

INTRODUCTION TO *Pradarsana*

MAKING TECHNICAL PRESENTATIONS IN 20 SLIDES!



Comprehensive Tutorial

28 February 2021

OVERVIEW

- Pradarsana philosophy
- Preamble
- Basic slide
 - choosing colours and fonts
 - changing backgrounds and decorations
- Placement and *boxes*
- Pradarsana's friends

Pradarsana is a tool
based on L^AT_EX for
making
technical
presentations

- follows L^AT_EX philosophy of separating the author and the typesetter
- author *conceptually visualises* the appearance of a slide while the typesetter *creates and renders* it
- Pradarsana provides many powerful macros to the author for marking up the contents of a slide

DOCUMENT STRUCTURE

```
\documentclass{pradarsana}  
\slidedesign{professional}  
\usepackage{amssymb}  
\usepackage{fontcolors}  
\usepackage{graphicx}  
\date{30 June 2019}
```

PREAMBLE

```
\begin{document}  
\begin{titleslide}  
title slide content  
\end{titleslide}  
\begin{slide}  
slide content  
\end{slide}  
:  
\end{document}
```

BODY

- Identical to a standard \LaTeX document
- Has two main parts:

Preamble: Begins with `\documentclass`

Specifies global aspects of presentation such as slide size, layout, designs, colours and other standard \LaTeX aspects such as packages to use and `\date`.

Body: Starts with `\begin{document}` and ends with `\end{document}`

Contains the actual slides with each slide starting with `\begin{slide}` and ending with `\end{slide}`

PREAMBLE

widescreen:

gives a 16:9 slide. Default is 4:3 slide.

decorate: puts extra pizzazz on the slide for some styles. Default is no decorations.

fancy: allows specifying a slide background. Default is no special background.

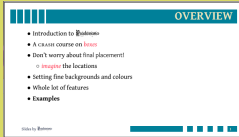
Specifies the document class, slide size and layout, packages to use, date, etc.

```
\documentclass[options]{pradarsana}
\slidedesign[options]{design specs}
\date{date}
\usepackage{any other LATEX packages}
```

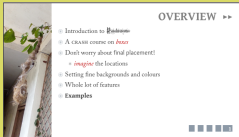
Common packages: `graphicx`, `amsmath`, `amssymb` and `fontcolors`. The last is a part of ~~Pradarsana~~ package and gives a large variety of colours and fonts. Fonts have to be downloaded and installed separately.

SLIDE DESIGNS

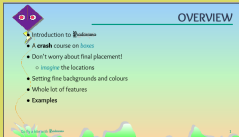
bars



birdnest



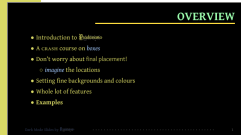
kite



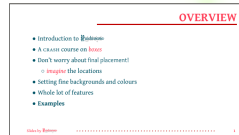
leaf



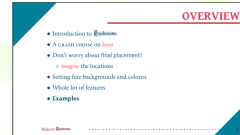
darkmode



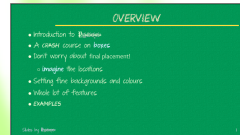
plain



triangles



blackboard



- The command `\slidedesign{design}` selects the overall slide style
 - Selects the fonts and specific decorations
 - Selects the foreground and background colours
- The current slides use professional design
 - `\slidedesign[fancy]{professional}`
 - *Eight (8)* other standard designs available

SLIDE CONTENTS

REGULAR BOX

`\regbox[1]{...}`

This is a *regular box* used for simple placement in slides. Used with *Option 1* to give an outline.

