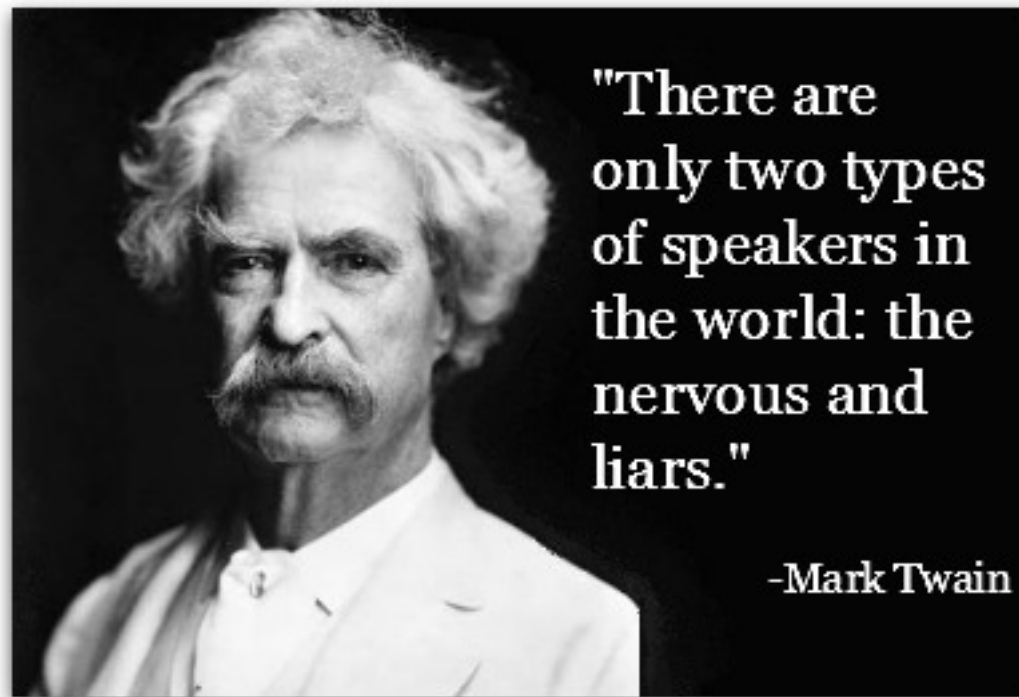


# Clear, Concise, Compelling: How to Present your Science to Best Effect

Sinéad Griffin (@sineatrix)  
Berkeley Lab/UC Berkeley



# Task: Open Day Talk

Some high school students are visiting your university (16-18 years old).

You have **one minute** to describe **one** of the following:

- 1. Your research project/thesis**
- 2. What your research group do**
- 3. A recent exciting discovery in your field**

# What makes a **bad** talk?



What makes a **good** talk?



## How to deliver you talk

Voice and delivery  
Body language

## Anatomy of a Talk

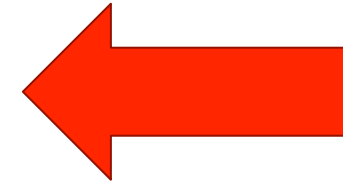
Good introductions  
The body of the talk – tips  
Answering Questions  
Dealing with nerves

## The Elevator Pitch

Presenting your science in  
3 minutes

**How to deliver you talk**

Voice and delivery  
Body language



**Anatomy of a Talk**

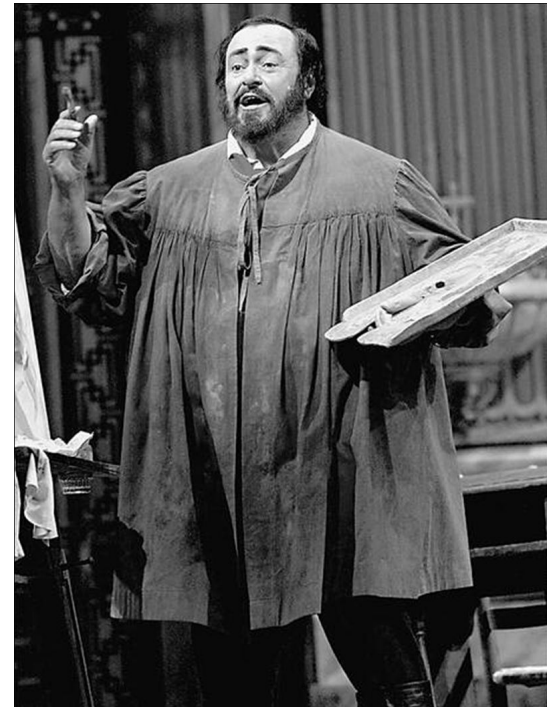
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# How should you sound?

