

# Creating Polished Presentations

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Centre for Modern Templates

# Outline i

Introduction

Tables, figures and subfiles

Tables and Figures

Cross-references

Sub section through input command

Displaying Mathematics

Inline Mode

Display Mode

Code Listings and Using Symbols

Conclusion

**Thanks for your attention. Pay attention here...**

# Introduction

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This is going to be a normal paragraph in our introduction.

Some intro stuff

**Observation**

This is a very important piece of information.

Some other stuff ...

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.

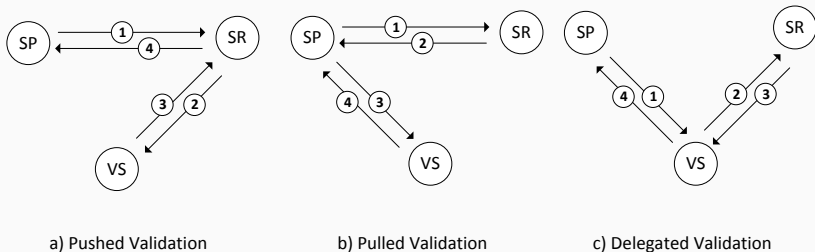
## **Example**

Block content.

## **Tables, figures and subfiles**

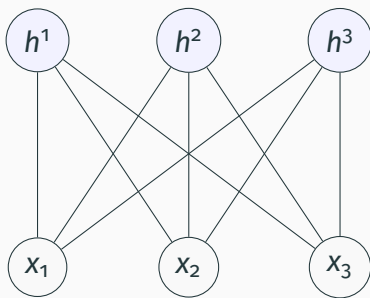
---

To insert a figure, you can use the TeXnicedcenter menus.



**Figure 1:** My First Figure





**Figure 2:** M1

# Multipage Xtabular table i

**Table 1:** Sample multipage table with repeating header

		document class	bibliography style	
Institute of Electrical and Electronics Engineers		IEEEtran	IEEEtran	 <b>IEEE</b>

## Multipage Xtabular table ii

Table 1 continued



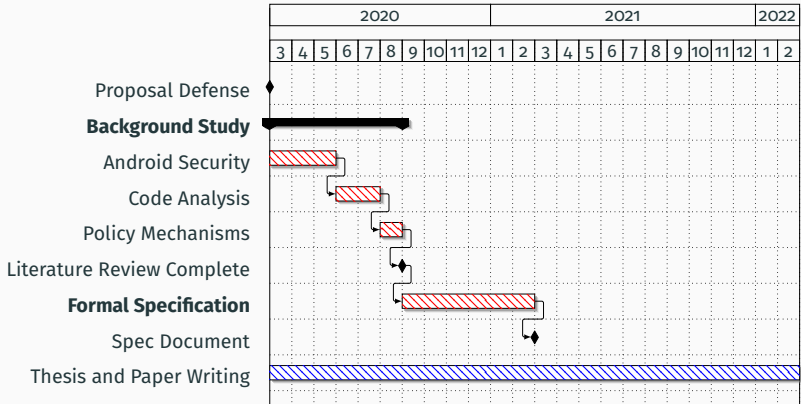
	<b>document class</b>	<b>bibliography style</b>	
Association for Computing Machinery	sig-alternate	plain	
Lecture Notes in Computer Science	llncs	lllncs	

Table 1 continued

	<b>document class</b>	<b>bibliography style</b>
General	article	plain

# Gant charts



**Figure 3:** My First Gantt

Some text here that wants to refer to Table 1. You can also refer to the Figure 1. When you want to refer to a previous section, you can use the `\ref` command again. Section 2.

This comes from a separate file. Notice that we have this subsection included in the Navigator.

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**Algorithm 1** My First Simple Algorithm

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**Require:** Randomly populated array

**Ensure:** Sorted array

```
    if  $i \leq 0$  then
2:    $i \leftarrow 1$ 
    else
4:   if  $i \geq 0$  then
        for  $j = 0$  to 10 do
6:         blah()
            carryOutSomeProcessing()
8:       end for
    end if
10: end if
    return  $i$ 
```

---

And of course, we can refer to the algorithm using `\ref`: See Algorithm 1 but the good thing is we can also refer to a specific line e.g. Line 4 or Line 7.



# Displaying Mathematics

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L<sup>A</sup>T<sub>E</sub>X is extremely powerful when it comes to typesetting mathematics. It's one of the core strengths of this system.

There are two ways of displaying maths. One is *inline* and the other is *display* format – in which the whole math sits on its own set of lines.

We are going to insert a mathematics equation inline here using a pair of \$ signs:  $E = mc^2$  . As you can see, the display (such as line spacing) does not get messed up by the mathematics as it does with word processing softwares.

