

The talk

mathematics
statistics
mecanics

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The talk

- A mathematical talk is a presentation of your results in oral form
- Very different from the written article form
- The point is to convey main ideas to your audience
- Details and proofs may be omitted
- May present negative results, unfinished work or ideas for feedback
- Has your personal touch

Plan your talk

- Content
- Audience
 - Who?
 - What do they know? What do you want them to know?
- Room
 - Try to visit the room
 - Size, sound, lights, computer, blackboard, whiteboard, chalk, sponge, clicker
 - What do you need to bring yourself?
- Form
 - Blackboard
 - Slides
 - Objects

Outline your talk

- Choose topic
- Select main points – 3-4 per 45 minutes
- Title
- Structure
 - Interesting introduction
 - Move gradually towards one or more highlights
 - Memorable ending
- Sketch all your slides
 - 15 rectangles on 1-2 sheets of paper
 - 4-5 subdivisions of the 3-4 main points
 - But make it flexible, and be prepared to skip some of them
- Special effects?

You as a presenter

- Use your voice, and speak clearly
- Dress appropriately
- Make sure the audience is on your side
 - Smile and make them comfortable
- Be a self confident version of snow white
 - You are the expert
 - Your audience must be treated with respect
- Face the audience when you talk
- Nervousness is common – but stay calm
 - Find a routine that can bring you back on track
- Bad habits become highly visible
 - Ehm, clapping hands, movement, clicking shoes...
- Plan and test your presentation, but give it without a manuscript

Starting the presentation

- Present yourself
- Thank the audience or organizers for the opportunity
- Present the talk and title
- Present the background for the talk
 - Why do you work with this?
 - Motivation
- Outline the talk
 - A recurring outline slide is sometimes a good idea
- Do you want questions during or after the presentation?
- Memorize the first 2 minutes of your talk

Using the blackboard

- Time consuming, but often synced with thought processes
- Flexible
- Write notes with exactly what you want to write on the blackboard
 - Plan the space – you have very little room
 - Prepare abbreviations
- Keep in mind that you might have to erase a blackboard
 - Loss of content
 - Water needs time to dry up
- Make sure your blackboard handwriting is readable
 - Readability
 - Size
 - How does chalk work?
 - Stress test

Slides

- Reliable and predictable
- Less flexible, so need more preparation
 - Worst case scenario: animation style (450 clicks/45 minutes)
- Have to be clean and organized
- Frame size
- At most 7-8 bullets per slide
- Strip down sentences
- Template, design and layout – mind the margins
- Colours, contrast, resolution and font size

The number...

- Number of slides / blackboards?
- No correct number – you have to try your style
- Recommendations
 - 12 slides for 20 minutes
 - 30 slides for 45 minutes
 - 3 blackboards for 20 minutes
 - 8 blackboards for 45 minutes
- Important to remember the highlights

Examples

Interactive

- <https://www.youtube.com/watch?v=Z9NQatne0xg>

Slides (3:30)

- <http://www.abelprize.no/c67534/artikkel/vis.html?tid=67578>

Blackboard (04:30)

- <https://www.youtube.com/watch?v=6mG9HG4lfgI>

Keep it simple

- It's easier to give a too difficult talk than to give a too easy talk
- Standard stratification:
 - 15 minutes for your high-school chemistry teacher
 - 15 minutes for your fellow students
 - 15 minutes for mathematicians in your field
 - Later on in your career: 15 minutes for specialists on the topic
- “Do not compute in public.” – Halmos
 - Incomprehensible for the audience and easy to make mistakes
- Give a short proof / sketch of proof
- Mention unsolved problems

If something goes wrong

- It always does
- Make decisions quickly and silently - and stand by them
- Apologize once – but only once

The ending

- Prepare the ending
 - Summary
 - Point to further research
- The last slide / the last sentence
 - Name
 - Title
 - Read more on
- Questions and navigation
- Thank the audience
- Accept the applause

Summing up the talk

- Tell them what you are going to say
- Say it
- Underline the highlights with 5 seconds of silence
- Then tell them what you said

Thank you!

Questions about the talk?

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