Making PowerPoint-like Presentations with LaTeX

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Goal: easily make presentation-quality slides
Overview

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Options:
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**Options:**
- PowerPoint
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- PowerPoint - what to do about equations?
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- \LaTeX\rightarrow pdf - several packages will do this
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- PowerPoint - what to do about equations?
- \LaTeX \rightarrow \text{pdf} - several packages will do this
  - pdfslide or \text{P}^4 with pdflatex
Goal: easily make presentation-quality slides

Options:

- PowerPoint - what to do about equations?
- \LaTeX \rightarrow pdf - several packages will do this
  - pdfslide or P^4 with pdflatex
  - prosper - most straight-forward; can easily convert existing seminar slides
Required packages for \texttt{prosper}

\LaTeX

- \texttt{seminar}
Required packages for *prosper*

* \texttt{latex}
  * \texttt{seminar}
  * \texttt{prosper}
Required packages for \texttt{prosper}

\texttt{\LaTeX}

- \texttt{seminar}
- \texttt{prosper}
- \texttt{hyperref}
Required packages for \texttt{prosper}

\begin{itemize}
\item \texttt{seminar}
\item \texttt{prosper}
\item \texttt{hyperref}
\item \texttt{pstricks}
\end{itemize}
**Required packages for *prosper***

**\LaTeX**
- \texttt{seminar}
- \texttt{prosper}
- \texttt{hyperref}
- \texttt{pstricks}

**Other**
- \texttt{dvips}
- \texttt{ps2pdf (ghostscript)}
- \texttt{Adobe Acrobat Reader (acroread)}
\documentclass[\textit{Options}]{prosper}
\title{\textit{Title of the presentation}}
\subtitle{subtitle}
\author{Names of the authors}
\institution{Affiliation}
\slideCaption{caption text}

\begin{document}
\maketitle
\begin{slide}
[transition] \{ slide title \}
Material for the slide
\end{slide}
...

\overlays{n}\{
\begin{slide}
[transition] \{ slide title \}
Material for the slide
\end{slide}
\}

\end{document}

\textbf{Options:}
final
draft
total
nototal
slideBW
slideColor
colorBG
nocolorBG
ps
pdf
noaccumulate
accumulate
azure
lignesbleues
contemporain
nuancegris
troispoints
frames
...

\textbf{Legend}
Mandatory or default choice
Optional
In seminar slides are constructed using
\begin{slide}
slide contents here
\end{slide}

Since prosper uses seminar, slides are built the same way. However, now we include a title.
\begin{slide}\{title\}
slide contents here
\end{slide}

If the title is left out the letter s will become the title.
ike this
\begin{slide}[Glitter]
like this
\end{slide}
For no title, use
\begin{slide}[Dissolve]{}
For no title, use
\end{slide}
Transitions

- **Split**: two lines sweep across the screen
- **Blinds**: multiple lines appear and synchronously sweep in the same direction
- **Box**: a box sweeps from the center
- **Wipe**: a single line sweeps across the screen from one edge to the other
- **Dissolve**: the old page image dissolves
- **Glitter**: similar to Dissolve, except the effect sweeps across the image
- **Replace**: the effect is simply to replace the old page with the new page.
Overlays

With overlays, you can

- incrementally add items to a page
Overlays

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- replace text or images on a slide in a smooth transition
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How it works

- each overlay treated as separate page
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How it works

- each overlay treated as separate page
- material is properly aligned from page to page to create illusion of adding material to slide
Overlays

With overlays, you can

- incrementally add items to a page
- replace text or images on a slide in a smooth transition

How it works

- each overlay treated as separate page
- material is properly aligned from page to page to create illusion of adding material to slide
- indexed as only one slide
Overlay commands

Every slide with overlays must be preceded by \texttt{\overlays{n}} and enclosed in brackets

\texttt{\overlays{2}\{\begin{slide}
\text{contents of slide}
\end{slide}\}}
Overlay commands, cont.

- \texttt{\textbackslash fromSlide\{p\}\{mat\}}. Puts \texttt{mat} on slides \texttt{p} through \texttt{n};
- \texttt{\textbackslash onlySlide\{p\}\{mat\}}. Puts \texttt{mat} on slide \texttt{p} only;
- \texttt{\textbackslash untilSlide\{p\}\{mat\}}. Puts \texttt{mat} on slides \texttt{1} through \texttt{p};
Overlay commands, cont.

- \texttt{\textbackslash fromSlide\{p\}\{mat\}}. Puts \texttt{mat} on slides \texttt{p} through \texttt{n};
- \texttt{\textbackslash onlySlide\{p\}\{mat\}}. Puts \texttt{mat} on slide \texttt{p} only;
- \texttt{\textbackslash untilSlide\{p\}\{mat\}}. Puts \texttt{mat} on slides 1 through \texttt{p};
- \texttt{\textbackslash FromSlide\{p\}}. All the material following this statement will be put on slides \texttt{p} through \texttt{n};
- \texttt{\textbackslash OnlySlide\{p\}}. All the material following this statement be put on slide \texttt{p} only.
Overlay commands, cont.

