

# A beamer presentation class theme for the Universiteit Antwerpen

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This is a theme for the  $\text{\LaTeX}$  `beamer` class for presentations. It has been designed to match the official UA templates for Microsoft PowerPoint<sup>®</sup> while doing away with some of the shortcomings of it within the `beamer` framework. If you would like to give a scientific presentation with all the benefits you get from using  $\text{\LaTeX}$ , this theme is for you.<sup>1</sup>

## 1 Installation

### 1.1 Requirements

The theme is an addendum for the  $\text{\LaTeX}$  `beamer` class, hence it is assumed that you have a running  $\text{\LaTeX}$  installation together with the `beamer` package [5] and its dependencies. If not already the case, it will also certainly be a good idea to make yourself familiar with the `beamer` class. The excellent manual [6] is will serve you well.

### 1.2 Getting the package

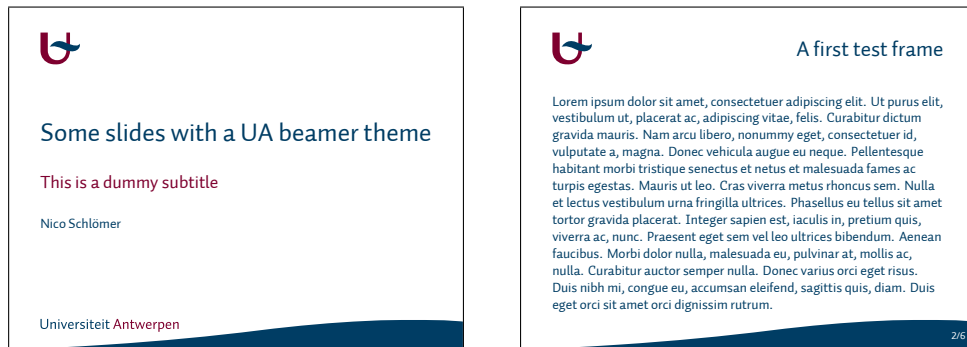
The package is distributed on the maintainer's website [3]. You can get the latest releases there, as well as additional information about the package. If you would like to stay on the bleeding edge of development, you can have read access to the Subversion repository by typing

```
$ svn co svn://macos.cmi.ua.ac.be:\n> /home/wins/toegw/nschloe/svnrepos/ua-beamer
```

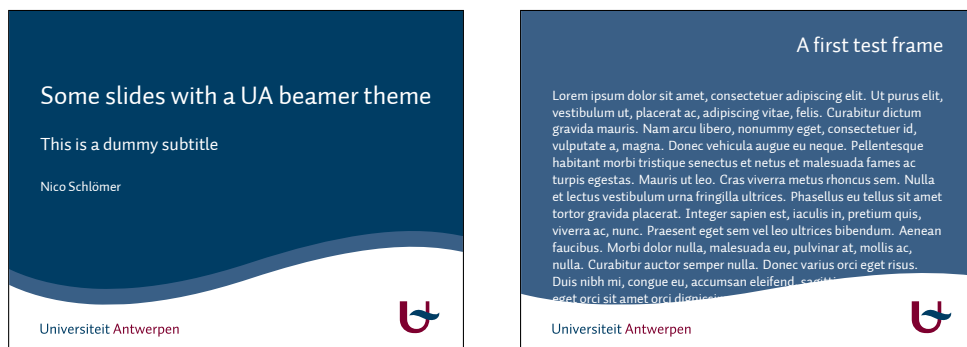
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<sup>1</sup>Note that there exists another `beamer` theme for the Universiteit Antwerpen designed by KRIS VEN [8], which has many more options than this package. In contrast to this theme, it is not designed with compliance to the official themes in mind.



(a) The first two pages with light theming (default).



(b) The first two pages with dark theming (option **dark**).

Figure 1: The first two pages of PDF output of the example file in `example/`, with light and dark theming. The theme is loaded with the option `framenummer` and the `beamer` package itself with `compress`. Note that it is also possible to combine the dark title page with light content pages (option `darktitle`, see below).

### 1.3 First run

Once you have the files, all that is required for the theme to work is putting the files into a directory where  $\text{\LaTeX}$  can find them. If you would like to install it for one user only, this would typically be `~/texmf/` (on Unix). For all other options please refer to the documentation of your  $\text{\LaTeX}$  package manager.

