

# Presentation in Front of an Audience

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# Eighteen fundamental skills of a scientist

1. How does science work?
2. What is research?
3. Identifying good research problems
4. Writing papers
5. **Presentation in front of an audience**
6. Obtaining funding
7. Reviewing/refereeing the work of others
8. Teaching
9. Guiding students, running a lab, managing projects
10. Scientific creativity
11. Information finding
12. Career planning
13. Interacting with people and networking
14. Marketing your skills: job hunt
15. Balancing your life between work and family
16. Coping with stress
17. Ethics in science
18. Appreciation for quality rather than quantity



# Overview

- **Why to present?**
- **Presentation materials**
- **Presentation skills**
- **“Elevator pitch”**
- **Being on the other side**
- **Concluding remarks**

# What is the big deal about presentations?

- One of the easiest ways of advertizing your work
- Do it whenever you can
- Scientific meetings are a great opportunity for networking

## Hint:

- **The best teacher of presentation skills is practice, so do it as often as you can**
- Whenever a colleague/friend is visiting town, invite him/her to give a talk at your institution
- Whenever you visit anybody, arrange to speak about your work

## The ground rule

# You present to be understood

... in order to “sell” your work

... in order to get feedback

- Be as clear as you can, so that as many people as possible understand you
- Only then will they be able to give you feedback
- Welcome the audience’s feedback, be genuinely thankful for their time and questions

# The audience

Why to present?  
● Presentation materials  
Presentation skills  
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- You have to know who the audience are
- Prepare presentations that target the audience
- Keep contact with the audience



## The structure of the talk

- Similarly to a paper, your talk has to have a clear structure and logical flow
- Introduce and motivate the problem that you are going to talk about
- Show your way of addressing the problem
- Stress the conclusion and the “take home” message (what you would like the audience to take out of your presentation)

## Your presentation materials: Slides

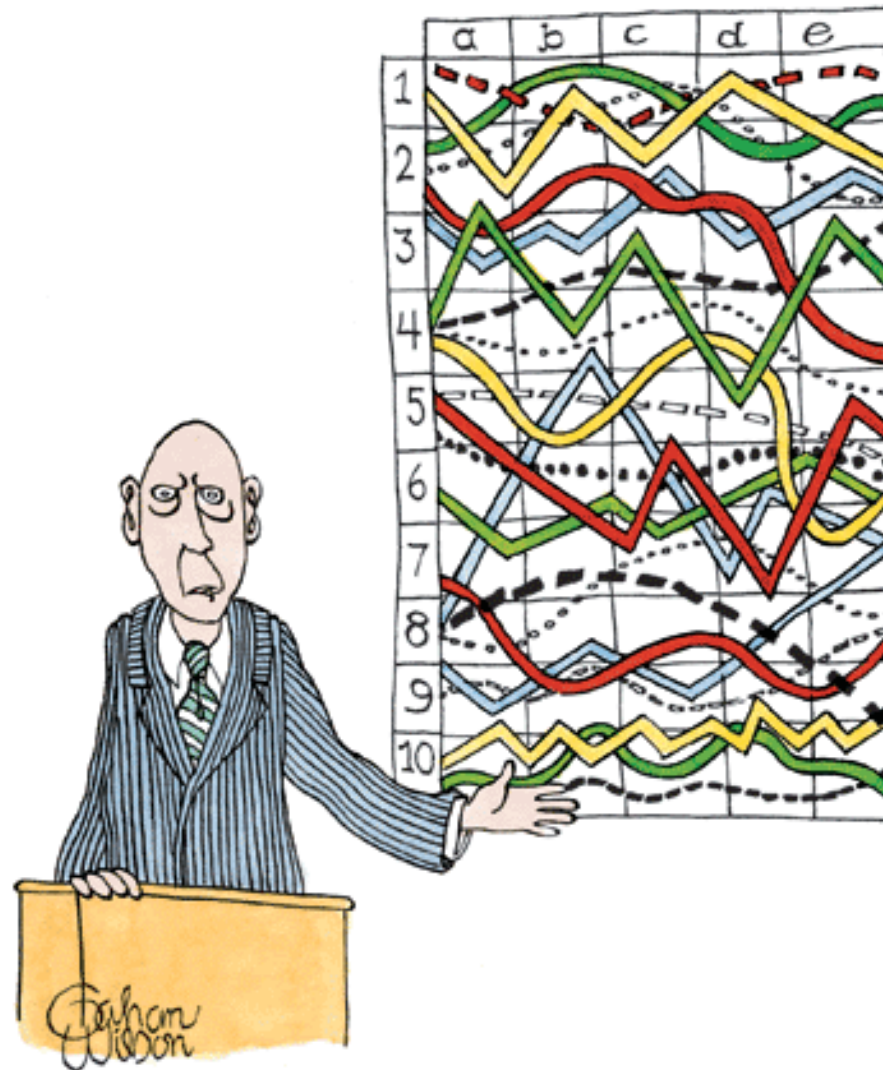
- Not too much text
- Sufficiently large font
- Some guidance to the audience as to how far into the talk you are (look at the guide in the upper-right corner of this slide 😊)
- Pictures and graphs, whenever appropriate  
“A picture is worth more than a thousand words”  
(usually 😊)
- Less is often more – do not overload your audience with too much information

