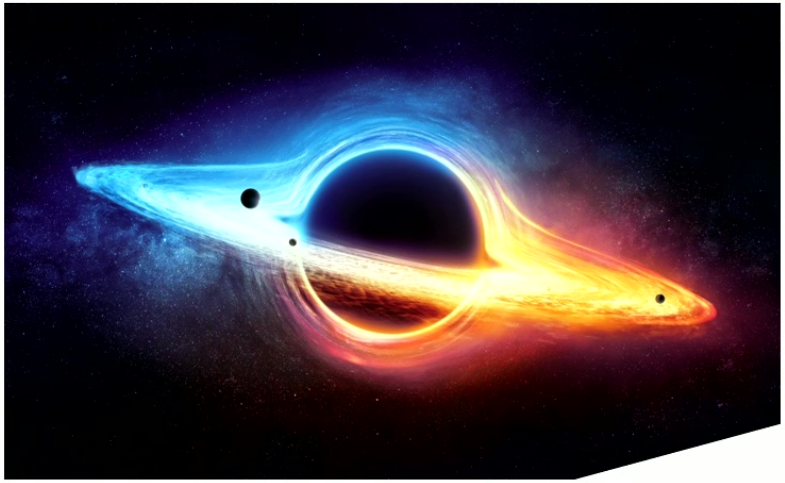


More Tips and Tricks

"Since the beginning of time, humanity has asked big questions about the universe."

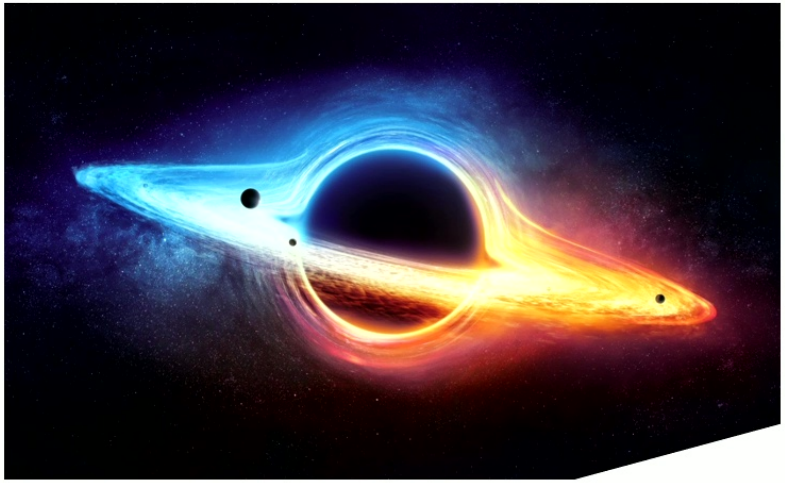
"This question has stuck with me since I first heard Carl Sagan speak about it when I was a child."

"Here's the question I want to answer:"