You can check if  $\text{\LaTeX}$  finds the files in its directories by, for example, looking for the file `beamerfontthemeUniversiteitAntwerpen.sty`,

```
$ kpsewhich beamerfontthemeUniversiteitAntwerpen.sty
```

If everything seems okay, you can check whether you can actually produce a presentation with the UA theme by either creating a minimal test file (see listing 1) or by compiling the  $\text{\LaTeX}$ -document provided in the `example/` folder of this package.

```

\documentclass{beamer}

\usetheme{UniversiteitAntwerpen}

\begin{document}

\begin{frame}
Hello world!
\end{frame}

\end{document}

```

Listing 1: A minimalistic test file for the UA Beamer theme.

**Note.** You might need to install more *L<sup>A</sup>T<sub>E</sub>X* packages when running the provided example file (e.g., the *lipsum* package).

## 2 Theme options

The theme comes with several options, all of which can be given in a comma-separated list like in

```

\usetheme[options]{UniversiteitAntwerpen}

```

<b>dark</b>	Just like the Universiteit Antwerpen itself provides two different flavors of PowerPoint <sup>®</sup> presentations, one with a light background and one with a darker, this <b>beamer</b> themes inherits options for both. By default, the theme applies the light theme, this options switches to the dark counterpart. See figure 1.
<b>darktitle</b>	With <b>darktitle</b> (and not <b>dark</b> ), the title page will have a dark background while all other slides will retain the light background.
<b>framenumbers</b>	With the light scheme, the <b>framenumbers</b> option makes sure that the number of the current frame as well as the total number of frames is displayed in the right lower corner of each frame. Does not do anything with the dark variant (see option <b>dark</b> ).

**Note.** The *beamer* option *compress* is respected in the sense that, if it is provided, header and footer will take less space such that there is more space for actual frame content.

## 3 Colors

### 3.1 Background on the official colors

**Note.** If you don't care about the technical details, you can skip this and directly go to subsection 3.3.

The two official colors of the UA, a blue and a red tone, are originally given in PMS format, a *proprietary* format issued by the Pantone Inc. corporation. One particular feature of the PMS color format is that it is, as opposed to RGB or CMYK, *device independent*. This means that the definition of the color does not consist of instructions such as “put 37% red, 12% green, and 45% blue and mix it all together”, but really is a concise description of what the final result, be it printed or displayed, physically looks like on the medium under determined ambient light conditions.

The PMS format is richer than RGB in the sense that it can embrace fluorescence effects, gold or silver shine, special coatings (matte and brilliant), in general everything that has to do with the actual appearance of the color on the medium. It comes thus as no surprise that there is no (exact) mapping between the PMS and RGB color spaces; more specifically: the mapping – if it exists – is device-dependent.

The *only* way to get a perfect PMS 1955 red, for example, is to have a the plot file ready with the (proprietary) PMS color information in it, and have it printed on a PMS-ready printer which needs to be filled the special PMS 1955 ink beforehand. This process is eponymous for colors which are not composed of different types of (yellow, blue, red) inks: they are called *single-spot colors*, and most Pantone<sup>®</sup> colors are of such kind.

### 3.2 Conversion to RGB/CMYK

When the computer screen or any other non-PMS-ready medium is the primary output source, having such rigorous rules may be rather obstructive. To overcome such restrictions, many vendors of graphical software try to translate PMS into RGB/CMYK by making use of special monitor color calibration data (e.g., the ICC color profiles, *.icc*). Unfortunately, if files containing PMS color information are displayed (printed) with programs (printers) which do not support PMS mechanisms (which is most often the case in non-professional environments), the color output will look disturbed. On top of that, and surprisingly for the novice, the output will look disturbed in different ways on different screens (printers) because of the inherent device-dependence of PMS.



Table 1: PMS 302 and PMS 1955 translated to CMYK/RGB in different ways. Left to right: UA website [1] RGB, UA website [1] CMYK, conversion chart [4] RGB, conversion chart [4] CMYK. To determine which version is closest to the actual colors PMS 1955 and PMS 302 on your monitor/printer/beamer, you would need a physical color sample (such as provided on the Pantone® charts) to compare.

That is why this theme aims to use non-PMS versions of the UA’s official colors, including modified versions of the logos.

Now, as explained above there is no device-independent conversion between the original PMS directives and the CMYK color space; several tables exist which are valid for different work environments. On the official sites of the UA [1], you’ll find particular RGB and CMYK values, other resources, e.g., [4], provide other numbers (see table 1).

For the sake of consistency between RGB and CMYK values, the **beamer** theme uses the CMYK values for PMS 302 and PMS 1955 provided on [4] for reference (see table 1, last column, and table 2).

### 3.3 Using the colors

Getting a consistent look-and-feel throughout your presentations requires sticking to a particular style scheme, most of which is being implemented in the **beamer** style file already. One particular aspect, though, can only be controlled by the user, and that is the colors that are used in the running text, tables, and figures.