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Source \LaTeX

```
\begin{slide}
\prdheading{REGULAR
BOX}
\regbox[1]{%
This is a \emph{regular
box} used for simple
placement in slides.
Used with \emph{Option
1} to give an outline.
}
\end{slide}
```

- Slides defined by `\begin{slide} ... \end{slide}`
- Slide title given by `\PRDheading{...}`
- Visualising a slide = *placement of relevant items*
- Slide is divided into *boxes*: choose a box for placing contents in a specific position
- Boxes come in four flavours — default (*option 0*) has no decorations, *option 1* draws an outline, *option 2* puts a shadow, *option 3* gives a coloured box without outlines
- The simplest box: `\regbox{}` Specifies all the area under the heading

lbox and rbox

LEFT AND RIGHT BOXES

This is a *left box* used for placing contents in the left half of the slide.

`\rbox[2]`

This is a *right box with Option 2* to show the shadow effect. All box sizes are automatically determined from the slide design and papersize specifications.

Source [1]X
`\lbox{This is a \emph{left box} used for placing contents in the left half of the slide. }`

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lthinbox and rwidebox

LEFT AND RIGHT BOXES ...

This is a *thin left box* used for placing contents in the left one-third of the slide.

`\rwidebox[1]`

This is a *wide right box with Option 1* to show the outline.

Source [1]X
`\lthinbox{This is a \emph{thin left box} used for placing contents in the left one-third of the slide. }`

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lwidebox and rthinbox

LEFT AND RIGHT BOXES ...

This is a *wide left box* used for placing contents in the left two-thirds of the slide.

`\rthinbox[1]`

This is a *thin right box with Option 1* to show the outline.

Source [1]X
`\lwidebox{This is a \emph{wide left box} used for placing contents in the left two-thirds of the slide. }`

8

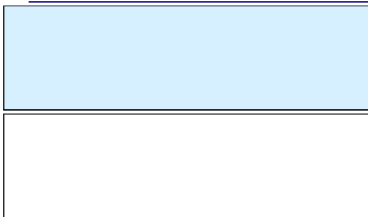
LEFT AND RIGHT BOXES

- Left and right boxes divide the slide area *vertically* into two parts
- `\lbox{...}` puts contents in left half of the slide.
May be combined with `\rbox` which places contents in the right half.
- `\lthinbox{...}` puts contents in left one-third.
May be combined with `\rwidebox` which puts contents in the right two-thirds.
- `\lwidebox{...}` puts contents in left two-thirds.
May be combined with `\rthinbox` to put contents in the right-most one-third.

TOP AND BOTTOM BOXES

topbox and bottombox

TOP AND BOTTOM BOXES



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tsmallbox, tcenterbox, bsmallbox

TOP AND BOTTOM BOXES ...

This is `\tsmallbox[1]{...}` to show the small topbox covering top one-third of the slide.

This is `\tcenterbox[1]{...}` to show the centre box covering middle one-third of the slide.

This is `\bsmallbox[1]{...}` to show the small bottombox covering bottom one-third of the slide.

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- Top and bottom boxes divide the slide area *horizontally* into two parts.
- `\topbox{...}` puts contents in top-half of the slide.
- `\bottombox{...}` puts contents in bottom half.
- `\tsmallbox{}` and `\bsmallbox{}` are variants to put contents in top and bottom one-third.
- There is also a *centre box* `\tcenterbox{}` to put contents in the middle one-third.
- Finally, there is a `\centerbox{}` to put contents in the middle of the slide. Try it and see!!

Four Boxes

MORE BOXES	
This is \tlbox{}	This is \trbox{}
This is \blbox{}	This is \brbox{}

Two variations

VARIATIONS ON BOXES	
This is \tlsmallbox{}	This is \trbigbox{}
This is \blbigbox{}	This is \brsmallbox{}

VARIATIONS ON BOXES	
This is \tlsmallbox{}	This is \trsmallbox{}
This is \blbigbox{}	This is \brbigbox{}

MORE BOXES

- There are four more major boxes for placement
 - `tlbox: \tlbox{}` puts contents in top-left quarter of the slide.
 - `trbox: \trbox{}` puts contents in top-right quarter.
 - `blbox: \blbox{}` puts contents in bottom-left.
 - `brbox: \brbox{}` puts contents in bottom-right.
- Also *small* and *big* variants of each exist —
 - `\tlbigbox{}`, `\tlsmallbox{}`,
 - `\trbigbox{}`, `\trsmallbox{}`,
 - `\blbigbox{}`, `\blsmallbox{}`,
 - `\brbigbox{}`, `\brsmallbox{}`