Even more tips and tricks

- Your introduction and conclusion will say the same thing – almost



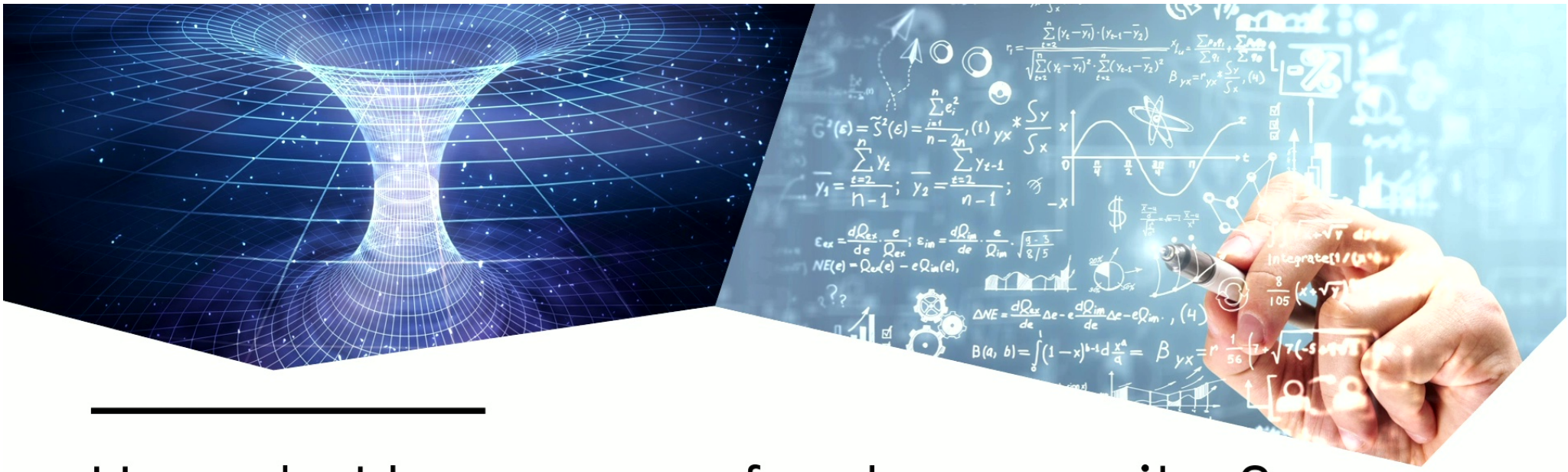
Even more tips and tricks

- Your introduction and conclusion will say the same thing – almost
- Avoid repetition
- Tangents hurt more than they help
- Avoid repetition

Writing headlines

Writing about controversial topics

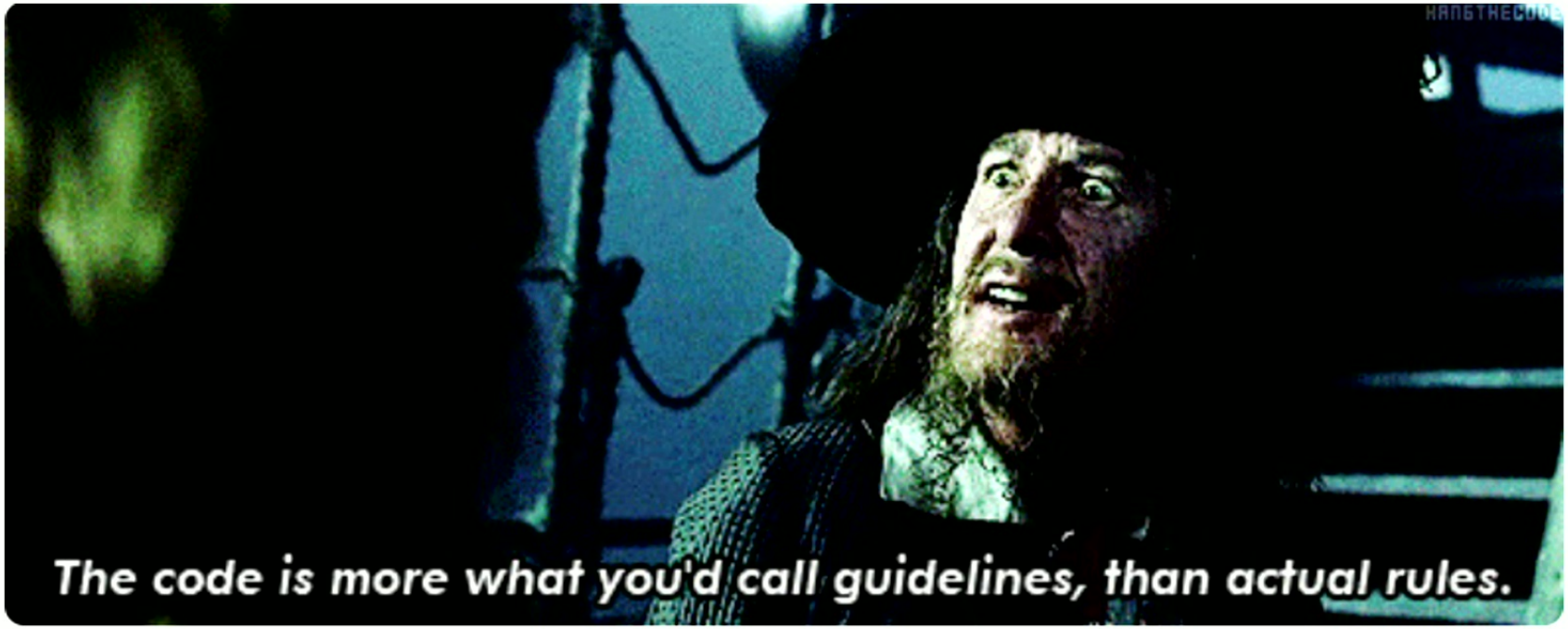
Should I use AI to write?