Although essentially consistent of only two colors, within **beamer** referred to as **uablue** and **uared**, provide more diversity than one might expect and should be *exclusively* used in all the slides. The user should be aware that this directive includes *tables, figures, and graphics of most kinds*. For an example of usage see figure 2.

If you need to emphasize a particular aspect in your slides (graphs, tables), you can (within **beamer**) use the `\alert{}` macro (e.g., `\alert{This is alerted text.}`). For the situation where something needs to stick out in a pie chart, for example, where the

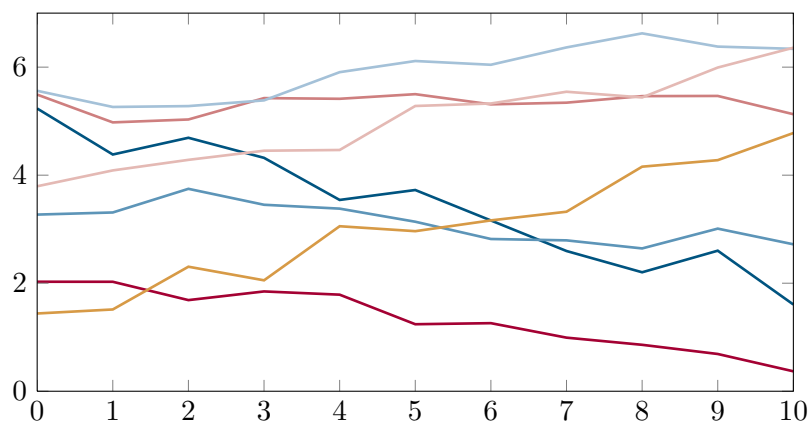


Figure 2: Example usage of the official colors within a set of graphs, using also the exception color.

ordinary colors (UA blue and red) have been used up already, a third color has been added (see table 2). It is to be used scarcely and strictly for highlighting purposes (see, for example, figure 2).

## 4 Fonts

To stick entirely to the corporate design of the Universiteit Antwerpen, one is bound to use the official font series “Auto” of Underware [7]. As stated on the UA website, “Een weloverwogen en consequente gebruik van typografie is de ruggengraat van een huisstijl.” (KAN::T). (A deliberate and consistent use of typography is the backbone of a corporate design.).

Unfortunately, these fonts are not freely available, not even for university members. In order to make use of the most basic fonts, it would be enough to dispose of the “Auto 1 office package”, available for €200 per personal license. The files can be purchased either in TrueType OpenType format (.ttf) or PostScript Type 1 format (.pfm). While the PostScript format is native to L<sup>A</sup>T<sub>E</sub>X, it TrueType-fonts can also be used natively in L<sup>A</sup>T<sub>E</sub>X with pdf<sub>l</sub>at<sub>e</sub>x; installation instructions are plenty (e.g., [2]).

## References

- [1] KAN Design. *Kleuren*. URL: <http://www1.kandesign.com/emc.asp?pageId=2714>.
- [2] Damir Rakityansky. *Using TrueType fonts with TeX (LaTeX) and pdfTeX (pdfLaTeX)*. URL: <http://www.radamir.com/tex/ttf-tex.htm>.
- [3] Nico Schlömer. *Personal homepage*. 2009. URL: <http://www.win.ua.ac.be/~nschloe/>.




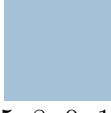
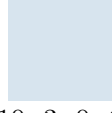
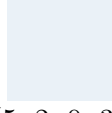





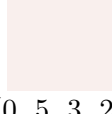

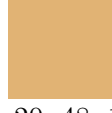

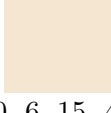
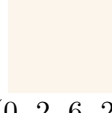
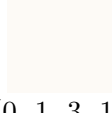
			
Color sample			
CMYK	(100, 30, 0, 62)	(75, 23, 0, 47)	(50, 15, 0, 31)
RGB	(0, 61, 100)	(40, 128, 158)	(96, 166, 191)
beamer name	uablue100	uablue75	uablue50
			
Color sample			
CMYK	(25, 8, 0, 16)	(10, 3, 0, 6)	(5, 2, 0, 3)
RGB	(166, 209, 222)	(218, 235, 242)	(235, 245, 247)
beamer name	uablue25	uablue10	uablue5
			
Color sample			
CMYK	(0, 100, 54, 46)	(0, 75, 41, 35)	(0, 50, 27, 23)
RGB	(161, 0, 64)	(184, 46, 101)	(207, 103, 145)
beamer name	uared100	uared75	uared50
			
