Package ‘scico’

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Title Colour Palettes Based on the Scientific Colour-Maps
Version 1.4.0
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Description Colour choice in information visualisation is important in order to avoid being mislead by inherent bias in the used colour palette. The 'scico' package provides access to the perceptually uniform and colour-blindness friendly palettes developed by Fabio Crameri and released under the "Scientific Colour-Maps" moniker. The package contains 24 different palettes and includes both diverging and sequential types.
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**scico-package**

*scico: Colour Palettes Based on the Scientific Colour-Maps*

**Description**

Colour choice in information visualisation is important in order to avoid being mislead by inherent bias in the used colour palette. The 'scico' package provides access to the perceptually uniform and colour-blindness friendly palettes developed by Fabio Crameri and released under the "Scientific Colour-Maps" moniker. The package contains 24 different palettes and includes both diverging and sequential types.

**Author(s)**

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Authors:

- Fabio Crameri

**See Also**

Useful links:

- [https://github.com/thomasp85/scico](https://github.com/thomasp85/scico)
- Report bugs at [https://github.com/thomasp85/scico/issues](https://github.com/thomasp85/scico/issues)

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**ggplot2-scales**

*Scales to use for ggplot2*

**Description**

These functions provide the option to use the scico palettes along with the ggplot2 package. It goes without saying that it requires ggplot2 to work.

**Usage**

```r
scale_colour_scico(
  ..., 
  alpha = NULL, 
  begin = 0, 
  end = 1, 
  direction = 1, 
  palette = "bilbao", 
  midpoint = NA
)
```
scale_color_scico(
  ...,  
  alpha = NULL,
  begin = 0,
  end = 1,
  direction = 1,
  palette = "bilbao",
  midpoint = NA
)

scale_fill_scico(
  ...,  
  alpha = NULL,
  begin = 0,
  end = 1,
  direction = 1,
  palette = "bilbao",
  midpoint = NA
)

scale_colour_scico_d(
  ...,  
  alpha = 1,
  begin = 0,
  end = 1,
  direction = 1,
  palette = "batlow",
  aesthetics = "colour"
)

scale_color_scico_d(
  ...,  
  alpha = 1,
  begin = 0,
  end = 1,
  direction = 1,
  palette = "batlow",
  aesthetics = "colour"
)

scale_fill_scico_d(
  ...,  
  alpha = 1,
  begin = 0,
  end = 1,
  direction = 1,
  palette = "batlow",
  aesthetics = "fill"
Arguments

...  Arguments to pass on to ggplot2::scale_colour_gradientn(), ggplot2::scale_fill_gradientn()
ggplot2::ggplot2::discrete_scale()
alpha  The opacity of the generated colours. If specified rgba values will be generated. The default (NULL) will generate rgb values which corresponds to alpha = 1
begin, end  The interval within the palette to sample colours from. Defaults to 0 and 1 respectively
direction  Either 1 or -1. If -1 the palette will be reversed
palette  The name of the palette to sample from. See scico_palette_names() for a list of possible names
midpoint  A midpoint to center the scale on, used primarily for diverging and multisequential scales
aesthetics  Character string or vector of character strings listing the name(s) of the aesthetic(s) that this scale works with. This can be useful, for example, to apply colour settings to the colour and fill aesthetics at the same time, via aesthetics = c("colour", "fill")

Value

A ScaleContinuous or ScaleDiscrete object that can be added to a ggplot object

Examples

if (require('ggplot2')) {
  volcano <- data.frame(
    x = rep(seq_len(ncol(volcano)), each = nrow(volcano)),
    y = rep(seq_len(nrow(volcano)), ncol(volcano)),
    height = as.vector(volcano)
  )

ggplot(volcano, aes(x = x, y = y, fill = height)) +
  geom_raster() +
  scale_fill_scico(palette = 'tokyo')

ggplot(iris, aes(x=Petal.Width, y=Petal.Length)) +
  geom_point(aes(color=Species), size=10) +
  scale_colour_scico_d()
}


scico

Scientific colour map palettes

Description

This function constructs palettes of the specified size based on the colour maps developed by Fabio Crameri. It follows the same API style as `viridis()` from the `viridisLite` package so anyone familiar with this package can easily adapt to that.

Usage

```r
scico(
  n,
  alpha = NULL,
  begin = 0,
  end = 1,
  direction = 1,
  palette = "bilbao",
  categorical = FALSE
)
```

Arguments

- `n` The number of colours to generate for the palette
- `alpha` The opacity of the generated colours. If specified rgba values will be generated. The default (NULL) will generate rgb values which corresponds to alpha = 1
- `begin`, `end` The interval within the palette to sample colours from. Defaults to 0 and 1 respectively
- `direction` Either 1 or -1. If -1 the palette will be reversed
- `palette` The name of the palette to sample from. See `scico_palette_names()` for a list of possible names
- `categorical` Boolean. Should the categorical palettes be returned

Value

A character vector of length n with hexencoded rgb(a) colour values

References


Examples

# Use the default palette
scico(15)

# Flip the direction
scico(15, direction = -1)

# Take a subset of a palette
scico(15, begin = 0.3, end = 0.6, palette = 'berlin')

scico_palette_show
 Show the different scico palettes

Description

This is a simple function to show a gradient of the different palettes available in the scico package

Usage

scico_palette_show(
    palettes = scico_palette_names(categorical),
    categorical = FALSE,
    n = if (categorical) 6 else 100
)

Arguments

palettes One or more palette names to show

categorical Boolean. Should the categorical palettes be returned

n How many colours should be shown

Examples

scico_palette_show()
scico_palette_show(categorical = TRUE)
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