- **Good posture**
- **Pitch!** Try not to squeal! (words aren't as audible)
- **Vary the tone** – not all flat
- Don't shout, but be audible – speak to the person in the corner of the room
- Don't cover your mouth
- Practice words that you find difficult (and include them in your slides in some cases)

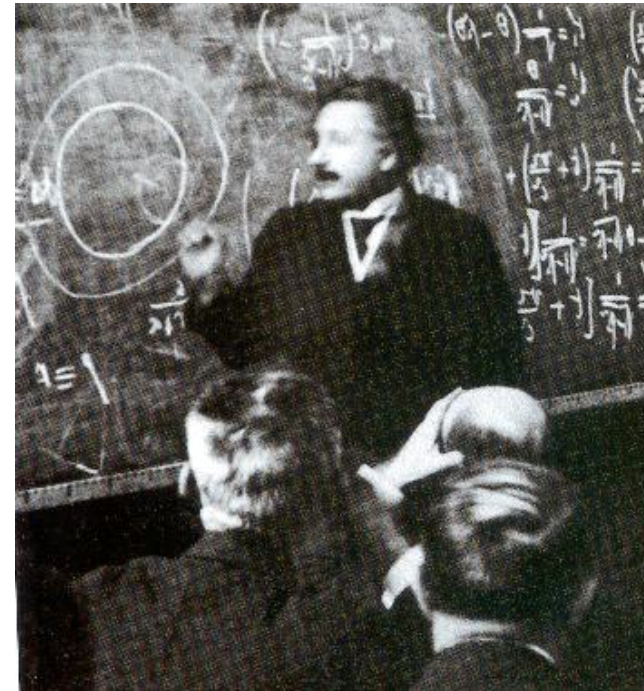


# Very Special Relativity: The Pause

- Pauses **appear much longer to you** than they are to your audience
- **Why bother?**
  - Increase impact and emphasis
  - Give the audience a break
  - Give yourself a break!
  - Can recover if you are lost

*5-10 second breaks at appropriate times*

*Can put a reminder into your slides*





# Facial Expressions and Eye Contact

- There's no wrong way
- Be genuine
- **Eye contact** with every part of the room – don't fixate on one corner or person