We can also display equations in their own set of lines. To do this, we can use the equation environment.

$$E = mc^2 \tag{1}$$

As you can see,  $\text{\LaTeX}$  inserts the equation number automatically. We can refer to it using the `\ref` command just as we referred to sections, figures and tables. (E.g. Equation 1.) To get rid of the equation number, simply use the *star variant* of the equation environment. (For this, you need the `amsmath` package.)

$$E = mc^2$$

Alternatively, we can use the shorthand keys `\[` and `\]`

$$E = mc^2$$

$\LaTeX$  has many builtin features and you can get many more easily. Here, we'll see some of these features:

Addition, subtraction, multiplication and division:

$$x + 2 - 25 \times 35 \div 98$$

Superscripts and subscripts:

$$x^2$$

$$x_{(i)}$$

Summation, union, intersection, big-union, integral:

$$\sum_{i=1}^n i^2$$

$$x \cup y \cap z$$

$$\bigcup_{i=1}^n x_i$$

$$\int_0^n x^2$$

Fractions, brackets, square root:

$$\frac{x}{y}$$

$$\frac{\sum_i x^2}{\int_0^n x^2}$$

$$\sqrt{\frac{\sqrt{36}}{x^5}}$$

$$2 \times \left( \frac{\frac{34}{124}}{356} \right)$$

Greek letters:

$$\alpha + \beta + \gamma^* + \Sigma + \Theta + 2_{\epsilon}$$

Matrices and vectors. For this, you need to include the `amsmath` package and then use the `bmatrix` or `pmatrix` environment:

$$\begin{pmatrix} \frac{a}{44} & b \\ c & \sqrt{d} \end{pmatrix}$$

Accents:

$$\hat{X}$$

$$\hat{i}$$

$$\dot{X}$$

See the `Math` menu in the IDE for other operations. You can refer to “Short Math Guide for  $\text{\LaTeX}$ ” for a lot more examples.



# **Code Listings and Using Symbols**

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You might come across situations where you need to find new symbols. For this, you can refer to the “The Comprehensive  $\text{\LaTeX}$ Symbols List”.

$$x \rightleftharpoons y$$

(Optional) Since this is a long command, we might want to create a shortcut using the `\newcommand` command in the preamble. This also allows us to later change the symbol without having to change the equations.

$$x \rightleftharpoons y$$

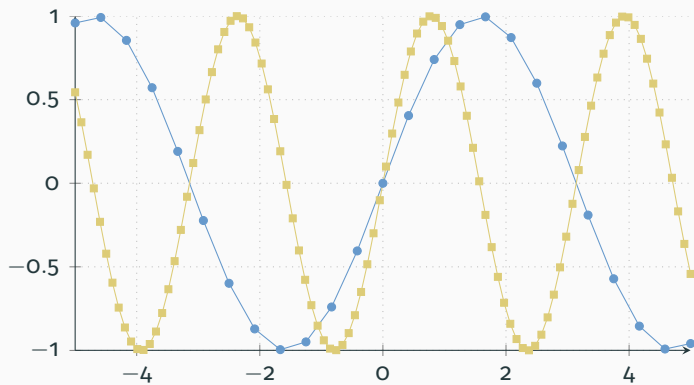
## Listing 1: Some LaTeX Code

```
\lstset{language=[LaTeX]tex}  
\lstset{caption=Some \LaTeX Code}  
\begin{lrbox}{\codebox}  
  \begin{lstlisting*}[frame=single]{  
    \begin{frame}  
      \end{frame}  
    \end{lstlisting*}  
  \end{lrbox}  
\begin{frame}{\LaTeX Code}  
  \usebox{\codebox}  
\end{frame}
```

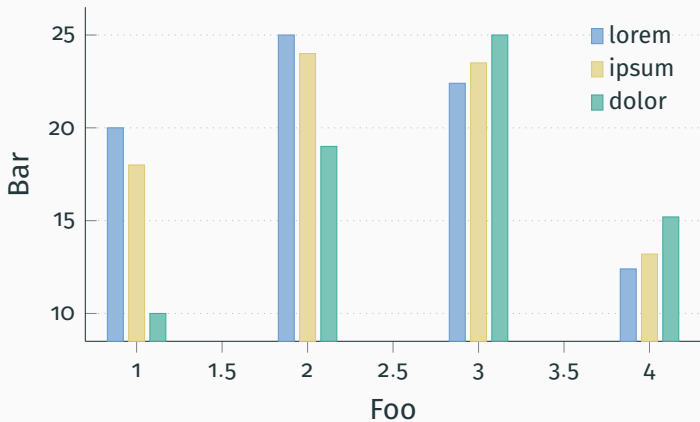
## Listing 2: Some C++ Code

```
for(i = 0; i < 10; i++){  
    // increment the pointer  
    *p++ = i;  
}
```

# Line plots



## Bar charts



**METROPOLIS** defines a custom beamer template to add a text to the footer. It can be set via

```
\setbeamertemplate{frame footer}{My custom footer}
```

Some references to showcase [?, ?, ?, ?, ?]



# Conclusion

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Get the source of this theme and the demo presentation from

`github.com/voklymchuk/latex_templates`

The theme *itself* is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.



**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.

