Important Presentation

MIT

AEROASTRO

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Motivation

Most Latex beamer templates have a lot of noise on the slides and are not focused on content.

You can use this template to generate slides focused on content to help get the message across. Remember, however, a template is only a small part of making a good presentation.

Important Presentation

1. Template
2. Results
3. Message

Citations

Cite something using.[1] The full reference will show up at the end of the presentation. If a DOI, URL, or ISBN is available, the title of the footnote will be a hyperlink to the paper. Like so[2].

1. Theodorsen, *General Theory of Aerodynamic Instability and the Mechanism of Flutter*. 1935
2. Opgenoord *et al.*, *Physics-Based Low-Order Model for Transonic Flutter Prediction*. 2018

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A word about subsection title pages

In older versions of LaTeX, you need to have used at least one \section command, before you can use the \section command. However, as of the 2017 version, this seems fixed.

Suppressing subsection title pages

Using the command \subsection* will prevent the subsection title page from showing (this works in exactly the same way as for sections).

Note on itemize

You can use \begin{itemize} \item ... \end{itemize} to itemize list, which will look like

- Itemize is great
- Or is it?

In general, however, you do not necessarily need to have the bullets – in fact, they can be distracting. In that case, you want to use \begin{itemize} \item[] ... \end{itemize}, which will look like

Much cleaner

And you still have proper spacing

Finally you can also use \begin{items} \item[] ... \end{items} if you want slightly more spacing between different items

- So much

- space

Enumerate

Again, in general there is no need to add numbers, but you can use
\begin{enumerate} \item ... \end{enumerate}, if you really want to.

1. Important thing
2. Other important thing

Again, you can also use \begin{enums} \item ... \end{enums} if you
want slightly more spacing between different items

1. So much

2. space

Some math

Be careful with adding too much math on a slide!

$$\Delta L_{nc}(t) = \frac{1}{4}\rho_\infty \pi c^2 \left[\Delta \ddot{h} - \left(x_{ea} - \frac{c}{2}\right)\Delta \ddot{\theta}\right] + \frac{1}{4}\rho_\infty \pi c^2 V_\infty \Delta \dot{\theta}$$

$$\Delta M_{nc}(t) = \frac{1}{4}\rho_\infty \pi c^2 \left(x_{ea} - \frac{c}{2}\right)\left[\Delta \ddot{h} - \left(x_{ea} - \frac{c}{2}\right)\Delta \ddot{\theta}\right] - \frac{\rho_\infty \pi c^4}{128}\Delta \ddot{\theta}$$

$$- \frac{1}{4}\rho_\infty \pi c^2 V_\infty \left(\frac{3}{4}c - x_{ea}\right)\Delta \dot{\theta}$$
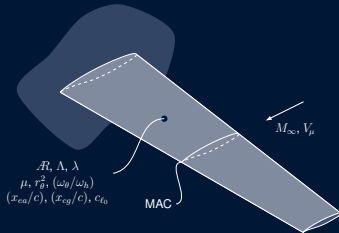
Handouts

In general, sending out slides is not a great idea, because quite a lot of the nuance is lost by only seeing slides.

However, if you have to send out slides, it is usually a better idea to send a handout, where the first slide is the abstract of the talk and information about the talk is added to each slide. You can also add copyright information to this handout.

An example is found in the `handout` folder.

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$\mathcal{R}, \Lambda, \lambda$
$\mu, r_\theta^2, (\omega_\theta/\omega_h)$
$(x_{ea}/c), (x_{cg}/c), c_{\ell_0}$
MAC

M_∞, V_μ

1. Template
2. Results
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Noticed the picture on section slide?

I use this to help with transition. It can be used to quickly show a setup that you use for results, for instance. You can redefine it before each section using `\secimage` or `\subsecimage`. By default it is empty.
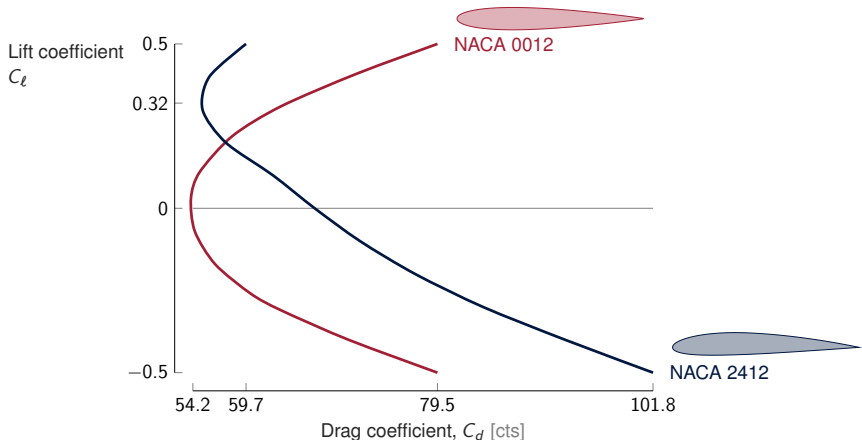
Best results

Don't **ever** use figure captions in presentations, instead use minipages. In general, minipages are a good idea to position text and figures on slides. For really intricate slides layouts, use `tikzpictures`.

Drawing figures in Tikz

Below is an example of a figure drawn with Tikz. The source code can be found in `figures\clcd`.

Note that this is a not an all-encompassing solution to figures. Each figure needs to be tailored to the specific message that you are trying to get across.

Scaling of tikzpictures

`tikz` is great for making vector graphics, but you may want to scale the graphic without changing all the coordinates in your drawing. There are two ways you can handle that.

1. Generate the `tikzpicture` in a `standalone` TeX document and include it using `\includegraphics` and scale appropriately. This also reduces compile time.

2. Use `adjustbox` to scale your figure inside a document, an example of which is shown below.

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Use the heading of a slide
to write down the message

And remember: everything you put on the slides needs to support the main message. Anything else is noise.

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Summary

I usually finish my presentation on a summary slide (in dark) instead of just a "Thank You" slide

Future

Presentations focused on content

References (1)

1 Theodorsen, T., "General Theory of Aerodynamic Instability and the Mechanism of Flutter," NACA-TR-496, National Aeronautics and Space Administration (NASA), Langley Aeronautical Lab, Hampton, Virginia, January 1935.

2 Opgenoord, M. M. J., Drela, M., and Willcox, K. E., "Physics-Based Low-Order Model for Transonic Flutter Prediction," *AIAA Journal*, Vol. 56, No. 4, 2018, pp. 1519–1531.
DOI: 10.2514/1.J056710

Back-up material