Seminar: Turing Award Winners and Their Contributions

3. How to Give a (Seminar) Presentation?

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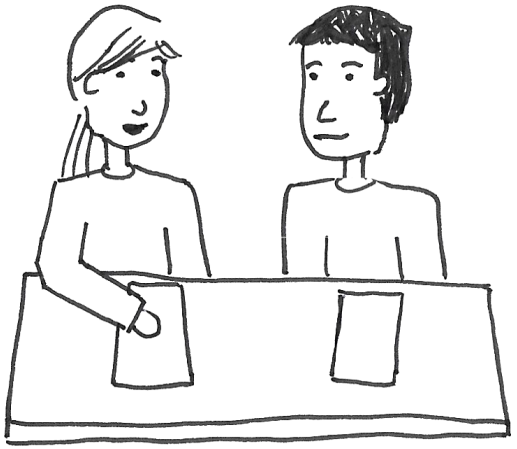
Discuss in groups of 2 or 3 (wearing masks) and take notes:

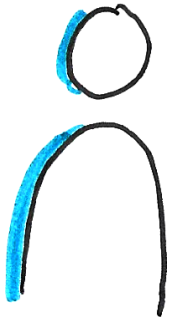
What makes the difference between a good and a bad seminar presentation?

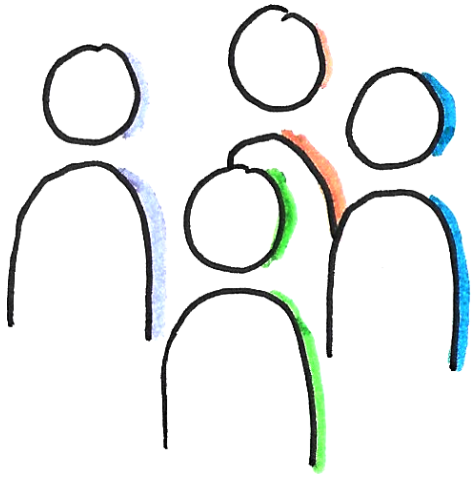


(3 minutes)

Outline

Who is listening?





Audience

- Who is listening?
- How many?
- What do they know already?
- What should they learn?

Your ideal audience...

- Read all the papers you also read to prepare for this talk.
- Is very alert and engaged with your topic.
- Is very willing to listen about some 70-year old scientist career for 30 minutes.

Your probable audience...

- Has never heard about the Turing Award winners you are talking about.
- Is very willing to check their smartphones if they get bored.
- Regrets joining this seminar after they realized they might be here until 19:00 every Thursday of December.

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  (This is a joke.)

Your goal

What is your goal

- Engage your audience with your topic.
- Make them curious and interested.

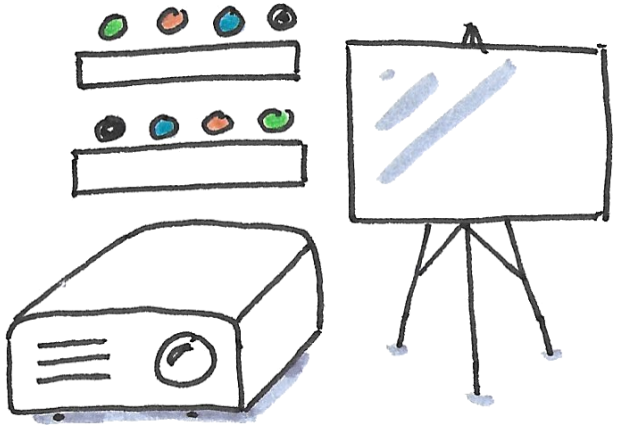
Your goal

What is not your goal

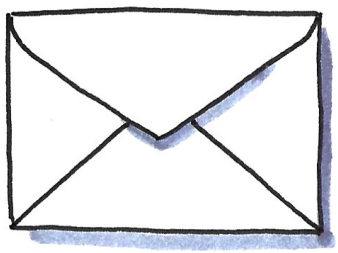
- Tell everything you know about the topic.
- Go very deep and technical into every detail.

