

How to write and how to present

Jaap-Henk Hoepman
Radboud University

jhh@ru.nl // www.cs.ru.nl/~jhh // blog.xot.nl // @xotoxot

Radboud University



1

Agenda

- On communication
- How to present
- How to write

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

2

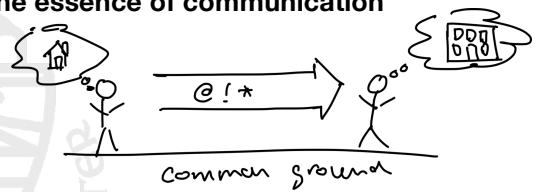



On communication

Radboud University

3

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

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

4

Common ground

- **Know your audience**
 - What do they know?
 - What do they expect?
 - What do they care about?
 - ...
- **For the Privacy Seminar**
 - Fellow CS MSc students
 - From different cultures!
- **For a thesis**
 - "Interested laymen" (with some technical background)
- **Beware!**
 - Your audience often knows less than you think
 - But may know more than you think

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present



5

What: the message

- **Content**
 - Idea
 - Fact
 - Opinion
 - Thought
 - Design
 - Story
 - ...
- **But also: why?**
 - Inform
 - Convince
 - Sell
 - Engage in discussion
 - Entertain
 - Drive to action
 - ...

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present


6

How to present

Radboud University

7



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

Jaap-Henk Hoepman //

8

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!
 - Use interaction to keep audience engaged.
 - Immediate feedback
- **Performance**
 - Stage
 - Choose your looks
 - Entertain
 - Make it personal
 - Use anecdotes or examples
 - Avoid (unnecessary) detail

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 9

9

Structure

- **Introduce yourself!**
- **Introduce main take-away**
- **Set context/conditions**
 - Assumption on audience
 - Questions during or after presentation?
- **Main content (see next slide)**
- **Confirm main take-away**
- **Thank audience!**
- **Open floor for questions/discussion**

Depends on type of presentation

In research, presentation often pitch to read the full paper

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 10

10

Content

- **Agenda**
 - Not too detailed
- **Introduction**
 - Context: put audience on same page
 - Scope: what your presentation is/isn't about
 - Create engagement: why is your presentation relevant/interesting?
- **Content**
- **Conclusion**
 - Main take-away (should follow from content!)

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 11

11

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 ;-)
- **Chalkboard/whiteboard**
 - For proofs
 - Sketching

Repeat/recall definitions

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 12

12

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.

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

13

13

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

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

14

14

Student lecture: grading

Content

■ Argumentation and Depth

- Whether your lecture provides a solid basis and backing of all statements and claims made, and whether it covers all important topics in sufficient detail.

■ Intelligibility

- Whether the message comes across, whether your lecture connects to what your audience expects and understands, how well you explain certain topics.

■ Comprehensiveness

- Whether your lecture covers all important aspects, and clearly separates important issues from secondary details. Equal attention should be paid to technical and legal/societal issues.

Form and performance

■ Structure

- Logical ordering of your lecture, the relationship between the topics.

■ Attractiveness

- Whether your lecture captivates the audience, your use of supporting materials (e.g. powerpoint).

■ Delivery

- Level of engagement and contact with the audience, your presence in front of the class, the liveliness and tone of your lecture

■ Interaction

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

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

15



15

How could I have improved this presentation?


Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

16


16

How to write



17




Examples of good / bad papers?

How is writing different from presenting?

Jaap-Henk Hoepman //

18




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

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

19



Structure

- **Title / authors**
 - Careful with fancy titles
 - Capture essence of content
- **Authors**
 - Decide on order
 - Authors must have significantly contributed!
- **Abstract**
 - Concise
 - Context
 - Problem
 - Why relevant
 - Contribution
 - Sells the paper
 - 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 logically follow from main body
- **Bibliography**

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

20

Structure: content

- **Typical CS paper**
 - Preliminaries / definitions
 - Problem description
 - Goal / requirements
 - Solution
 - Analysis
- **Use meaningful section titles**
- **Privacy seminar paper**
 - Application scenario / practical case
 - Problem description
 - Overview of applicable PETs
 - (Critical) analysis
 - *Voice your own opinion*

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 21

21

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**

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 22

22

Form / writing style

- **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 hyperbole**
- **Introduce concepts before using them**
 - Introduce abbreviations once
 - But remind occasionally
 - *Remember: people do not read linearly!*
 - *Refer back!*
- **Avoid repetition**

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 23

23

Form / writing style

- **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

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 24

24

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)

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 25

25

Formatting (cont.)

- **Bibliography**
 - Author(s)
 - Title
 - Book
 - [Series], publisher
 - Journal
 - Journal name, volume, number, [pages]
 - Proceedings
 - Conference title, editors, publisher, [pages]
 - Year
 - [URL/DOI]
- See <https://dblp.uni-trier.de>

- [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.

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 26

26

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

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 27

27

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

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present 28

28

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

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

29

29

Student paper: grading

Content

■ (Technical) quality

- Whether the paper shows an understanding of the (technical) issues involved. Correctness of all (technical) statements and claims.

■ Analysis

- Whether a proper argumentation is given, and whether all main aspects of the topic are addressed, with proper regard of what are the main points and what are only secondary points. (This covers the criteria argumentation, depth and intelligibility, and comprehensiveness used for scoring the presentation.)

■ Quality of references

- Whether you found and cite all relevant literature. Originality (finding relevant references yourself) is appreciated.

■ Own opinion

- Whether the paper clearly expresses and argues your own opinion on the subject matter.

Form

■ Style

- Clarity of writing, objectiveness, linguistic quality (in terms of spelling and grammar).

■ Structure

- Logical structure of the paper, helping the reader understand what he is about to read, giving the paper a natural flow.

■ Attractiveness

- Formatting of the paper, including precise formatting of the bibliography.

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

30

30

Questions



[Monty Python's
Argument Clinic sketch]

✉ jhh@cs.ru.nl

🌐 www.cs.ru.nl/~jhh

📖 blog.xot.nl

🐦 [twitter: @xotxot](https://twitter.com/xotxot)

Jaap-Henk Hoepman // 2025-02-13 // How to write and how to present

31

31