How do I become a freelance writer?

Final thoughts

Successful Scicomm = Niche – Jargon + Story + Personality


The code is more what you'd call guidelines, than actual rules.

Want to connect?

communications@perimeterinstitute.ca


THANK YOU
25 YEARS
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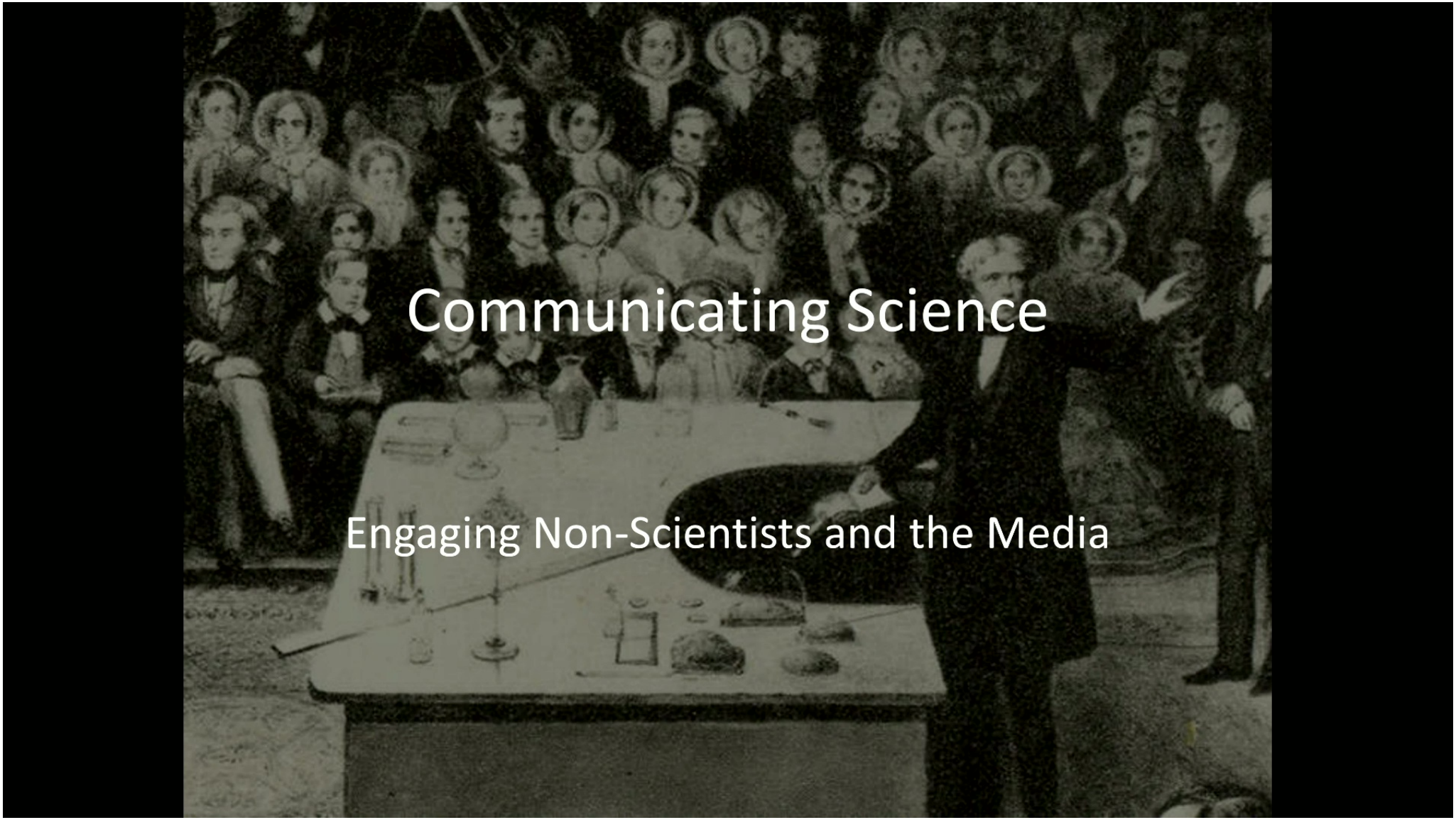
We are Explorers.