## Your presentation materials: Audio, video, demos

- Audio elements
- Movie clips: Provide a nice diversification
- Software demos: Can explain difficult concepts much easier than “dry” slides
- Telling a joke is great but a little risky. Do not attempt it if you are not humorous by nature.
- Avoid risky jokes and risky statements



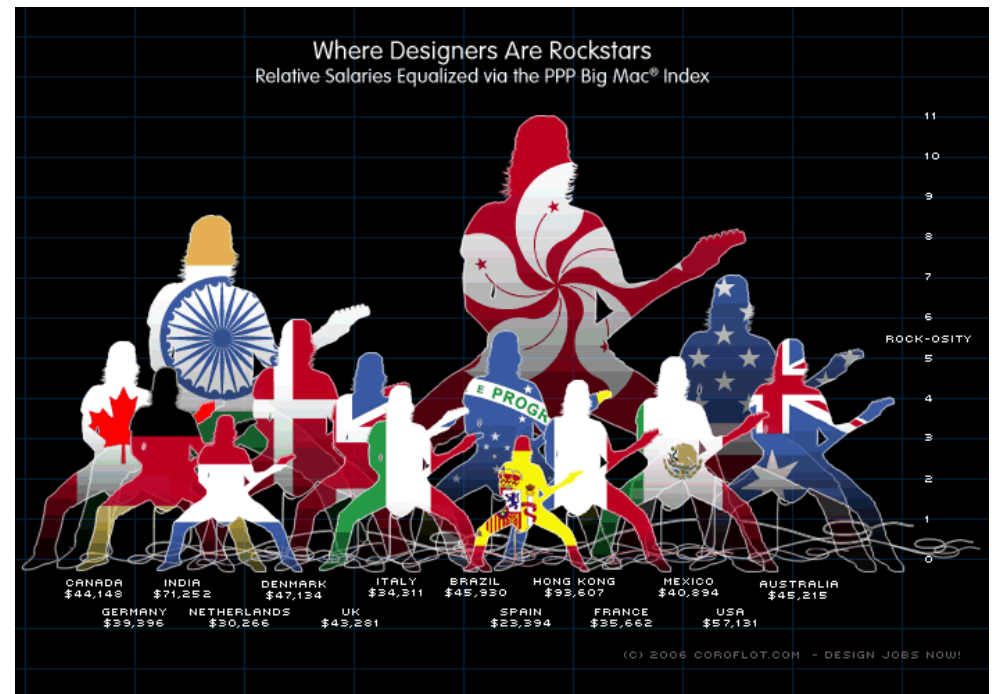
# Your presentation materials: Audio, video, demos



*"I'll pause for a moment so you can let this information sink in."*

## Your presentation materials: “Beautifiers”

- Animation: Use it but only whenever it serves its purpose
- Sound effects: **Don't use at all!**
- Not too many colors



## How much time should you plan for?

**Absolutely not more than the allotted time**



# How many slides should you plan for?

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**Heuristic: one slide a minute of the allotted presentation time**



## How do you start?

- “Today I am going to talk about ...”
- “Thank you for this generous introduction.”
- “It is a pleasure to be here after a five years long break.”