Color sample			
CMYK	(0, 25, 14, 12)	(0, 10, 5, 5)	(0, 5, 3, 2)
RGB	(232, 174, 197)	(245, 220, 230)	(250, 237, 242)
beamer name	uared25	uared10	uared5
			
Color sample			
CMYK	(0, 28, 67, 16)	(0, 20, 48, 12)	(0, 13, 31, 8)
RGB	(215, 154, 70)	(225, 179, 116)	(235, 205, 163)
beamer name	vividbrown100	vividbrown75	vividbrown50
			
Color sample			
CMYK	(0, 6, 15, 4)	(0, 2, 6, 2)	(0, 1, 3, 1)
RGB	(245, 230, 209)	(251, 245, 237)	(253, 250, 246)
beamer name	vividbrown25	vividbrown10	vividbrown5

Table 2: Overview over the two main colors used in theme as well as the third color for exceptions and highlighting.

weight	shape	sample
light	normal	The quick brown fox jumps over the lazy dog. 0123456789 ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % & @
	italic	<i>The quick brown fox jumps over the lazy dog. 0123456789</i> <i>ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % &amp; @</i>
	small caps	THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. 0123456789 FF FL FI FFI IJ TO AV É À Ä Ö Ü Ï Œ Æ SS - - — ¿ ? % & @
	italic small caps	<i>THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. 0123456789</i> <i>FF FL FI FFI IJ TO AV É À Ä Ö Ü Ï Œ Æ SS - - — ¿ ? % &amp; @</i>
regular	normal	The quick brown fox jumps over the lazy dog. 0123456789 ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % & @
	italic	<i>The quick brown fox jumps over the lazy dog. 0123456789</i> <i>ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % &amp; @</i>
	small caps	THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. 0123456789 FF FL FI FFI IJ TO AV É À Ä Ö Ü Ï Œ Æ SS - - — ¿ ? % & @
	italic small caps	<i>THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. 0123456789</i> <i>FF FL FI FFI IJ TO AV É À Ä Ö Ü Ï Œ Æ SS - - — ¿ ? % &amp; @</i>
bold	normal	<b>The quick brown fox jumps over the lazy dog. 0123456789</b> <b>ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % &amp; @</b>
	italic	<i><b>The quick brown fox jumps over the lazy dog. 0123456789</b></i> <i><b>ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % &amp; @</b></i>
	small caps	<b>THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. 0123456789</b> <b>FF FL FI FFI IJ TO AV É À Ä Ö Ü Ï Œ Æ SS - - — ¿ ? % &amp; @</b>
	italic small caps	<i><b>THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. 0123456789</b></i> <i><b>FF FL FI FFI IJ TO AV É À Ä Ö Ü Ï Œ Æ SS - - — ¿ ? % &amp; @</b></i>
black	normal	<b>The quick brown fox jumps over the lazy dog. 0123456789</b> <b>ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % &amp; @</b>
	italic	<i><b>The quick brown fox jumps over the lazy dog. 0123456789</b></i> <i><b>ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % &amp; @</b></i>
	italic	<i><b>The quick brown fox jumps over the lazy dog. 0123456789</b></i> <i><b>ff fl fi ffi ij To AV é à ä ö ü ï œ æ ß - - — ¿ ? % &amp; @</b></i>
	small caps	<b>THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. 0123456789</b> <b>FF FL FI FFI IJ TO AV É À Ä Ö Ü Ï Œ Æ SS - - — ¿ ? % &amp; @</b>
	italic small caps	<i><b>THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. 0123456789</b></i> <i><b>FF FL FI FFI IJ TO AV É À Ä Ö Ü Ï Œ Æ SS - - — ¿ ? % &amp; @</b></i>

Table 3: Samples of the font Auto 1 of Underware. All regular and italic versions are available with lining and text figures.



- [4] *Table de couleurs: PMS CMYK HEX*. URL: <http://www.zedimage.com/pms-cmyk-hex.php>.
- [5] Till Tantau. *The L<sup>A</sup>T<sub>E</sub>X Beamer Class*. Feb. 2008. URL: <http://sourceforge.net/projects/latex-beamer/>.
- [6] Till Tantau. *User Guide to the Beamer Class, Version 3.07*. 2007. URL: <http://www.ctan.org/tex-archive/macros/latex/contrib/beamer/doc/beameruserguide.pdf>.
- [7] Underware. *Auto, a triple-italic sans serif*. URL: <http://www.underware.nl/site2/index.php?id1=auto&id2=overview>.
- [8] Kris Ven. *Beamerthemeua*. URL: <http://www.ua.ac.be/main.aspx?c=kris.ven&n=62858>.