Setup

- Time and length
- Size of the room
- Technical equipment
- Other presentations
- ...



Define a Main Message



- 30 minutes are not that long.
- Focus on a single topic.
- But motivate and explain it well.

Possible Structure

- Title page
- Introduction
- Outline
- Activating previous knowledge
- New information
- Discussion
- Conclusion
- Ending and questions

Title page

Content

- Title
- Name
- Date/event

Presentation

- Welcome the audience
- Mention title and topic unless already mentioned in introduction

Introduction

Get the audience's attention

- Motivating example
- (Positive) provocation
- Interaction with the audience
- Presentation of the setting
- ...

Outline

- Structure of the presentation for the audience
- Repeating slides with current part highlighted
- Alternatively: advance organizer
- Not always necessary

Outline is not a "compact version" of the presentation!

Activating Previous Knowledge

- Get the audience interested in the topic
- Refresh knowledge they (probably) have
- Connections to previous presentations
- Interactive component

New Information

Main part of the presentation

Discussion

- Experimental evaluation
- Related work

Conclusion

- Take-home message
- Outlook (open questions, further reading)
- What happened since then?

Ending and Questions

- Does not have to be a separate slide.
- If there will be applause (e.g. seminars, thesis presentation), end by thanking the audience
  - not by asking for questions

Example: Turing Machines in the textbook

Definition (Non-deterministic Turing machine)

A non-deterministic Turing machine is given by a 7-tuple $M = \langle Q, \Sigma, \Gamma, \delta, q_0, \square, E \rangle$. Here Q is a finite, non-empty set of *states*, $\Sigma \neq \emptyset$ is the finite *input alphabet*, $\Gamma \supset \Sigma$ the finite *tape alphabet* and $\delta : (Q \setminus E) \times \Gamma \to \mathcal{P}(Q \times \Gamma \times \{\mathrm{L}, \mathrm{R}, \mathrm{N}\})$ the *transition function*. State $q_0 \in Q$ is the *initial state*, Tape symbol $\square \in \Gamma \setminus \Sigma$ the *blank symbol* and $E \subseteq Q$ the set of *terminal states*.

