



# How to write and how to present



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# Agenda

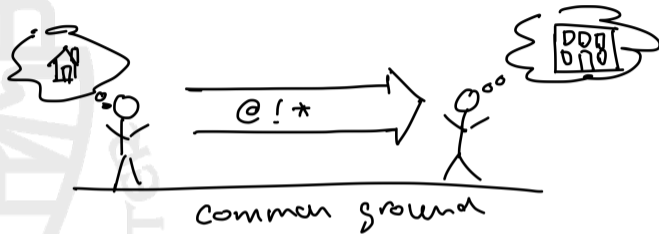
- On communication
- How to present
- How to write



**On communication**



# The essence of communication



- **What (30%)**

- **How (30%)**

- Your performance
- Your medium

- **Common ground (30%)**

- frame of reference
- shared knowledge
- cultural background

- **Context (10%)**

- Where
- When

# Common ground

## ■ Know your audience

- What do they know?
- What do they expect?
- What do they care about?
- ...

## ■ Beware!

- Your audience often knows less than you think
- But may know more than you think

## ■ For the Privacy Seminar

- Fellow CS MSc students
- From different cultures!

## ■ For a thesis

- “Interested laymen” (with some technical background)



# What: the message

## ■ Content

- Idea
- Fact
- Opinion
- Thought
- Design
- Story
- ...

## ■ But also: why?

- Inform
- Convince
- Sell
- Engage in discussion
- Entertain
- Drive to action
- ...



## How to present



**Any examples of good or bad presentations?**  
**Why were they good/bad?**

# Properties of this medium

## ■ Immediate

### ■ Fixed duration / at particular time

- Determined by speaker/organiser
- Don't go 'over time'.

### ■ Density = content × speed of delivery

- Determined by speaker.

### ■ Linear

- Audience cannot rewind
- Beware of **attention span**: People remember first and last part best.

## ■ Ephemeral

- Unless recorded

## ■ Interactive

- You can check common ground by asking questions!
- Keep audience engaged.
- Immediate feedback

## ■ Performance

- Stage
  - *Choose your looks*
- Entertain
  - *Make it personal*
  - *Use anecdotes or examples*
  - *Avoid (unnecessary) detail*

**Presentation is an invitation to read  
more; A sales pitch for your paper.**

# Structure / Content

- **Introduce yourself!**
- **Introduce main take-away**
- **Agenda**
  - Not too detailed
- **Set context/conditions**
  - Assumption on audience
  - Questions during or after presentation?

## ■ **Introduction**

- Context: put audience on same page
- Scope: what your presentation is/isn't about
- Create engagement: why is your presentation relevant/interesting?

## ■ **Content**

- Remind audience of previous definitions, statements!

## ■ **Conclusion**

- Main take-away (should follow from content!)

# Form

## ■ Decide on medium

- Slides?
- Chalkboard/whiteboard?
- Demo?
- Something else...

## ■ Medium should **support** your message

- Focus on the essence

## ■ **Attract! Engage!**

## ■ Slides

- Use section slides (follow agenda)
- Use images/figures/tables; but don't use images "just because"
- Beware of "shopping lists"
- Don't put too much information on one slide; do not use long sentences (like this one ;-)
- *Repeat/recall definitions*

## ■ Chalkboard/whiteboard

- For proofs
- Sketching

# There are always exceptions (GDPR art. 6)

1. Processing shall be lawful only if and to the extent that at least one of the following applies:
  - (a) the data subject has given consent to the processing of his or her personal data for one or more specific purposes;
  - (b) processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract;
  - (c) processing is necessary for compliance with a legal obligation to which the controller is subject;
  - (d) processing is necessary in order to protect the vital interests of the data subject or of another natural person;
  - (e) processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller;
  - (f) processing is necessary for the purposes of the legitimate interests pursued by the controller or by a third party, except where such interests are overridden by the interests or fundamental rights and freedoms of the data subject which require protection of personal data, in particular where the data subject is a child.

Point (f) of the first subparagraph shall not apply to processing carried out by public authorities in the performance of their tasks.