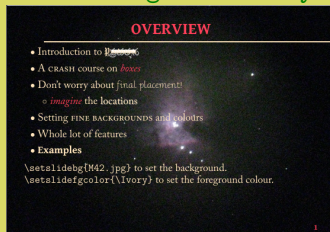
Colour Selection

```
\slidedesign{plain}  
\setslidebgcolor  
{LightElectricBlue}  
  
\setslidefgcolor{Ivory}
```



Background Image

```
\slidedesign[fancy]{plain}  
\setslidebg{M-42.jpg}  
  
\setslidefgcolor{Ivory}
```



SLIDE COLOURS

- Basic colour scheme is defined by the choice of `\slidedesign{design}`

- You can override the defaults using

`\setslidefgcolor{clrname}`: globally sets foreground colour for entire presentation.

`\setslidebgcolor{clrname}`: globally sets background colour.

`\setslidebg{imgname}`: globally sets background image for slides. Image can be eps, jpg or png.

Requires `\slidedesign[fancy]{...}`

- You can use `\setdesigncolor{clrname}` to change the default colour of the decorations (try it with bars and see!)

BOX COLOURS

```
\setfgcolor{Pista}  
\setbgcolor{DarkTeal}  
\lthinbox[1]  
generated this box.
```

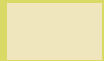
- All the boxes can have background colours whenever Options 1, 2 or 3 are chosen.
- Foreground colour may be changed for any box independent of any option.
- `\setfgcolor{clrname}` sets foreground colour for *next box in slide*.
- `\setbgcolor{clrname}` sets background colour for *next box in slide*.
Colours reset to defaults for subsequent boxes.
- Currently there is no way to set a background image for a box.

AVAILABLE COLOURS

Many other colours (>75)
are available in
`fontcolors.sty`

Many colours are defined in `fontcolors.sty`
Use `\usepackage{fontcolors}` in the preamble.

Some of the colours are shown here.



Ivory



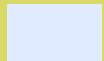
PGWPlum



Pista



BlueCarbuncle



BlueWhite



Parchment



LightPink



HoneyDew



DarkBlue



blue



DarkGreen



green



DarkRed



red



Fuchsia



FrijidPink



DarkBiscuit



Orange



HcuYellow



yellow



DarkTeal



Teal



Turquoise



BlueGreen



Lilac



Violet



ElectricBlue



PastelBlue



Blackboard



DeepPurple



DarkGrey



MediumGrey

FONT SIZE SELECTION

```
{\ceighteen  
18pt font}  
18pt font  
{\ctwenty 20pt  
font}  
20pt font  
{\ctwentyfour  
24pt font}  
24pt font  
{\ctwentyeight  
28pt font}  
28pt font  
:
```

- Wide set of font sizes available through `fontcolors.sty`
- The smallest is 6pt font and the largest

90pt font

- Two special fonts `csmall` and `clarge` are relative to normal size. The first is 4pt smaller and second, 4pt larger.
- Size is changed using `\c<size>`

FONT SELECTION

- *Pradarsana* provides a set of 11 fonts for use in presentations.

Serif fonts: Bitstream Charter, Gentium, Merriweather

Sans Serif fonts: Overlock

Handwriting fonts: *NellaSue*, *Cookie*, *Satisfy*, *YummyCupcakes*

Special fonts: *Medici*, *CRAYONS*, *DRIFTWOOD*

- Font selection is done by specifying `\slidedesign`
- Can be changed temporarily using `{\fontname text}`
e.g `{\NellaSue This is NellaSue font}` produces
This is NellaSue font

SPECIALS!!

Embed Videos!

