

# The owl Beamer colour theme

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*“The effectiveness of a colour scheme is heavily dependent on the conditions you present in. Colours that look nice on a computer screen may be invisible projected; colours that stand out in a lit room may strain the eyes in a dark room. If possible, you should carefully choose from Beamer’s wide variety of colour themes to find one that fits your presentation’s individual needs.”*

The above paragraph would be excellent advice, except for one thing – only a handful of pre-selected colour themes are publicly available for Beamer. The vast majority of Beamer presentations use one of the [built-in colour themes](#), which are effective in some conditions but inadequate in others. The goal of this package is to reduce the number of situations you find yourself without any good colour options. **owl** is a flexible dark or light colour theme designed for maximum readability in environments where most themes fall flat.

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## 1 Usage

Once you have downloaded and installed the `beamercolorowl` package, using it is a piece of cake:

```
\usecolortheme{owl}
```

Unlike many Beamer themes, `owl` defaults to a “dark” theme with white text on a black background. This is particularly recommended for presentations with low ambient lighting, where it has the most advantages (see Section 2).

If you expect to present in a brightly-lit room or with a weak projector, you may

wish to use to use the `snowy` option to use black text on a white background:

```
\usecolortheme[snowy]{owl}
```

In addition to setting the colour scheme of your slides, `owl` redefines the re-  
defines the basic colour names `red`, `green`, `blue`, `yellow`, `violet`, `brown`,  
`orange`, and `cyan` to hues that are more visible when when displayed by some  
projectors. If you do not want these colour names to be redefined, use the  
`cautious` option when loading `owl`:

```
\usecolortheme[cautious]{owl}
```

In either case, `owl`-defined colours will be available as `OwlRed`, `OwlGreen`,  
`OwlBlue`, and so forth.

## 2 The Background

### 2.1 Dark background (default)

By default, `owl` is a dark colour theme. This isn't just because owls are usually  
nocturnal — a black background actually offers several advantages.

- In low-light environments, a dark background helps to reduce eye strain and  
focus attention on the content of your slides.
- Laser pointers are more visible against dark backgrounds. It's also easier to  
interact directly with your slides when the projector isn't shining as bright  
a light at your eyes and body.
- With a perfectly black background, there is no visual distinction between  
the frame margin and the surrounding projector screen. Because of this,

less space needs to be dedicated to the margins of each slide; you could afford to use a larger font size, say, to increase visibility of the content.

There are a few caveats to using a black background. First and foremost, when applying a black background to an existing presentation, it is important to check that your figures and charts look all right. Diagrams created with TikZ or PGF-Plots are easily adjusted to a new colour scheme; images generated from external tools may need to be re-exported, edited with an image editing program, or [preprocessed](#) with the `convert` utility.

## 2.2 Light background

If your presentation or environment prevent you from using a dark background, but you still want to use the other colours in `owl`'s palette, you can use the `snowy` option to switch to a light theme. (Snowy owls, of course, are diurnal and have white plumage.)

### *Implementation*

```
\@ifclassloaded{beamer}{
  \iftoggle{snowy}{
    \setbeamercolor{normal text}{fg=black, bg=white}
  }{
    \setbeamercolor{normal text}{fg=white, bg=black}
  }
}
```

## 3 The Colours

The projectors I encounter regularly tend to have very bright green channels and dim red and blue channels: the default **green** is sometimes so bright as to be indistinguishable from white, while even pure **red** and **blue** are still too dim to tell apart from black. The **owl** colour theme provides a basic colour palette that attempts to compensate for this.

### 3.1 Primary colours

**OwlBlue** is a greenish blue, bright enough to be legible on a dark background.

**OwlGreen** is a darker green than the default, and with a slightly yellower hue to help distinguish it from **OwlBlue**.

**OwlRed** is a pinkish magenta, which combines the (individually dim) red and blue channels on the projector to produce enough light to be legible.

**OwlYellow** is a gold colour of moderate brightness.

In addition to being distinguishable from white and black, these colours have been chosen to be as distinct as possible from one another. Even so, it is always a good idea to take care when selecting colours for your presentation. For audience members with red-green colour vision deficiencies, **OwlGreen** and **OwlYellow** may be difficult to tell apart, while **OwlRed** may be difficult to distinguish from light grey or white.

#### *Implementation*

```
\RequirePackage{xcolor}
\definecolor{OwlRed}{RGB}{ 255, 92, 168}
\definecolor{OwlGreen}{RGB}{ 90, 168, 0}
\definecolor{OwlBlue}{RGB}{ 0, 152, 233}
\definecolor{OwlYellow}{RGB}{ 242, 147, 24}
```

## 3.2 Secondary colours

The `owl` colour theme also provides names for certain combinations of the above colours: `OwlViolet`, `OwlBrown`, `OwlOrange`, and `OwlCyan`. These should be used sparingly; if possible, it is preferable to use only two or three colours in a presentation.