[http://en.wikipedia.org/wiki/Ruth\\_Westheimer](http://en.wikipedia.org/wiki/Ruth_Westheimer)

## Your speech

- No stop-words (hmm, aha, actually, etc.)
- Do not read your text, say things in your own words, explain as if you were explaining to your colleague

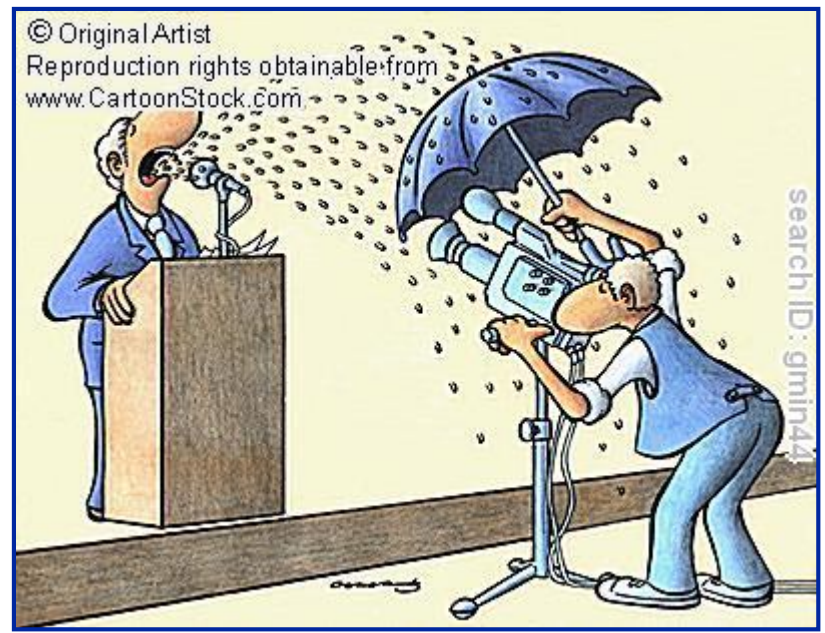
## Your physical behavior

- Look at the audience (it helps to create a level of comfort among the listeners)
- Be natural (be yourself)
- If you feel nervous, look at somebody who is paying attention to your talk and keep eye contact with that person – it will help you!
- No stepping from one leg to the other
- No nervous movements

The story of Dr. Drobkin ☺

<http://oldjewstellingjokes.com/>

[http://blip.tv/oldjewstellingjokes/  
classic-joke-malcolm-busch-  
drobkin-4980336](http://blip.tv/oldjewstellingjokes/classic-joke-malcolm-busch-drobkin-4980336)



## Some mental torture that is good for you

- Video record yourself and watch the recording
- You are guaranteed a terribly torturous experience
- This experience will, however, work greatly in improving your presentation skills!



<http://www.affiliatesummit.com/audio-and-video-recording-prohibited-at-affiliate-summit-east-2012/>

## Handling questions

- This is really a killer of otherwise good scientists and good presenters
- “This is a stupid question” vs. “This is an interesting question; I haven’t thought about it this way”
- “Thank you for asking this question” “Now, this is really the central question” “You got to the core of this problem”
- Being rude and unwelcoming discourages others from asking questions (Why would you want to discourage the audience from asking questions?)

# Handling questions: Media

## Jak powinniśmy mówić o nauce?

<http://www.polskieradio.pl/7/129/Artykul/285743,Nauka-jest-dla-ludzi>

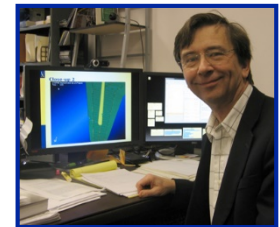
[http://pl.wikipedia.org/wiki/%C5%81ukasz\\_Turski](http://pl.wikipedia.org/wiki/%C5%81ukasz_Turski)



## Jak odpowiadać na pytania agresywnych i niezupełnie kompetentnych dziennikarzy?

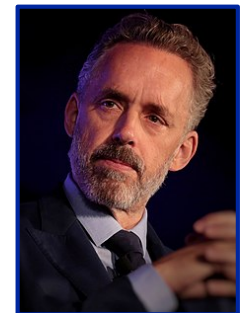
<http://www.youtube.com/watch?v=RAgTg8h9M3E>

[http://pl.wikipedia.org/wiki/Wies%C5%82aw\\_Binienda](http://pl.wikipedia.org/wiki/Wies%C5%82aw_Binienda)



<https://www.youtube.com/watch?v=aMcjxSThD54>

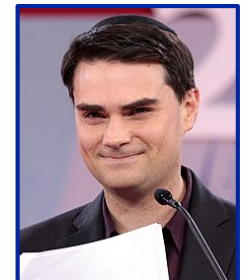
[https://en.wikipedia.org/wiki/Jordan\\_Peterson](https://en.wikipedia.org/wiki/Jordan_Peterson)