Let your video be
foo.mp4

You can embed it

```
\showvideo{foo.mp4}
```

You can insert an
optional thumbnail as
the first argument

The video size is
the size of the box
containing it

Use `\genericbox{}`
for fine-grained
control

... and the last thing to do is ...

Title Slide!

- Title slide has two special features
 - turns off all decorations so that the user can customise it
 - turns off page numbering and resets next page to ‘1’
- Two special boxes `\titlebox{}` and `\subtitlebox{}` for placing title and presenter’s details
- Date is automatically put (in \LaTeX format) unless turned off with `\date{}` or explicitly given with `\date{date}`

Pradarsana depends on several \LaTeX packages which should be installed on the system

- xelatex
- fontenc
- pstricks
- fp

COMPLETE EXAMPLE

```
\documentclass[widescreen]{pradarsana}
\slidedesign{bars}
\date{30 June 2019}
\usepackage{amsmath}
\usepackage{amssymb}
\usepackage{graphicx}
\usepackage{fontcolors}
\begin{document}
\begin{titleslide}
  \setbgcolor{Pista}
  \titlebox[2]{EXAMPLE SLIDES}
  \subtitlebox{C. Bhagvati\par
    SCIS, University of Hyderabad}
\end{titleslide}
%%% FIRST SLIDE
\begin{slide}
\PRDheading{REAL SLIDE!}
\setbdcolor{CornflowerBlue}%
\setfgcolor{DeepPurple}%

\setbgcolor{CornflowerBlue}%
\tlsmallbox[1]{%
  :
}%
\trbigbox{%
  It sneaks in ...
}%
\blbigbox{%
\centerline{%
  \includegraphics[...]{...}
}}\setbdcolor{black}%
\setbgcolor{DarkTeal}%
\setfgcolor{Pista}%
\brsmallbox[2]{%
  Mathematically, it ...
}
\end{slide}
\end{document}
```

COMPLETE EXAMPLE ...

Compile it into PDF as `xelatex foo.tex`

Note how the title slide differs from the content slide.

No decorations

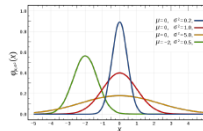
No page numbers

EXAMPLE SLIDES

C. Bhagvati
SCIS, University of Hyderabad
30 June 2019

REAL SLIDE!

The most common distribution in statistics is the
Normal or Gaussian distribution.



It sneaks in every place with large numbers of things.
Where do we find it?

- heights of boys in a class
- heights of girls in a class
- lengths of 100 1-inch nails

Mathematically, it is given by

$$N(x|\mu, \sigma^2) = \frac{1}{\sqrt{2\pi}\sigma} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

ENDNOTE

Pradarsana is yet another example of the grad student spirit¹!
The year was 1993, there was no Powerpoint and no Beamer ...
Presentations were handwritten and projected using OHPs ...
Technical presentations? Well, ... there was *LiTeX* and some used *FrameMaker*

I had images **and** enumerated equations with integrals

Pradarsana came out of the desperate need to make a PhD
presentation
on Mathematical Morphology!!

The emphasis was (and is) on **functionality** and not robustness!
Over the years, roughly once every 3–5 years, *Pradarsana* undergoes improvements as
more packages/tools get added to *TeX* and the tinkering bug bites me

This is the *Silver Jubilee* version! I am sure there is a law here somewhere:
I had more spare time and less knowledge of *TeX*; today, I have more knowledge of
TeX but significantly less spare time ... and *Pradarsana*'s fragility (or robustness) is a
constant!

¹...or, in the immortal words of my PhD advisor, *creative avoidance*

Pradarsana has its own character and, let's face it, idiosyncracies.

It can be sometimes painful but does produce beautiful slides at the end (thanks to X_{TEX}). There are annoyances that you will discover with use but they are relatively minor.

By the way, what are **FrijidPink** and **DeepPurple**?
You can explore and find others ...

Enjoy *Pradarsana*