Metropolis

A modern beamer theme

Matthias Vogelgesang

April 20, 2019

Center for modern beamer themes

1. Introduction
2. Title formats
3. Elements
4. Conclusion

Introduction

Metropolis

The **metropolis** theme is a Beamer theme with minimal visual noise inspired by the hsrm Beamer Theme by Benjamin Weiss.

Enable the theme (in LaTeX) by loading

```
\documentclass{beamer}
\usetheme{metropolis}
```

Note, that you have to have Mozilla's *Fira Sans* font and XeTeX installed to enjoy this wonderful typography.

In R you can of course use this package directly, see its documentation.

Sections

Sections group slides of the same topic

```
## Elements
```

for which **metropolis** provides a nice progress indicator ...

Title formats

Metropolis title formats

metropolis supports 4 different title formats:

- Regular
- Small caps
- all small caps
- ALL CAPS

They can either be set at once for every title type or individually.

Elements

Typography

```
The theme provides sensible defaults to
\emph{emphasize} text, \alert{accent} parts
or show \textbf{bold} results.
```

becomes

The theme provides sensible defaults to *emphasize* text, accent parts or show **bold** results.

Font feature test

- Regular
- *Italic* (also *Italic*)
- Small Caps
- **Bold** (also **Bold**)
- ***Bold Italic*** (also ***Italic***)
- **Bold Small Caps**
- `Monospace`
- *`Monospace Italic`*
- **`Monospace Bold`**
- ***`Monospace Bold Italic`***

Lists

Items

- Milk
- Eggs
- Potatoes

Enumerations

1. First,
2. Second and
3. Last.

Descriptions

PowerPoint Meeh.

Beamer Yeeeha.

Animation (using LaTeX)

- This is important

This uses LaTeX for aninmation. The next slides uses RMarkdown

Animation (using LaTeX)

- This is important
- Now this

This uses LaTeX for aninmation. The next slides uses RMarkdown

Animation (using LaTeX)

- This is important
- Now this
- And now this

This uses LaTeX for aninmation. The next slides uses RMarkdown

Animation (using LaTeX)

- This is really important
- Now this
- And now this

This uses LaTeX for aninmation. The next slides uses RMarkdown

Animation (using RMarkdown, plus one LaTeX trick)

- This is important

Animation (using RMarkdown, plus one LaTeX trick)

- This is important
- Now this

Animation (using RMarkdown, plus one LaTeX trick)

- This is important
- Now this
- And now this

Animation (using RMarkdown, plus one LaTeX trick)

- This is really important
- Now this
- And now this

Figures (using LaTeX)