Communicating Science
Engaging Non-Scientists and the Media

Introduction

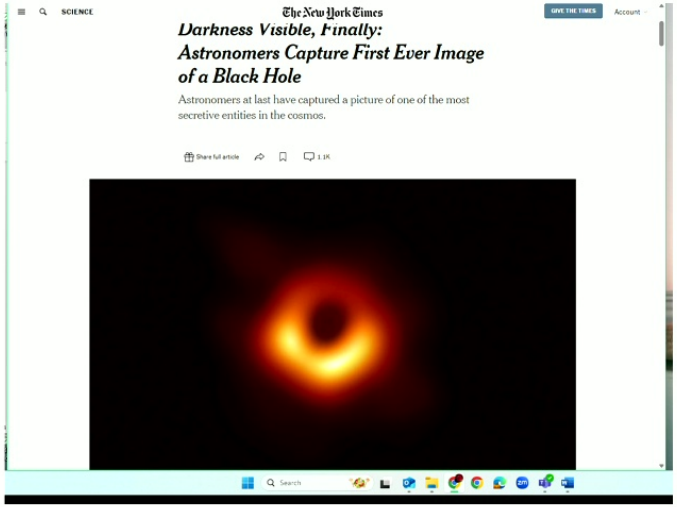
- • Background in journalism (Ontario newspapers)
- • Covered various topics, with a passion for science writing
- • Academic background: Journalism, Political Science, Carleton University, Ottawa
- • Science communication is about understanding and engaging your audience

Do You Need a Science Degree?

- • A science degree helps, but effective communication is key
- • Some scientists are great communicators, others are not
- • Example of great communicators: Carlo Rovelli, Claudia de Rham

Why Clear Science Communication Matters

- • Prevents disconnect between science and public perception
- • Encourages public support for science funding
- • Helps counter misinformation and conspiracy theories
- • Inspires young minds to pursue science\



Risks in Science Communication

- • Risk of being misunderstood or sensationalized
- • Potential loss of public trust or institutional credibility
- • Media may oversimplify or misinterpret findings

NASA Responds To Rumors They've Found Alien Life

Yesterday we brought you the rather odd news that hacking group Anonymous thought NASA was going to announce they'd found intelligent alien life. Today, NASA have responded.

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Mitigating Risks

- • Work with reputable science journalists
- • Consult your institution’s communications team
- • Offer to clarify explanations for journalists
- • You can ask for corrections
- • Understand media deadlines, limiting pre-publication reviews

Best Practices for Interviews

- • Prepare point-form notes to stay focused
- • Live interviews are preferable for better engagement
- • Show personality – makes interviews more engaging
- • Be yourself and take confidence in your expertise
- • Try not to ramble; allow for questions and clarification

Strategies for Clear and Engaging Science Communication

- • Emphasize the 'why' behind research (applications, significance)
- • Avoid jargon; use clear and simple language
- • Use analogies and metaphors cautiously but effectively
- • A picture is worth a thousand words
- • Use accessible graphics, images, and videos
- • Keep visuals simple and relevant

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The Power of Storytelling
• People connect with stories more than data
• Share your journey and enthusiasm for science
• Relate science to everyday experiences or hobbies

Presenting complex learning with confidence and impact

Conclusion

- • Science communication is vital for public engagement
- • Risks exist but can be managed
- • Clarity, storytelling, and visuals enhance understanding
- • Every scientist can be a great communicator with practice

Thank You

- Happy to take questions!