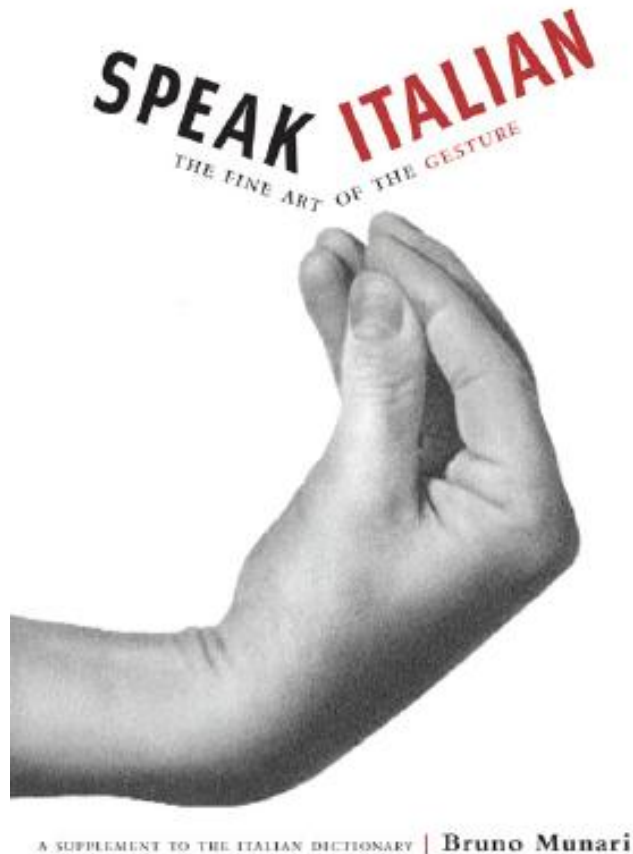


# Your Body Language

- Dress appropriately
- Be aware of your posture



# Keeping it Lively: Gestures



- Makes a talk very lively
- Practice in front of a mirror
- Use gestures congruent with words
- Examples:
  - *One on hand, on the other hand*
  - *As we lower the temperature, the percentage increased*
  - *I would like to give a broad outline and then give some details*

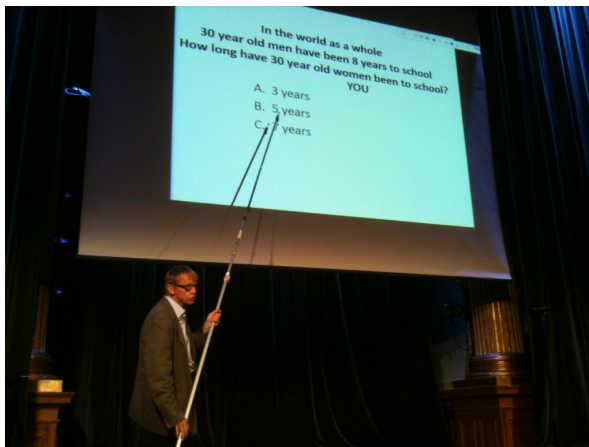
# Making use of the stage



- Try not to stand in one spot the whole time (for longer talks)
- No nervous pacing
- Move to interact more with your audience

# Friend or Foe? *The Laser Pointer*

- Can be a good alternative to cumbersome sticks/pointers
- Use it sparingly!
- Be careful of shaking hands
- Hold the pointer in place for long enough



# Things to Avoid

- Covering your mouth
- Crossing your arms
- Fidgeting, or playing with things: have a strategy!
- Reading your slides
- Watch out for cables
- Empty your pockets
- Familiarize yourself with equipment

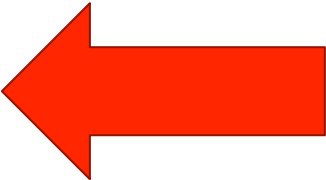


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# Have a confident beginning

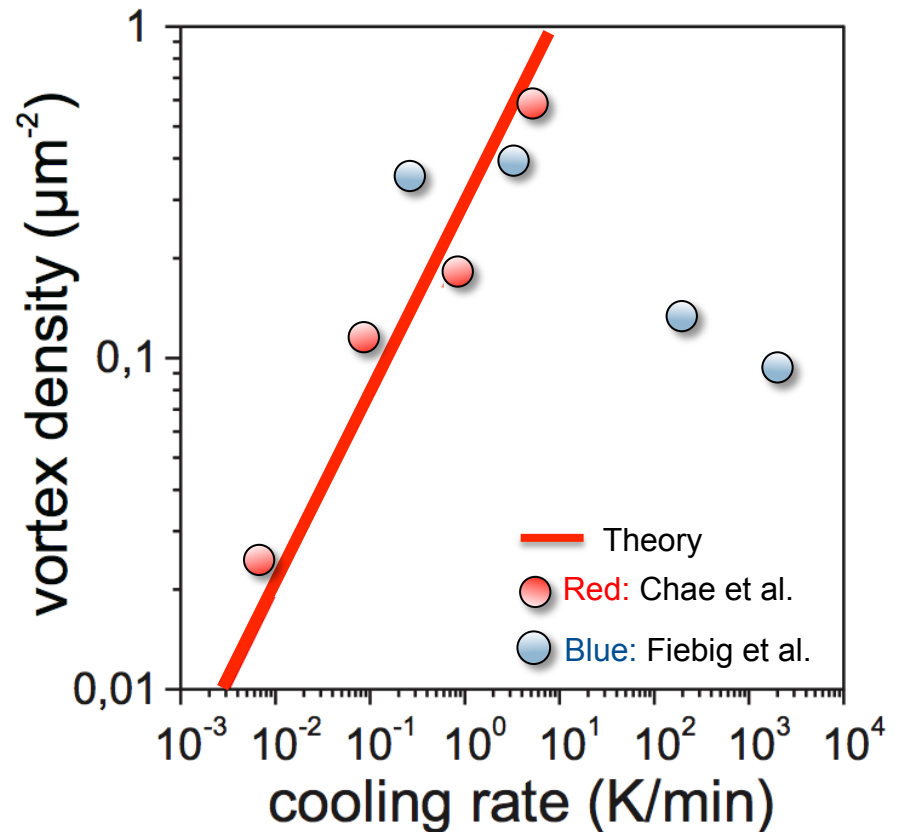
Ahem!

