FLOW

Using beamer

Josilio

KTH Mechanics
May 5, 2024

Overview

1. General
   - Random stuff
   - Transitions
   - Blocks
2. Colors and symbols
3. Adding videos
4. Frames backgrounds
5. TIKZ it!

General

Some subtitle

- You can `highlight` text with `\hl{}`. But I generally save the highlighting for `\texttt{}`
- You can also `\alert{}` some text
- If you want to use the `verbatim` or `listings` environment in beamer, you have to add the `fragile` option to the frame. But this could mess up some beamer features.
- If you have big images or videos, in `Overleaf` you can speed up the compilation by clicking the arrow next to `Recompile` and selecting the `Fast[draft]` option.
- To compile without transitions add `handout` in your document class options.
- You can cite, for instance, THE BOOK: [Schmid et al., 2002]
- I don't really like footnotes[1]

[1] but sometimes they can help

General

- Here are some commands for transitions
  - \pause
  - \only<1|handout:0>{}
  - \onslide<2-|handout:2>{}
- For environments you can use, for instance,

```
\item<1-> Some item
```

```
\alert<1>{text}  \textcolor<2>{color}{text}  \textbf<2>{text}
```

```
\begin{block}{}<3->
A block
\end{block}
```

Normal block

And its body

$$Re = 1e6$$

Let's pause

Normal block

And its body

$$Re = 1e6$$

Let's pause

Example block

And its body

Normal block

And its body

$$Re = 1e6$$

Let's pause

Example block

And its body

Alert block

And its body

Colors and symbols

Colors and symbols

KTH colors

Primary

- kthcolor
- kthcolor_navy
- kthcolor_sand
- kthcolor_skyblue
- kthcolor_lightblue
- kthcolor_digitalblue

Functional Dark

- kth_darkgreen
- kth_darkturquoise
- kth_darkbrick
- kth_darkyellow
- kth_darkgray

Functional

- kth_green
- kth_turquoise
- kth_brick
- kth_yellow
- kth_gray

Functional light

- kth_lightgreen
- kth_lightturquoise
- kth_lightbrick
- kth_lightyellow
- kth_lightgray

Colors and symbols

Matlab colors

- matlabcolor1
- matlabcolor2
- matlabcolor3
- matlabcolor4
- matlabcolor5
- matlabcolor6
- matlabcolor7

Python colors

- tab_blue
- tab_orange
- tab_green
- tab_red
- tab_purple
- tab_brown
- tab_pink
- tab_gray
- tab_olive
- tab_cyan

Qual. colors [Link]
(Color-blind safe)

- BqualBlue
- BqualCyan
- BqualGreen
- BqualYellow
- BqualRed
- BqualPurple
- BqualGray

Others

- wheat
- orangepeel
- UniBlue
- DarkGray
- LightGray
- oldTextGreen
- oldOcean
- BG
- darkred

Colors and symbols

These two packages have icons and symbols that can be used as text. In the links you can find a complete list.

Font Awesome [Link]

-
-
-
-
-

manfnt [Link]

-
-
-

Adding videos

- Load the package: (see documentation)

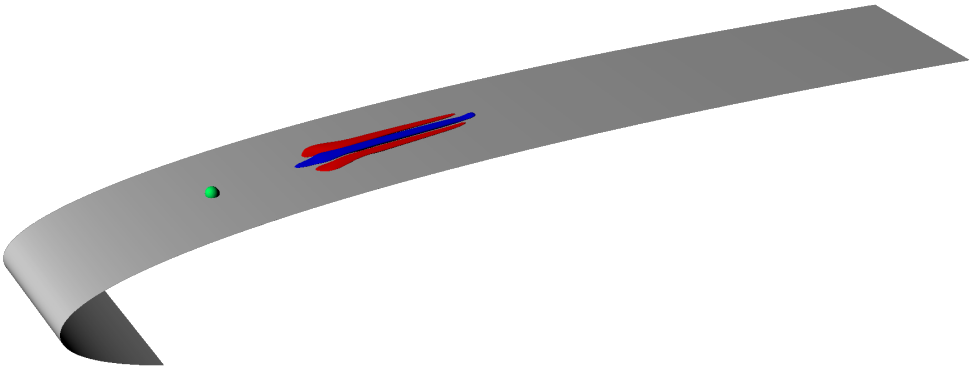
```
\usepackage{animate}
```

- One needs a bunch of images (not the video).
- The pdf gets quite big and remember there is a max limit of files in `Overleaf`.
- For zero padding, one can add the following: (see stackexchange post)

```
\makeatletter
\let\zeropad\@anim@pad
\makeatother
```