# Delivery

## ■ It's a show!

- Bring energy...
- ... in a way that fits **you**
- Speak clearly/confidently
- Not too fast or too slow

## ■ Use speaker notes

- Keywords only; do not fully script your presentation
- If your nervous: script introduction (to get you rolling)

## ■ Attract / Engage

- Look audience in the eyes
- Don't literally repeat what is on the slide
- Ask questions / use quizzes / ...

## ■ Rehearse

- Does the order make sense?
- Or did you feel you forgot to explain something?
- Or are you all over the place ('van de hak op de tak springen')?
- But do not over-rehearse

## ■ Time your presentation

- 1 slide ~ 1-2 minutes

## ■ Practice makes perfect

- You will get better over time

# Student lecture: grading

## Content

### ■ Argumentation and Depth

- A solid basis and backing of all statements.

### ■ Intelligibility

- Quality of explanation; take audience into account.

### ■ Comprehensiveness

- Cover all important aspects (incl. legal/societal); separates important/secondary issues.

### ■ Structure

- Logical ordering; relationship between the topics.

## Form and performance

### ■ Attractiveness

- Captivating audience, supporting materials.

### ■ Delivery

- Engagement and contact with the audience.

### ■ Interaction

- Level of interactivity, the way you respond to questions.

**How could I have improved this  
presentation?**



## How to write



**Examples of good / bad papers?  
How is writing different from  
presenting?**

# Properties of this medium

## ■ Asynchronous

### ■ No duration or fixed time

- Reader decides

### ■ Density = content × length

- Determined by writer.

### ■ Nonlinear

- Reader can go back & forth
- Reader may start anywhere
  - *Abstract, in the middle, or at the conclusions*
- Use layers
  - *General idea vs details/proofs*

## ■ Permanent

### ■ Non-interactive

- Preempt any possible questions
- No immediate feedback

### ■ Performance? Yes: indirect.

- Choose your writing style
- Engage
  - *Use (personal) anecdotes or examples*
  - *Avoid (unnecessary) detail*

# Structure

## ■ Title / authors

- Careful with fancy titles
- Capture essence of content

## ■ Authors

- Decide on order
- Authors must have significantly contributed!

## ■ Abstract (Sells the paper)

- Concise
  - *Context*
  - *Problem*
  - *Why relevant*
  - *Contribution*
- No references/footnotes

## ■ Introduction

- Context / Problem / Relevance / Contribution
- Can already mention state of the art
- Reading guide (can be woven through introduction)

## ■ Main body: two options

- State of the art → content
- content → state of the art

## ■ Conclusions/discussion

- Should follow from main body

## ■ Bibliography

## ■ Number sections!

# Structure: content

## ■ Typical CS paper

- Preliminaries / definitions
- Problem description
  - *Goal / requirements*
- Solution
- Analysis

## ■ Use meaningful section titles

I typically like to show what I tried and failed

## ■ Privacy seminar paper

- Application scenario / practical case
- Problem description
- Overview of applicable PETs
- (Critical) analysis
  - *Voice your own opinion*



## Structure: final remarks

### ■ Indicators of poor structure

- Sections of very uneven length
- Sections with one subsection
- (One paragraph sections)
- Content doesn't match section title
- Different kinds of content within one section

### ■ Finding good structure is an iterative process

# Form / writing style (1)

## ■ Be yourself!

## ■ Avoid long sentences

- Especially if English is not your mother tongue

## ■ First person perspective

- “I/we ..” (not “This paper ..”)

## ■ Active voice

- “We studied..” (not “Research has been performed...”)