- Dress appropriately
- Check that your laptop works before your talk
- Organise/check a pointer
- Courtesy of Kings: be on time!
- Before you start look around the room and make some eye contact. Familiarize yourself with the room.
- Check your posture, smile!
- Thank the chair/ Introduce yourself
- **KNOW THE BEGINNING BY HEART!**



# Graphs are Easy...

1. Explain in general what you have plotted (description of the title)
2. Describe your x-axis with units, and your y-axis with units
3. Point out the different lines/features of your graph and the legend
4. Explain the key features of your graph in more detail
5. Reference



# ...and the end: Questions!!!

This is **your** research, you know what you have done

## *What is I don't know the answer?*

- Ask them to rephrase/clarify the question
- Acknowledge their point and say that you can discuss it after the talk
- It's ok to say you don't know!
- If it's not relevant, address why it's not and move on
- You can repeat the question out loud to give yourself time to construct an answer

And finally have a definite, pre-planned ending, and thank everyone.

# Practice Makes Perfect

- On your own, with your research group, colleagues
- Pay attention to the beginning, the ending, and the transitions between slides

Aspect	Comments
<b>Head</b> Structure, clarity, easy to follow, language, articulation	
<b>Hand</b> Posture, gesticulation, eye contact, use of visual aids	
<b>Heart</b> Sincerity, personal style, in touch with listeners, enthusiasm	
<b>Other observations</b>	

# Dealing with Nerves: Tips and Tricks

- Practice!
- Nerves are a good thing: use them to your advantage
- Concentrate on speaking clearly and loudly
- Adopt a confident posture (even if you don't feel that way!)
- Eye contact and a smile at the beginning



**How to deliver you talk**

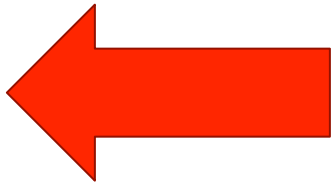
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# The Elevator Pitch

- **Open days**
- **Attracting students**
- **Funding**
- **Journalists**
- **Generally explaining what you do**



**The most important thing  
is...**

**The most important thing  
is...**

***The Beginning!***

- ONE point, question or statement
- Should summarize what you'll talk about
- **Make it engaging for your audience**



# How it's different from a usual scientific talk

- No slides
- Very short!
- Your audience will probably not understand your scientific jargon
- You have to convince the audience that they want to listen to you
- You need to know the structure of your talk in your head (again, can't rely on slides)



# How to Open Your Talk

1. An interesting piece of evidence or fact

*Particle accelerators are used to dry the paint on soft drinks cans.*

2. An anecdote about you or something the audience will be familiar with

3. Statement or Question that you will address – build suspense

4. Something funny

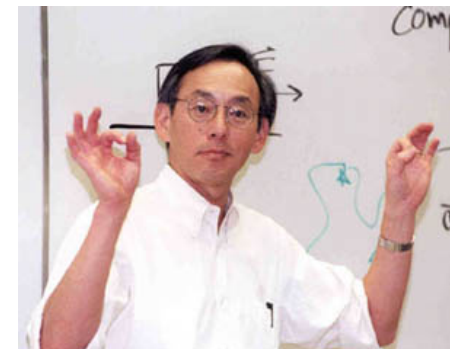
5. A scenario (Imagine that ...)

*Above all, make sure it's interesting!*

The audience will decide whether or not to pay attention to the rest of your talk in these first 30 seconds, so don't give them an excuse not to.