- For me, the visualisation has only worked on `Adobe Reader`. It also works on `Okular`, but not always in `Presentation mode`. Using `Full Screen Mode` should work okay; just missing the annotation tools available in `Presentation Mode`. Remember to tick the `Show form` box (> Edit)

Adding videos



Frames backgrounds

- We can have a dark background using:

  `\darkpageline`

- There is even a

  `\startpagedark`

- Code looks cool:

```
1 import numpy as np
2 a = 3 #comment
3 for i in range(a):
4     print(i)
```

Normal block

And its body

Example block

And its body

Alert block

And its body

$$c^2 = a^2 + b^2 \tag{1}$$

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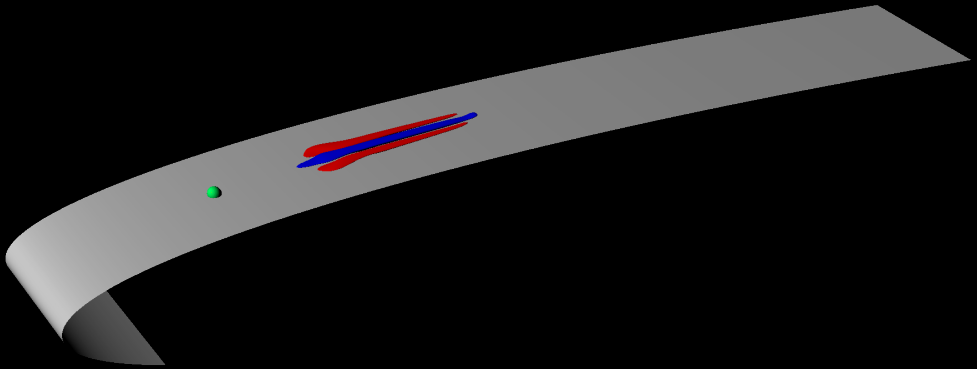
Frames backgrounds

subtitle

Images with transparent background look cool too



Frames backgrounds

- We can go back to a normal page by:

```
\normalpageline
```

Frames backgrounds

subtitle

- Or using:

```
\normalpagewaves
```

If you want some waves at the bottom

Frames backgrounds
subtitle

- Or using:

```
\normalpagewaves
```

If you want some waves at the bottom

[2]test footnote height

Frames backgrounds

- Or the navy version:

```
\normalpagelinenavy
```

Frames backgrounds

- Or the navy version of waves:

```
\normalpagewavesnavy
```

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Frames backgrounds

Consistent colors for TOC and block

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different block

text

Frames backgrounds

- Or a totally blank page:

```
\whitepage
```

Frames backgrounds

- Or a totally dark page:

  `\darkpage`

TIKZ it!

- Generate a grid on top of your image so you can see the local coordinates
- You have to add :

```
\usetikzlibrary{calc}
```

- Once you are done drawing, you just have to comment the grid and axis labels

Frame coordinate system

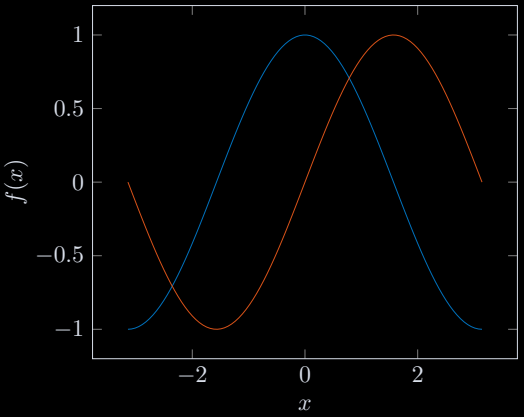
Absolute positioning of images and sketches

In case you want to draw over the slide

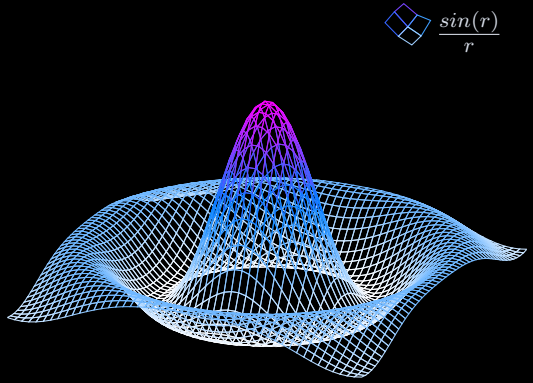
TIKZ it!

pgfplots

Plot from Equation



Example using the mesh parameter



NAISS

VINNOVA

Thank you for your attention!

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References I

Schmid, P. J., Henningson, D. S., and Jankowski, D. (2002).
Stability and transition in shear flows. applied mathematical sciences, vol. 142.
Appl. Mech. Rev., 55(3):B57–B59.