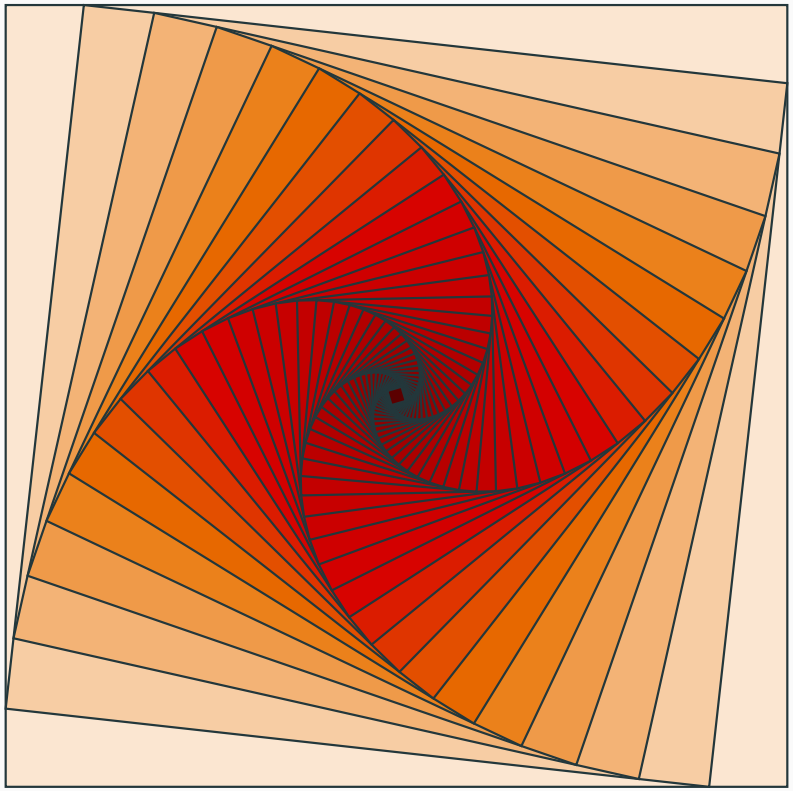


Figure 1: Rotated square from texample.net.

This used a LaTeX feature. All RMarkdown features are also at our disposal.

Tables (using LaTeX})

Table 1: Largest cities in the world (source: Wikipedia)

City	Population
Mexico City	20,116,842
Shanghai	19,210,000
Peking	15,796,450
Istanbul	14,160,467