# Some good openers

- Clip – Tom Whyntie (famelab winner 2009)
- **Queen's** Speech at the 40<sup>th</sup> Anniversary to Her Succession:  
*"1992 is not a year on which I shall look back with undiluted pleasure. In the words of one of my more sympathetic correspondents, it has turned out to be an 'Annus Horribilis'. I suspect that I am not alone in thinking it so."*
- **Steven Chu** at Commencement Address of Ponomo College:  
*"Normally, commencement speakers are like corpses at an Irish wake — we're needed for the ceremony, but no one expects us to say much."*



# What should you talk about?

- Something that you find interesting
- Something that you know a lot about
- Something you can explain in under 1/2/3 minutes!

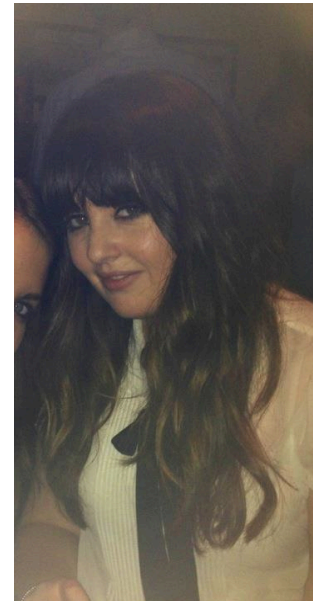
**Your talk should answer ALL of the following questions:**

- 1. What is it?*
- 2. Why is it important or interesting?*
- 3. Why does it matter to the audience?*

# Who are your audience?

*For a general, but intelligent, audience:*

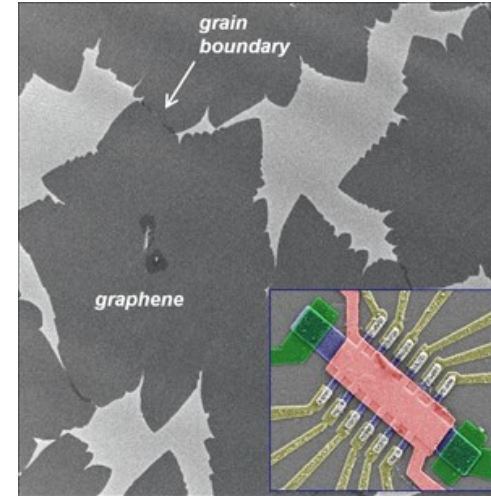
- Absolutely **no jargon** – explain every term you use
- Don't assume any knowledge
- Take the audience by the hand and guide them through your talk
- Have an Emma in mind