## ■ Avoid hyberbole

## ■ Introduce concepts before using them

- Introduce abbreviations once
- But remind occasionally
  - *Remember: people do not read linearly!*
  - *Refer back!*

## ■ Avoid repetition



## Form / writing style (2)

- **Every section has a purpose**

- Make this explicit: “In this section...”
- Do not start a section with a subsection immediately

- **Introduce/explain first, then define**

- Informal introduction/explanation helps understanding the formal protocol/formula/definition



# Formatting

## ■ Page layout

- 10-12 words per line
- Serif font for body text, not too small (10-11pt)
- Not too cramped (interline space)
- Reasonable margins (people take notes)

# Formatting (cont.)

## ■ Bibliography

- Author(s)
- Title
- Book
  - *[Series], publisher*
- Journal
  - *Journal name, volume, number, [pages]*
- Proceedings
  - *Conference title, editors, publisher, [pages]*
- Year
- [URL/DOI]

Every year, people fail to obey these simple rules!

- [1] H. Abelson et al. *Keys Under Doormats. Mandating insecurity by requiring government access to all data and communications.* report MIT-CSAIL-TR-2015-026. MIT, July 6, 2015.
- [2] S. Altay, M. Berriche, H. Heuer, J. Farkas, and S. Rathje. “A survey of expert views on misinformation: Definitions, determinants, solutions, and future of the field”. In: *Harvard Kennedy School (HKS) Misinformation Review* 4.4 (July 27, 2023).
- [3] D. Chaum. “Security without Identification: Transaction Systems to make Big Brother Obsolete”. In: *CACM* 28.10 (1985), pp. 1030–1044.
- [4] S. Chokhani. “Toward a national public key infrastructure”. In: *IEEE Communications Magazine* 32.9 (1994), pp. 70–74.
- [5] B. Jacobs. “The authenticity crisis”. In: *CLSR* 53 (July 2024).
- [6] S. van der Linden. “Misinformation: susceptibility, spread, and interventions to immunize the public”. In: *Nature Medicine* 28 (Mar. 2022), pp. 460–467.
- [7] H. K. Maji, M. Prabhakaran, and M. Rosulek. “Attribute-Based Signatures”. In: *CT-RSA 2011. The Cryptographers’ Track at RSA Conference* (San Francisco, CA, USA, Feb. 14–18, 2011). Ed. by A. Kiayias. LNCS 6558. 2011, pp. 376–392.
- [8] J. N. Matias. *The Real Name Fallacy*. Jan. 3, 2017. URL: <https://coralproject.net/blog/the-real-name-fallacy/>.
- [9] A. J. Menezes, P. C. van Oorschot, and S. A. Vanstone. *Handbook of Applied Cryptography*. Boca Raton: CRC Press, 1996.



# Review

- **Erase your mind**

- Pretend you see the paper for the first time
- Pretend someone else wrote it
- Be like your intended audience

- **Review individual sections**

- But don't review too often!

- **Be ready to kill your darlings**

- **Find a proof reader**

- Review each other's work

# This was the theory

## ■ Practice is always messy

- You learn while writing/making presentations : goals, content, ideas change in the process
- I often start with a dump of ideas/thoughts
  - *Powerpoint*
  - *Mindmap*
- And then turn this into a skeleton
- Once you are in a flow continue writing; don't aim for perfection straight away

## ■ Sometimes it helps to restart from scratch

## ■ Plan your work realistically

- Especially for longer pieces (book, thesis)
- 400-500 words/hour ;  
1500-2000 words/day

# Student paper: AI Tools

## ■ Meta goal

- Learn to write a scientific report
- Develop your own style of writing
- See writing as a tool that helps you think and understand the problem space and the possible solutions

## ■ Refrain from using AI tools

- Verbatim copies of AI generated text are considered fraudulent behaviour
- Use sparingly to correct style: not everyone should write like a boring US marketing copywriter

# Student paper: grading

## Content

### ■ (Technical) quality

- Understanding of the (technical) issues. Correctness of all (technical) statements.

### ■ Analysis

- Proper argumentation, completeness, distinguishing main and secondary points.

### ■ Quality of references

- Relevance, completeness and originality.

### ■ Own opinion

## Form

### ■ Style

- Clarity, objectiveness, spelling and grammar.

### ■ Structure

- Logical structure and proper flow.

### ■ Attractiveness

- Formatting of paper, including bibliography.

# Questions



[Monty Python's Argument Clinic sketch]