## How do you deal with aggressive people among the audience?

<https://www.youtube.com/watch?v=dVo0v5yypW0>

[https://en.wikipedia.org/wiki/Ben\\_Shapiro](https://en.wikipedia.org/wiki/Ben_Shapiro)



# Toastmasters International

Why to present?  
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- An organization that has as a goal improving public speaking skills
- Can be found in most places in the World
- Some links:

<http://www.toastmasters.org/>

<http://www.toastmasters.org.pl/>

<http://topcareerstoastmasters.waw.pl/>

<http://speakingelephants.ning.com/>

**Active in Białystok as well!**

<http://www.facebook.com/pages/Toastmasters-Bia%C5%82ystok/277753095623576>



## The “elevator pitch”

- You can find audience at many places (queuing up for coffee during the break, sitting next to you at a conference banquet, riding with you on the train, riding with you on the elevator).
- You never know when somebody will ask you the question “What are you working on?” (i.e., “What research problem are you working on?”).
- You need to have a 30 second speech prepared and ready at all times.
- If you sense more interest (but only then 😊!), pull out a 5 minute long speech.
- Very, very important in networking and learning what happens in your field in the World. Quite possibly, the most important thing that you do at scientific meetings.

## The “elevator pitch”

- An elevator pitch is an overview of an idea for a product, service, or project. The name reflects the fact that an elevator pitch should be possible to deliver in the time span of an elevator ride, meaning in a maximum of 30 seconds and in 130 words or fewer.
- The term is typically used in the context of an entrepreneur pitching an idea to a venture capitalist or angel investor to receive funding. Venture capitalists often judge the quality of an idea and team on the basis of the quality of its elevator pitch, and will ask entrepreneurs for the elevator pitches to quickly weed out bad ideas and weak teams.
- A variety of other people, including entrepreneurs, project managers, salespeople, evangelists, policy-makers, job seekers, and speed daters commonly use elevator pitches to get their point across quickly.

Source: [http://en.wikipedia.org/wiki/Elevator\\_pitch](http://en.wikipedia.org/wiki/Elevator_pitch)

# The “elevator pitch”

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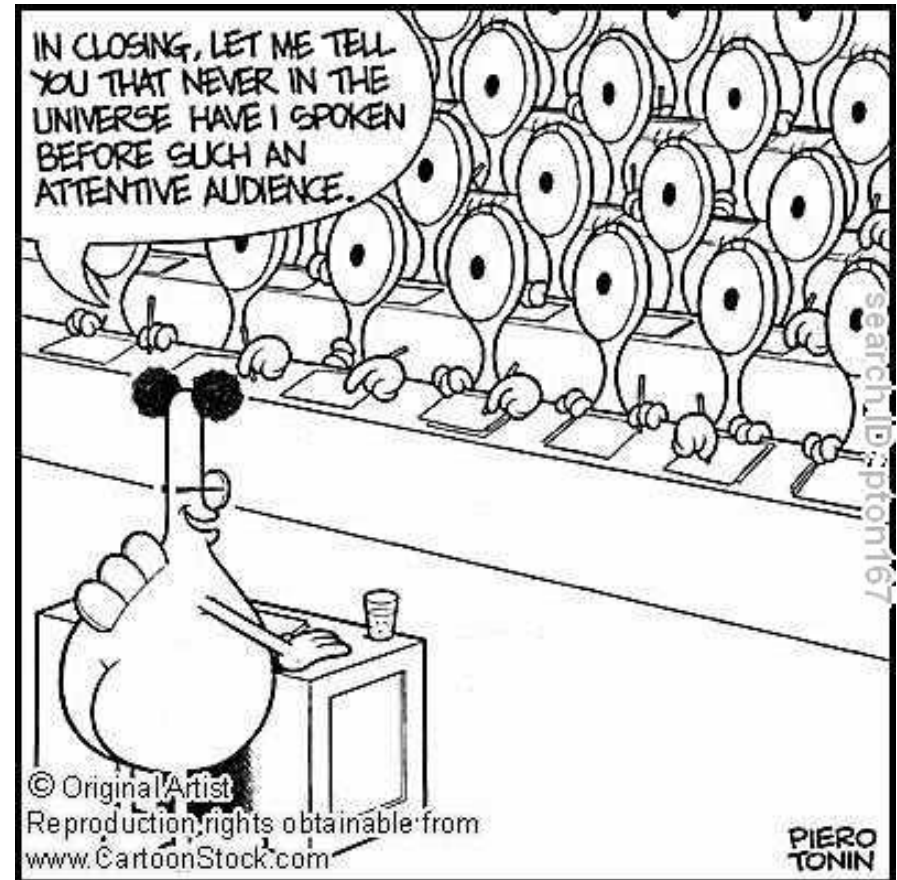
- A "hook": A statement or question that makes them want to hear more. Start by getting the listener's attention with something that you know will interest them.
- Energy and passion: People like seeing energy, passion, and dedication.