- \texttt{\textbackslash fromSlide*\{p\}\{mat\}} Puts $\mathtt{mat}$ on slides $p$ through $n$;
- \texttt{\textbackslash onlySlide*\{p\}\{mat\}}. Puts $\mathtt{mat}$ on slide $p$ only;
- \texttt{\textbackslash untilSlide*\{p\}\{mat\}}. Puts $\mathtt{mat}$ on slides 1 through $p$;

Adding an $\ast$ to these commands causes the material to be replaced by the material on the next overlay.
Text overlay – no replacement

- one

\ overlays \{4\}\{
\ begin \{slide\}\{Text overlay – no replacement\}\{
\ begin\{itemstep\}\{
\ item one
\ item two
\ item three
\ item four
\ end \{itemstep\}\{
\ end \{slide\}\{

\ overlays \{4\}\{
\ begin \{slide\}\{Text overlay – no replacement\}\{
\ begin\{itemize\}\{
\ item one
\ From\{Slide\ 2\} \ item two
\ From\{Slide\ 3\} \ item three
\ From\{Slide\ 4\} \ item four
\ end \{itemize\}\{
\ end \{slide\}\{

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Text overlay – no replacement

- one
- two

\texttt{\textbackslash overlays \{ 4 \}\{}
\begin \{slide\}\{Text overlay \textendash{} no replacement\}\}
\begin \{itemstep\}\}
\item one
\item two
\item three
\item four
\end \{itemstep\}\}
\end \{slide\}\}

\texttt{\textbackslash overlays \{ 4 \}\{}
\begin \{slide\}\{Text overlay \textendash{} no replacement\}\}
\begin \{itemize\}\}
\item one
\item FromSlide2 \item two
\item FromSlide3 \item three
\item FromSlide4 \item four
\end \{itemize\}\}
\end \{slide\}\}
Text overlay – no replacement

- one
- two
- three

\text{overlays \{ 4 \} } \begin{slide}{Text overlay – no replacement}
\begin{itemstep}
\item one
\item two
\item three
\item four
\end{itemstep}
\end{slide}

\text{overlays \{ 4 \} } \begin{slide}{Text overlay – no replacement}
\begin{itemize}
\item one
\item FromSlide2 \item two
\item FromSlide3 \item three
\item FromSlide4 \item four
\end{itemize}
\end{slide}
Text overlay – no replacement

- one
- two
- three
- four

\overlays{4}\
\begin{slide}\{Text overlay – no replacement\}\
\begin{itemstep}\
item one
\item two
\item three
\item four
\end{itemstep}\
\end{slide}\

\overlays{4}\
\begin{slide}\{Text overlay – no replacement\}\
\begin{itemize}\
\item one
\FromSlide2\item two
\FromSlide3\item three
\FromSlide4\item four
\end{itemize}\
\end{slide}
Plot overlay example
Plot overlay example
Plot overlay example

Rejection region
hyperref package

Use this package to create links to help you move around the document and load webpages

```
\href{URL}{text} creates a link to a web page
```

```
\hypertarget{name}{text} creates a target for a link in your document
```

```
\hyperlink{name}{text} creates a link to a place in the presentation defined by \hypertarget
```
Examples:

- Department homepage
  \href{http://www.biostat.harvard.edu/}{{\textcolor{green}{Department homepage}}}
- open applications
- citations
- a book I’m reading [?]
Making the presentation file

LaTeX → DVI → PostScript → Transparencies

LaTeX → DVI → ... → Transparencies

LaTeX → DVI → PostScript → PDF → On-screen display
More advanced topics

- creating your own background
Helpful links

Webpage for this talk –
http://biosun1.harvard.edu/~ebrown/cwg6-6-01.html
\begin{slide}{Plot overlay example}
\begin{center}
\onlySlide*{1}{mfpic commands}
\onlySlide*{2}{mfpic commands}
\onlySlide*{3}{
\begin{mfpic}[50][300]{-3.2}{3.2}{0}{.5}
\pen{5pt}
\axes
\function{-3,3,0.1}{1/2/sqrt(pi)*exp(-.5*x*x)}
\lines{(-3,0),(3,0)}
\pen{2pt} \drawcolor{blue} \headcolor{blue}
\gfill\btwnfcn{1.5,3,0.1}{1/sqrt(2*pi)*exp(-.5*x*x)}{0*x}
\arrow[110]
\rotatepath{(1.7,.025),-120}\lines{(2.5,.02),(1.7,.025)}
\tlabel(0,-.12){\blue Rejection region}
\end{mfpic}
\end{center}
\end{slide}