Lecture 12
Slides and Posters

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Slides

Why Give Talks?

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Here we focus on how to design slides for a **scientific presentation** (e.g., seminar talk, thesis defense, workshop or conference talk).

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Some advice:

- Focus on **one** or **two key ideas**, ruthlessly pruning everything else. In particular, you can usually omit related work and references.
- Consider your **audience**. Beware of the curse of knowledge.
- Go into detail as **time permits**.

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For a 20-minute talk (excluding questions), 15 slides are probably enough.

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You can prepare **extra slides** and put them in an appendix.
These can be useful to answer questions.

Two Schools of Slide Design

Minimalist

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- This style is impactful if done right.
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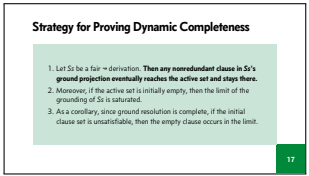
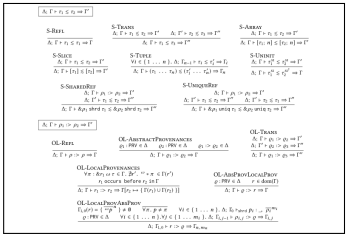


- The slides alone are sufficient to get the gist of the talk.
- The slides can serve as a self-contained handout.
- This style is appropriate for more technical material.

Beware of Clutter

Slides are a **visual aid**, not a paper. These are far too cluttered:



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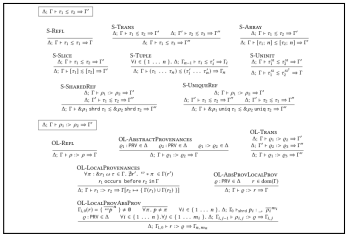

Slides should **summarize** or **supplement** your message.
They are not for reading out word for word.

Animations

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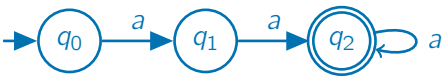
Highlighting can help draw the audience's attention.

Examples

Work with **examples**. Compare:

A DFA is a tuple $(Q, \Sigma, \delta, q_0, E)$ *...*

Consider the DFA



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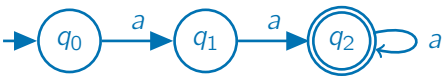

Keep slide examples as **simple** as possible.

Visuals

Images, graphs, and tiny code excerpts are doubly useful:

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Make sure to **explain** them in detail.

Writing

Much **writing advice** also applies to slides:

- Omit needless words.
- Use short sentences.
- Prefer the active voice over the passive.
- Prefer verbs over zombie nouns.
- Use abbreviations sparingly.

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- Prefer the active voice over the passive.
- Prefer verbs over zombie nouns.
- Use abbreviations sparingly.

Moreover, use **consistent punctuation**, especially periods.

Formatting

Some **formatting** advice:

- Be consistent.
- Use emphasis sparingly.
- Use a pleasing color scheme.
- Use large enough fonts.
- Leave space between elements.

Live Demonstrations

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You need to be **very well prepared** and have good nerves.

Presenter Notes or Scripts

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Most presentation software allows you to **see the notes** while you present the slides.
You can also print the notes.

Presentation Software

Some presentation software:

- **Microsoft PowerPoint** and **Apple Keynote** offer a "what you see is what you get" interface.
- **Google Slides** is a basic alternative that supports collaborative slide writing.
- LaTeX's `beamer` class is ideal for highly mathematical content. It is very flexible but difficult to master. Customization is necessary to make your slides look attractive.

Examples of Slide Decks

Let us look at a minimalist slide deck for a PhD defense and a maximalist a slide deck for a scientific conference talk (first draft and final version):

- Roy Overbeek, "**A Unifying Theory for Graph Transformation**," 2024.
- Lydia Kondylidou, "**Augmenting Model-Based Instantiation with Fast Enumeration: Extending SMT Solving**," 2025 (first draft).
- Lydia Kondylidou, "**Augmenting Model-Based Instantiation with Fast Enumeration in SMT**," 2025 (final version).

Posters

Poster Presentations

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During a poster session, researchers present their work **in parallel**
to individual visitors who walk around from one poster to the next.

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Appealing visuals are crucial to attract attention.

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- The poster makes sense on its own, so it can be viewed without explicit explanation.
- This style is appropriate for more technical material, or if you will not stand next to the poster.

Poster Software

Some poster software:

- **Microsoft PowerPoint** and **Apple Keynote** can be tweaked to produce a poster as one large slide. There is then no need to learn a new tool.
- **Adobe Illustrator** supports sophisticated graphic design and image processing.
- **LaTeX** is ideal for highly mathematical content. It is very flexible but difficult to master. Customization is necessary to make your poster look attractive.

Examples of Posters

Let us look at two posters:

- Maximilian Schäffeler, "**Verified Solution Methods for Markov Decision Processes**," 2024.
- Sara Taheri, "**ML Certification Against Data Poisoning by Barrier Function**," 2025.