*Implementation*

```
\colorlet{OwlViolet}{OwlRed!50!OwlBlue}  
\colorlet{OwlBrown}{OwlRed!50!OwlGreen}  
\colorlet{OwlOrange}{OwlRed!50!OwlYellow}  
\colorlet{OwlCyan}{OwlGreen!50!OwlBlue}
```

## 3.3 Redefines L<sup>A</sup>T<sub>E</sub>X colours

Unless the `cautious` option is used, `owl` redefines the built-in colours `red`, `green`, `blue`, `yellow`, `violet`, `brown`, `orange`, and `cyan` to the above values. This allows you to create diagrams in TikZ or PGFPlots that use `owl`'s legible colours in your presentation but are still easy reuse in other contexts.

*Implementation*

```
ftoggle{cautious}{}{  
\colorlet{red}{OwlRed}  
\colorlet{green}{OwlGreen}  
\colorlet{blue}{OwlBlue}  
\colorlet{yellow}{OwlYellow}  
\colorlet{violet}{OwlViolet}  
\colorlet{brown}{OwlBrown}  
\colorlet{orange}{OwlOrange}  
\colorlet{cyan}{OwlCyan}
```

## 4 Implementation: Beamer colour definitions

The Beamer colours set by `owl` all derive from the definitions of `normal text`, `alerted text`, and `example text`. This makes it easy for you to tweak the theme; for example, you can add

```
\setbeamercolor*{alerted text}{fg=OwlBlue}  
\setbeamercolor*{example text}{fg=OwlYellow}
```

to your preamble to change the highlight colours of the theme.

```
\@ifclassloaded{beamer}{  
  \setbeamercolor*{alerted text}{  
    fg=OwlRed  
  }  
  \setbeamercolor*{example text}{  
    fg=OwlGreen  
  }  
}
```

### 4.1 Title page

```
\setbeamercolor*{title}{  
  use=normal text,  
  fg=normal text.fg  
}  
\setbeamercolor*{title in sidebar}{  
  use=normal text,  
  fg=normal text.fg  
}  
\setbeamercolor*{titlelike}{  
  use=normal text,
```

```

    parent=normal text.fg
}
\setbeamercolor*{author}{
    use=normal text,
    parent=normal text.fg
}
\setbeamercolor*{date}{
    use=normal text,
    parent=normal text.fg
}
\setbeamercolor*{institute}{
    use=normal text,
    parent=normal text.fg
}

```

## 4.2 Palettes

```

\setbeamercolor*{structure}{
    use=normal text,
    fg=normal text.fg!50!normal text.bg
}
\setbeamercolor*{palette primary}{
    use=normal text,
    fg=normal text.fg!90!normal text.bg,
    bg=normal text.bg!90!normal text.fg
}
\setbeamercolor*{palette secondary}{
    use=normal text,
    fg=alerted text.fg!75!normal text.bg,
    bg=normal text.bg!90!normal text.fg
}
\setbeamercolor*{palette tertiary}{

```

```

    use=normal text,
    fg=example text.fg!75!normal text.bg,
    bg=normal text.bg!90!normal text.fg
}
\setbeamercolor*{palette quaternary}{
    use=normal text,
    fg=normal text.fg!75!normal text.bg,
    bg=normal text.bg!90!normal text.fg
}
\setbeamercolor*{sidebar}{
    use=normal text,
    fg=normal text.fg!80!normal text.bg,
    bg=normal text.bg!80!normal text.fg
}
\setbeamercolor*{palette sidebar primary}{
    use=palette primary,
    parent=palette primary
}
\setbeamercolor*{palette sidebar secondary}{
    use=palette primary,
    parent=palette primary
}
\setbeamercolor*{palette sidebar tertiary}{
    use=palette quaternary,
    parent=palette quaternary
}
\setbeamercolor*{palette sidebar quaternary}{
    use=palette quaternary,
    parent=palette quaternary
}
\setbeamercolor*{frametitle}{
    use=palette primary,
    parent=palette primary
}

```

```
}
```

## 4.3 Blocks

```
\setbeamercolor*{block title}{  
  use=normal text,  
  fg=normal text.fg,  
  bg=  
}  
\setbeamercolor{block body}{  
  bg=  
}  
\setbeamercolor*{block title alerted}{%  
  use={block title, alerted text},  
  fg=alerted text.fg,  
  bg=block title.bg  
}  
\setbeamercolor*{block title example}{%  
  use={block title, example text},  
  fg=example text.fg,  
  bg=block title.bg  
}  
\setbeamercolor*{block body alerted}{  
  use=block body,  
  parent=block body  
}  
\setbeamercolor*{block body example}{  
  use=block body,  
  parent=block body  
}
```

## 4.4 Tweaks to Beamer

Since `owl` does not set a background colour for `block` environments, it also prevents the built-in themes from adding drop shadows to blocks. Finally, `owl` fixes a pet peeve of mine and disables the navigation symbols that often appear at the bottom right of Beamer presentations.

```
\def\beamer@themerounded@shadow{false}
\setbeamertemplate{navigation symbols}{}
}}
```

## 5 License and contributions

`owl` may be distributed and/or modified under the conditions of the [LaTeX Project Public License](#) version 1.3 or later. The Current Maintainer of this work is Ross Churchley ([ross@rosschurchley.com](mailto:ross@rosschurchley.com)), who welcomes contributions to the package [on GitHub](#).