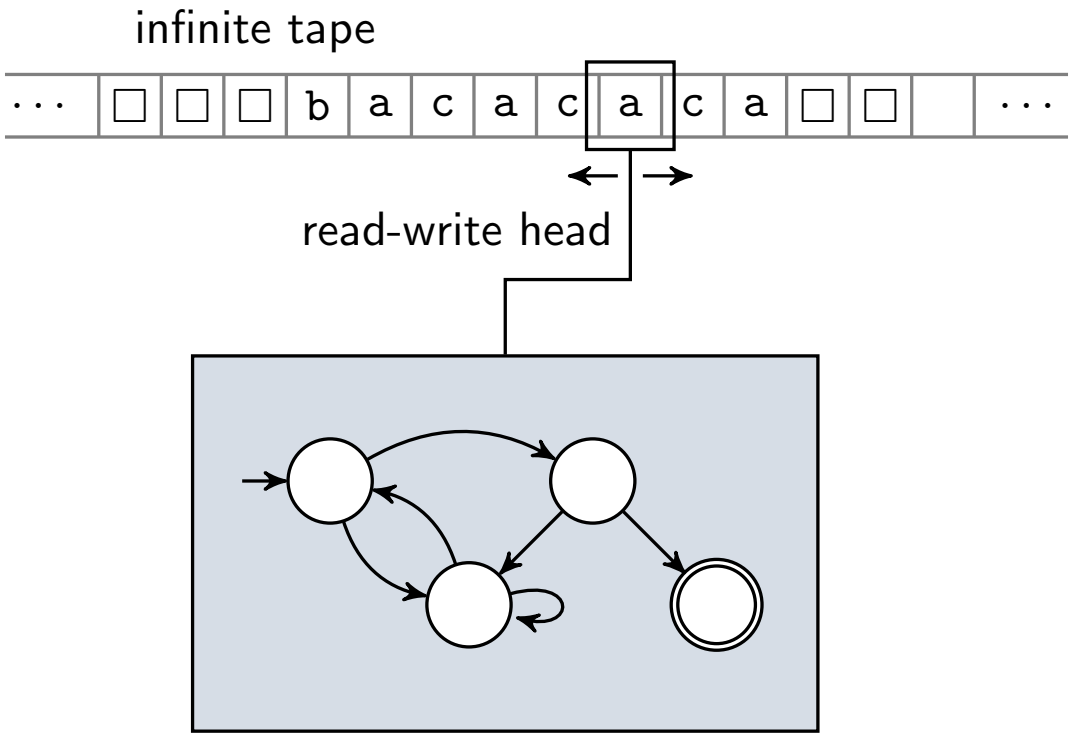
Example: Turing Machines in a lecture

Definition (Non-deterministic Turing Machine)

A non-deterministic Turing machine is given by a 7-tuple $M = \langle Q, \Sigma, \Gamma, \delta, q_0, \square, E \rangle$ with:

- $Q \neq \emptyset$ finite set of states
- $\Sigma \neq \emptyset$ finite input alphabet
- $\Gamma \supset \Sigma$ finite tape alphabet
- $\delta : (Q \setminus E) \times \Gamma \to \mathcal{P}(Q \times \Gamma \times \{\mathrm{L}, \mathrm{R}, \mathrm{N}\})$ transition function
- $q_0 \in Q$ initial state
- $\square \in \Gamma \setminus \Sigma$ blank symbol
- $E \subseteq Q$ terminal states

Example: Turing Machines in a seminar

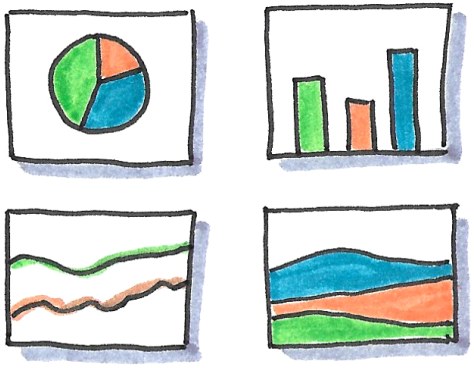


Images and Illustrations

"A picture is worth a thousand words."

- Supporting the text
- Additional information
- Replacing the text
- Lightening up the presentation

Slide Content



- One message per slide
- Bullet point instead of sentences
- Examples, images, illustrations
- Experimental data: graphs better than tables
- Formal definitions only if necessary

Style

- Standard font size or larger
- Color for highlighting
- consistent CAPITALIZATION
- "Less is more"
- Deliberate

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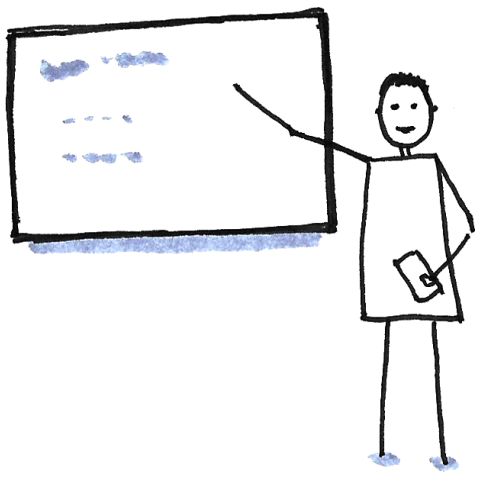
- Deliberate use of animations and overlay

Style

- Speak clearly
- Look at your audience (not at the slides)
- Try not to read from your slides
- Be aware of the time limit



More Information

Good example

We uploaded a good example of presentation to the course website.

Great talk by Simon Peyton Jones

https://www.microsoft.com/en-us/research/academic-program/give-great-research-talk/

How to give a bad talk, by David Patterson

https://people.eecs.berkeley.edu/~pattrsn/talks/BadTalk.pdf

Questions