# Structuring Your Talk

## *Zooming*

- Start from a broad concept
- Add layers of detail
- Ending zoom out again

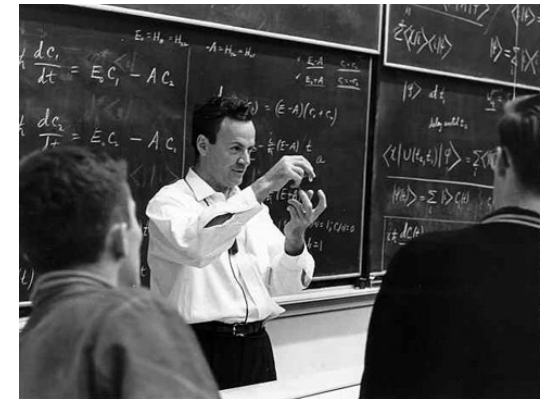


## OUTLINE

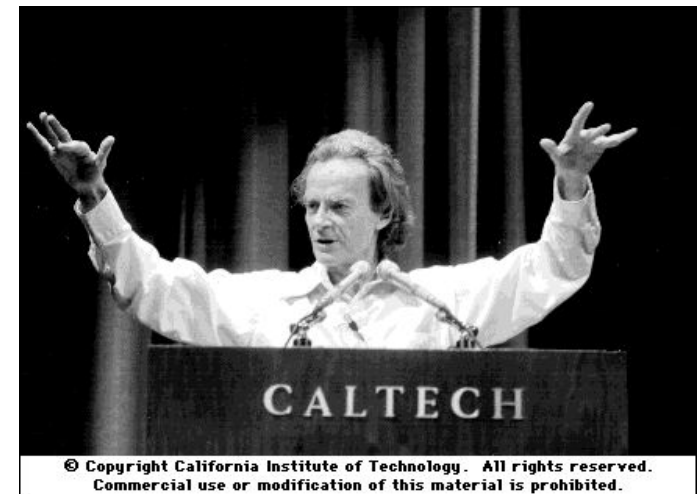
- Opening: Statement/Question, etc.
- Up to 1 minute of introduction (anecdote, scenario, etc.)
- Zoom in: Explain the concept in a simple manner (and repeat if necessary)
- Zoom out: Summary and link back to beginning

# Making it Interesting

- Suspense and conflict
- Very relevant examples that the audience will relate to
- Strong, vivid language
- References to history, art, music, etc.
- Gimmicks?



- Try not to fiddle with anything or cause distraction
- Address the whole room (and not just one person)
- Move a little (but not too much)
- Gesture and use your hands



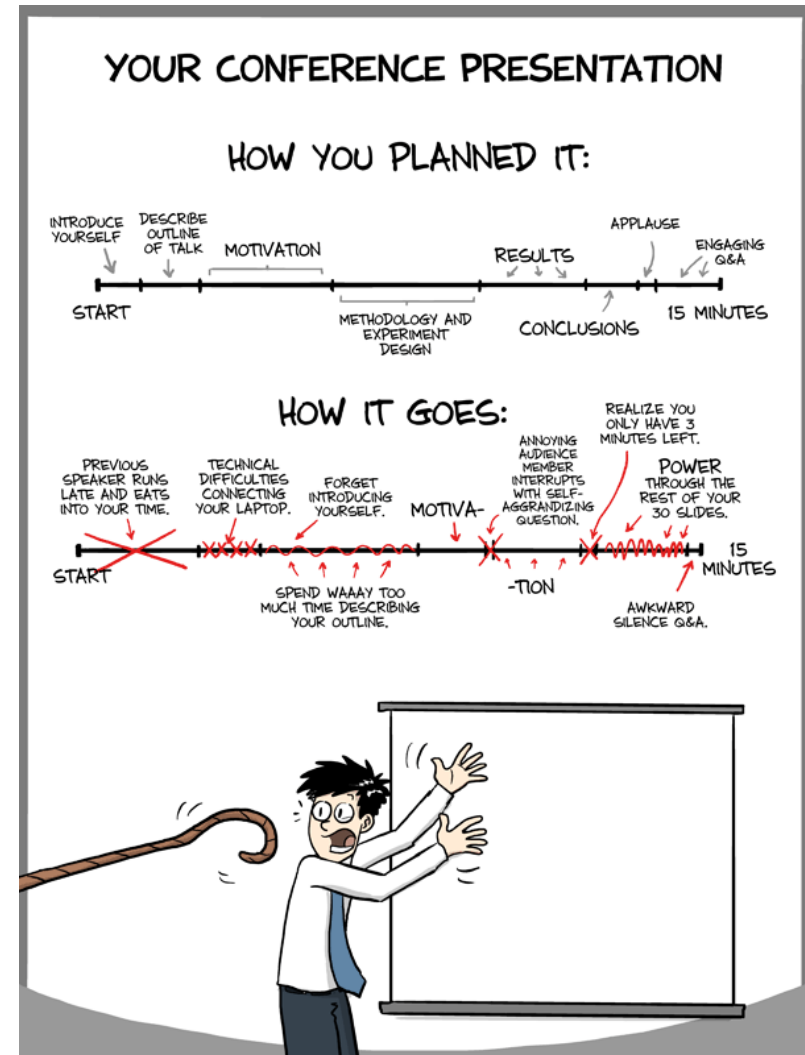
# Something things to Avoid...

- Trying to be funny and failing!
- Jargon
- Saying something is 'cool', 'really interesting' or 'fascinating'
- Telling the audience what they should think about something



# How to improve

- Practice!
- Watch some excellent speakers:
  - ted.com
  - fallingwalls.com
- Ask for feedback



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