This used a LaTeX feature. All RMarkdown features are also at our disposal.

Blocks

Three different block environments are pre-defined and may be styled with an optional background color.

Default
Block content.

Alert
Block content.

Example
Block content.

Default

Block content.

Alert

Block content.

Example

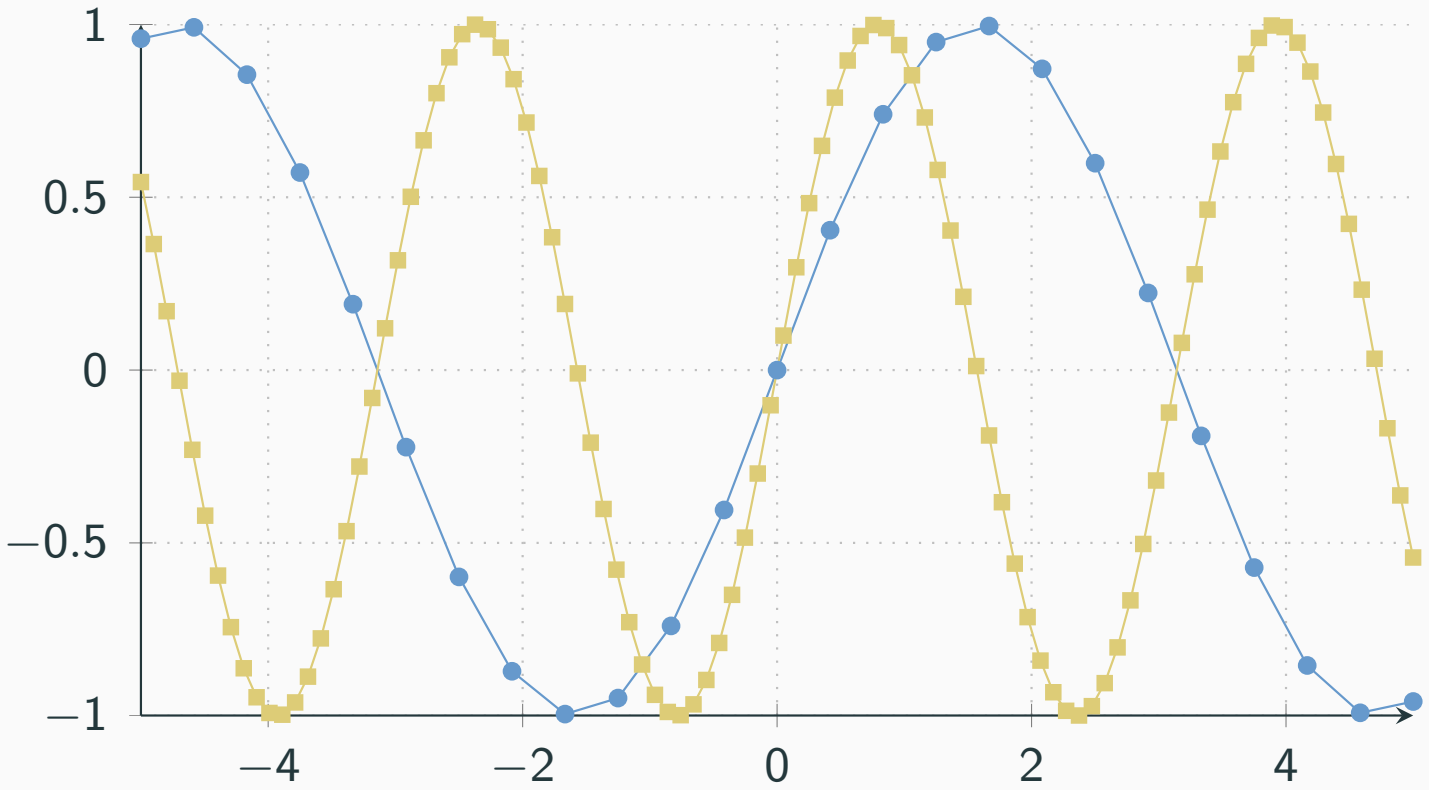
Block content.

