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**Title**

**TESI DI LAUREA MAGISTRALE IN**  
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**Author: Name Surname**

Student ID: 00000000

Advisor: Prof. Name Surname

Co-advisors: Name Surname

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# Abstract

Here goes the Abstract in English of your thesis followed by a list of keywords. The Abstract is a concise summary of the content of the thesis (single page of text) and a guide to the most important contributions included in your thesis. The Abstract is the very last thing you write. It should be a self-contained text and should be clear to someone who hasn't (yet) read the whole manuscript. The Abstract should contain the answers to the main scientific questions that have been addressed in your thesis. It needs to summarize the adopted motivations and the adopted methodological approach as well as the findings of your work and their relevance and impact. The Abstract is the part appearing in the record of your thesis inside POLITesi, the Digital Archive of PhD and Master Theses (Laurea Magistrale) of Politecnico di Milano. The Abstract will be followed by a list of four to six keywords. Keywords are a tool to help indexers and search engines to find relevant documents. To be relevant and effective, keywords must be chosen carefully. They should represent the content of your work and be specific to your field or sub-field. Keywords may be a single word or two to four words.

**Keywords:** Here the keywords of your thesis



# Sommario

Qui va l'Abstract in lingua italiana della tesi seguito dalla lista di parole chiave.

**Parole chiave:** Qui le parole chiave della tesi



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# 1 | Introduction

This document is intended to be both an example of the Polimi LaTeX{} template for Master Theses, as well as a short introduction to its use. It is not intended to be a general introduction to LaTeX{} itself, and the reader is assumed to be familiar with the basics of creating and compiling LaTeX{} documents (see cite{oetiker1995not,kottwitz2015latex}).

The cover page of the thesis must contain all the relevant information: title of the thesis, name of the Study Programme and School, name of the author, student ID number, name of the supervisor, name(s) of the co-supervisor(s) (if any), academic year. The above information are provided by filling all the entries in the command `\puttitle{}` in the title page section of this template.

Be sure to select a title that is meaningful. It should contain important keywords to be identified by indexer. Keep the title as concise as possible and comprehensible even to people who are not experts in your field. The title has to be chosen at the end of your work so that it accurately captures the main subject of the manuscript.

Since a thesis might be a substantial document, it is convenient to break it into chapters. You can create a new chapter as done in this template by simply using the following command followed by the body text.

= Title of the chapter

Especially for long manuscripts, it is recommended to give each chapter its own file. In this case, you write your chapter in a separated `chapter_n.typ` file and then include it in the main file with the following command

```
#include "chapter_n.typ"
```

It is recommended to give a label to each chapter by using the command

= Title of the chapter `<chapter_name>`

where the argument is just a text string that you'll use to reference that part as follows:  
Chapter Chapter 1 contains AN INTRODUCTION TO ....



# 1 | Chapter One

In this chapter additional useful information are reported.

## 1.1. Sections and subsections

Chapters are typically subdivided into sections and subsections, and, optionally, sub-subsections, paragraphs and subparagraphs. All can have a title, but only sections and subsections are numbered. A new section is created by the command

`== Title of the section`

Sections can be nested easily by using multiple =.

`=== Title of the subsection`

## 1.2. Equations

This section gives some examples of writing mathematical equations in your thesis.

Maxwell's equations read:

$$\left\{ \begin{array}{l} \nabla \cdot \mathbf{D} = \rho \\ \nabla \times \mathbf{E} + \frac{\partial \mathbf{B}}{\partial t} = \mathbf{0} \\ \nabla \cdot \mathbf{B} = 0 \\ \nabla \times \mathbf{H} - \frac{\partial \mathbf{D}}{\partial t} = \mathbf{J} \end{array} \right. \quad 1.$$

Equation 1 is automatically labeled. Remember that Equations have to be numbered only if they are referenced in the text.

Equation 2 show again Maxwell's equations without brace:

$$\begin{aligned}
\nabla \cdot \mathbf{D} &= \rho \\
\nabla \times \mathbf{E} + \frac{\partial \mathbf{B}}{\partial t} &= \mathbf{0} \\
\nabla \cdot \mathbf{B} &= 0 \\
\nabla \times \mathbf{H} - \frac{\partial \mathbf{D}}{\partial t} &= \mathbf{J}
\end{aligned}
\tag{2.}$$

### 1.3. Figures, Tables and Algorithms

Figures, tables and algorithms have to contain a caption that describe their content, and have to be properly referred in the text.

#### 1.3.1. Figures

For including pictures in your text you can use `\texttt{\textbackslash TikZ}` for high-quality hand-made figures, or just include them as usual with the command

```
#image("filename.xxx")
```

Supported formats are `png`, `jpg`, `gif` and `svg`.



Figure 1: Caption of the Figure to appear in the List fo Figures.



Figure 3: One PoliMi logo.



Figure 4: Another PoliMi logo.

Figure 2: This is a very long caption you don't want to appear in the List of Figures.

1.3.2. Tables

Within #table you can create very fancy tables as the one shown in Table 1.

Title of Table (optional),

	column 1	column 2	column 3
row 1	1	2	3
row 2	$\alpha$	$\beta$	$\gamma$
row 3	alpha	beta	gamma

Table 1: Caption of the Table to appear in the List of Tables.



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## List of Acronyms



# Ringraziamenti

Qui i miei ringraziamenti