The goal of `owl` is to provide colours that are as visible as possible, even in unfavourable presenting conditions. This can be challenging to test with only one pair of eyes and a handful of projectors! If you have used `owl` or seen it used, we would greatly appreciate your opinion on how it performed. Please open a GitHub Issue or privately email the Current Maintainer with as much of the following information as you can:

- The version of `owl` used.
- The Beamer theme, if any, that was used together with `owl`.
- Whether `owl` was used as a dark or light theme.
- Details on the room (auditorium, large room, small room, ...)

- Details on the lighting conditions (brightly lit, dark, windows, ...)
- Details, if known, on the reporter's vision (glasses, colour deficiencies, ...)
- Your opinion on:
  - whether normal text was visible against the background.
  - whether the provided colours (**OwlRed**, **OwlBlue**, etc) were legible against the background.
  - whether the provided colours (**OwlRed**, **OwlBlue**, etc) were distinguishable from each other and from the normal text colour.

We also welcome technical feedback and bug reports in the form of GitHub Issues and pull requests.

# 6 Examples

## Pittsburgh

**Slide 1 (Left):**

Presentation Title  
Presentation Subtitle

F. Author<sup>1</sup> S. Another<sup>2</sup>

<sup>1</sup>Department of Computer Science  
University of Somewhere

<sup>2</sup>Department of Theoretical Philosophy  
University of Elsewhere

Date / Occasion

**Slide 2 (Right):**

This is the slide title.  
This is the slide subtitle.

Remark  
Sample text

- An item
- Another item
  - Something
  - Something else

1. Thing A
2. Thing B
3. Thing C

## Hannover

**Slide 1 (Left):**

Short Paper  
Title  
Author,  
Another

First Section  
Short First  
Section  
Name

Presentation Title  
Presentation Subtitle

F. Author<sup>1</sup> S. Another<sup>2</sup>

<sup>1</sup>Department of Computer Science  
University of Somewhere

<sup>2</sup>Department of Theoretical Philosophy  
University of Elsewhere

Date / Occasion

**Slide 2 (Right):**

This is the slide title.  
This is the slide subtitle.

Remark  
Sample text

- An item
- Another item
  - Something
  - Something else

1. Thing A
2. Thing B
3. Thing C

## metropolis

**Slide 1 (Left):**

Presentation Title  
Presentation Subtitle

---

F. Author<sup>1</sup> S. Another<sup>2</sup>  
Date / Occasion

<sup>1</sup>Department of Computer Science  
University of Somewhere

<sup>2</sup>Department of Theoretical Philosophy  
University of Elsewhere

1

**Slide 2 (Right):**

This is the slide title.

Remark  
Sample text

- An item
- Another item
  - Something
  - Something else

1. Thing A
2. Thing B
3. Thing C

3

# Pittsburgh (snowy owl)

This is the slide title.  
This is the slide subtitle.

Presentation Title  
Presentation Subtitle

F. Author<sup>1</sup> S. Another<sup>2</sup>

<sup>1</sup>Department of Computer Science  
University of Somewhere

<sup>2</sup>Department of Theoretical Philosophy  
University of Elsewhere

Date / Occasion

Remark  
Sample text

- An item
- Another item
  - Something
  - Something else

1. Thing A
2. Thing B
3. Thing C

# Hannover (snowy owl)

Short Paper  
Title  
Author,  
Another

First Section  
Short First  
Subsection  
Name

This is the slide title.  
This is the slide subtitle.

Presentation Title  
Presentation Subtitle

F. Author<sup>1</sup> S. Another<sup>2</sup>

<sup>1</sup>Department of Computer Science  
University of Somewhere

<sup>2</sup>Department of Theoretical Philosophy  
University of Elsewhere

Date / Occasion

Short Paper  
Title  
Author,  
Another

First Section  
Short First  
Subsection  
Name

Remark  
Sample text

- An item
- Another item
  - Something
  - Something else

1. Thing A
2. Thing B
3. Thing C

# metropolis (snowy owl)

This is the slide title.

Presentation Title  
Presentation Subtitle

F. Author<sup>1</sup> S. Another<sup>2</sup>

Date / Occasion

<sup>1</sup>Department of Computer Science  
University of Somewhere

<sup>2</sup>Department of Theoretical Philosophy  
University of Elsewhere

Remark  
Sample text

- An item
- Another item
  - Something
  - Something else

1. Thing A
2. Thing B
3. Thing C