The right side uses the `\metroset{block=fill}` option. Blocks can also used in Markdown using `###` (if slide-level=2).

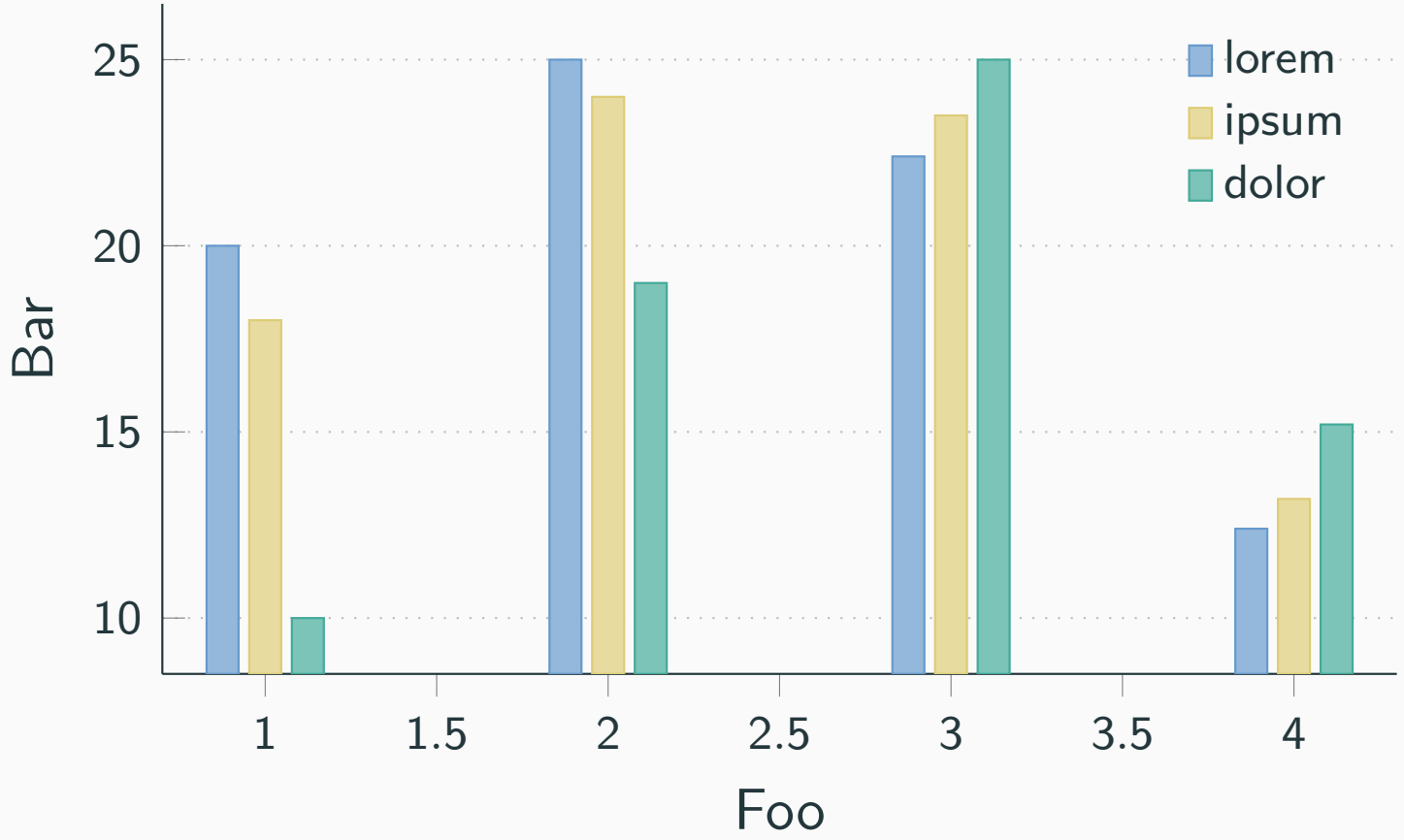
Math

$$e = \lim_{n \to \infty} \left(1 + \frac{1}{n}\right)^n$$

Line plots with `tikz`



Bar charts with `tikz`



Quotes

Veni, Vidi, Vici

References

Some references [Knuth, 1992, Graham et al., 1989, Simpson, 2003, Erdős, 1995, Greenwade, 1993]

`allowframebreaks` is not used or needed, also changed `\cite` to `\citep`, and defaulted `natbib` to option `[round]`.

Conclusion

Summary

Get the source of this theme and the demo presentation from

https://github.com/matze/mtheme

Source and documentation for the RMarkdown variant are at https://github.com/eddelbuettel/binb.

Questions?

Backup slides

Sometimes, it is useful to add slides at the end of your presentation to refer to during audience questions.

The best way to do this is to include the `appendixnumberbeamer` package in your preamble and call `\appendix` before your backup slides.

metropolis will automatically turn off slide numbering and progress bars for slides in the appendix.