## Being in the audience

Why to present?  
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- You are contributing your time to the speaker but can also benefit from the presentation (typically by being inspired by something)
- Do come to research seminars!
- Help the speaker by listening, looking at the speaker, trying to follow, asking questions



## How do you express criticism?



**A whole collection of polite expressions:**

- “It seems to me that ...”
- “Could it be possible that the results that you have seen are due to ... ?”
- “Your results seem to be quite different than those of Smith. Do you have any insight why?”

**What do you do when somebody is really wrong (beyond repair) in his/her presentation?**

## Introducing a speaker

- At a minimum say the name of the speaker, go briefly through the educational background.
- Be extremely polite, thankful for the distinguished speaker to be here, say something nice (but do not overdo it!).
- Be smiling, perhaps joking, but confident.
- Clark Glymour’s introduction of Herb Simon at a symposium dedicated to Simon’s 80th birthday (the shortest and one of the most creative I have seen):

*“I have always wanted to introduce a speaker who does not need an introduction. This is the moment I have been waiting for. Ladies and gentlemen, Herbert Simon.”*

## Being a conference session chair

- **Announce the session at the very start, explain the rules (how much time each of the speakers, how much time for questions, whether questions are allowed during the presentation).**
- **Introduce each of the speakers (check them out!).**
- **If you have time in advance, make yourself familiar with the papers.**
- **Prepare a question for the speaker if there are no questions from the audience.**
- **Send signals to the speaker about the time (prepare large sheets of paper with 1 minute, 5 minutes, 10 minutes), push physically off the podium if needed 😊.**
- **Break long/heated discussions if needed (“I propose to take this discussion off line”).**

## Concluding remarks

- Inspiring examples:
  - David Patterson in Pisa (handwritten slides)
  - Justin Lindsey at IIS Kraków (MacIntosh)
  - Martin Weiss at SIS (MindMap)
  - Lawrence Lessig at TED (a timed Power Point presentation, one word/sentence at a time  
[http://www.ted.com/talks/larry\\_lessig\\_says\\_the\\_law\\_is\\_strangling\\_creativity.html](http://www.ted.com/talks/larry_lessig_says_the_law_is_strangling_creativity.html))
  - Hans Rosling at TED  
([http://www.ted.com/talks/lang/eng/hans\\_rosling\\_shows\\_the\\_best\\_stats\\_you\\_ve\\_ever\\_seen.html](http://www.ted.com/talks/lang/eng/hans_rosling_shows_the_best_stats_you_ve_ever_seen.html))
  - Mathematica or GeNIe workbooks

## Okropna strona bierna

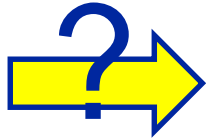
- Język polski “mówiony” i “pisany”
  - “stworzono”
  - “w pracy opracowano”
  - “zaobserwowano”
  - “przeprowadzono eksperyment”
- Kto „stworzył”, „zaobserwował”, „przeprowadził”? Antek Pawłów 😊?
- Pojęcie języka “pisanego” istnieje w innych językach, np. w niderlandzkim, chociaż tam też nie słyszałem aby język pisany był nadużywany w mowie tak bardzo jak w języku polskim
- **Absolutnie unikać w wystąpieniach!**

## Concluding remarks

- **Keep your presentation simple**
- **Remember that the best spontaneity is a well-prepared spontaneity (practice, practice, practice, ...)**
- **It all starts inside (in martial arts, you start from your mental attitude)**
- **Do not hesitate to be different, unconventional (some things are too risky, though)**
- **Is PowerPoint the best tool to start preparing your presentation with? What about pen and paper?**
- **Connect with the audience**
- **The worst thing you can do is to be boring, especially if people are waiting for coffee or lunch**

# Eighteen fundamental skills of a scientist

Next  
meeting



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