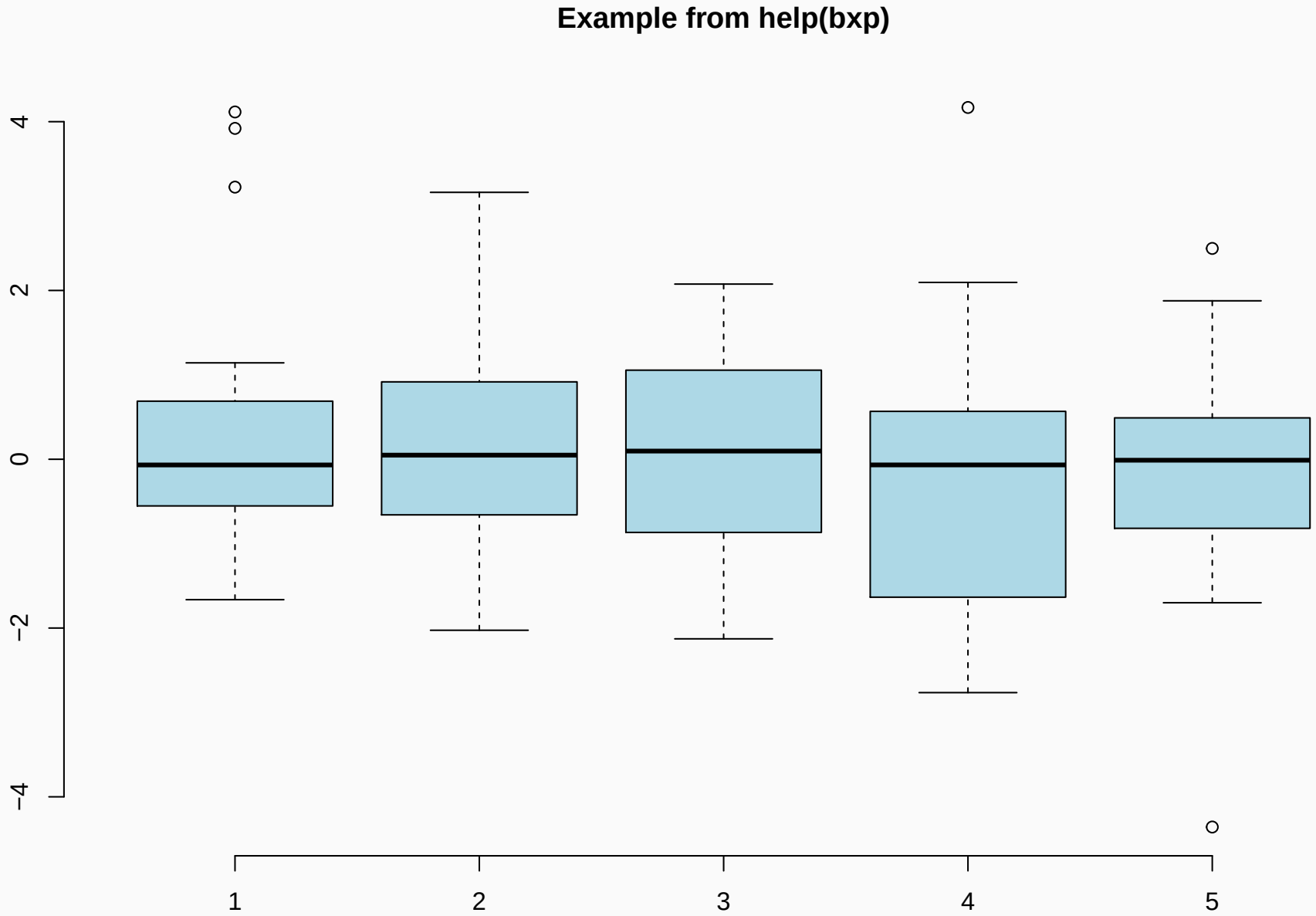
Calling `\appendix` currently leads to an error in when using `binb`.

R Appendix: R Figure Example

The following code generates the plot on the next slide (taken from `help(bxp)` and modified slightly):

```
library(stats)
set.seed(753)
bx.p <- boxplot(split(rt(100, 4),
                      gl(5, 20)), plot=FALSE)
bxp(bx.p, notch = FALSE, boxfill = "lightblue",
    frame = FALSE, outl = TRUE,
    main = "Example from help(bxp)")
```

R Appendix: R Figure Example



R Appendix: R Table Example

A simple `knitr::kable` example:

```
knitr::kable(mtcars[1:5, 1:8],
             caption="(Parts of) the mtcars dataset")
```

Table 2: (Parts of) the mtcars dataset

	mpg	cyl	disp	hp	drat	wt	qsec	vs
Mazda RX4	21.0	6	160	110	3.90	2.620	16.46	0
Mazda RX4 Wag	21.0	6	160	110	3.90	2.875	17.02	0
Datsun 710	22.8	4	108	93	3.85	2.320	18.61	1
Hornet 4 Drive	21.4	6	258	110	3.08	3.215	19.44	1
Hornet Sportabout	18.7	8	360	175	3.15	3.440	17.02	0

References

P. Erdős. A selection of problems and results in combinatorics. In *Recent trends in combinatorics (Matrahaza, 1995)*, pages 1–6. Cambridge Univ. Press, Cambridge, 1995.

R. Graham, D. Knuth, and O. Patashnik. *Concrete mathematics*. Addison-Wesley, Reading, MA, 1989.

G. D. Greenwade. The Comprehensive Tex Archive Network (CTAN). *TUGBoat*, 14(3):342–351, 1993.

D. Knuth. Two notes on notation. *Amer. Math. Monthly*, 99: 403–422, 1992.

H. Simpson. Proof of the Riemann Hypothesis. preprint (2003), available at `http://www.math.drofnats.edu/riemann.ps`, 2003.