Instituto Superior de Engenharia de Lisboa
Instituto Politécnico de Lisboa

This is the title

which is long and needs to be in two lines.

Nome Apelido | Aluno No.: 12345

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Nome Apelido | Aluno No.: 12345

Nome da Unidade Curricular

Professor Nome Completo

A. D. E. E. A

Área Departamental de Engenharia

Electrotécnica e Automação Industrial

Lisboa, 18 de Março de 2020

Conteúdo

1 Introdução

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1.1 Objectivos e motivação

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2 Estado da arte e suporte teórico

2.1 Primeira secção

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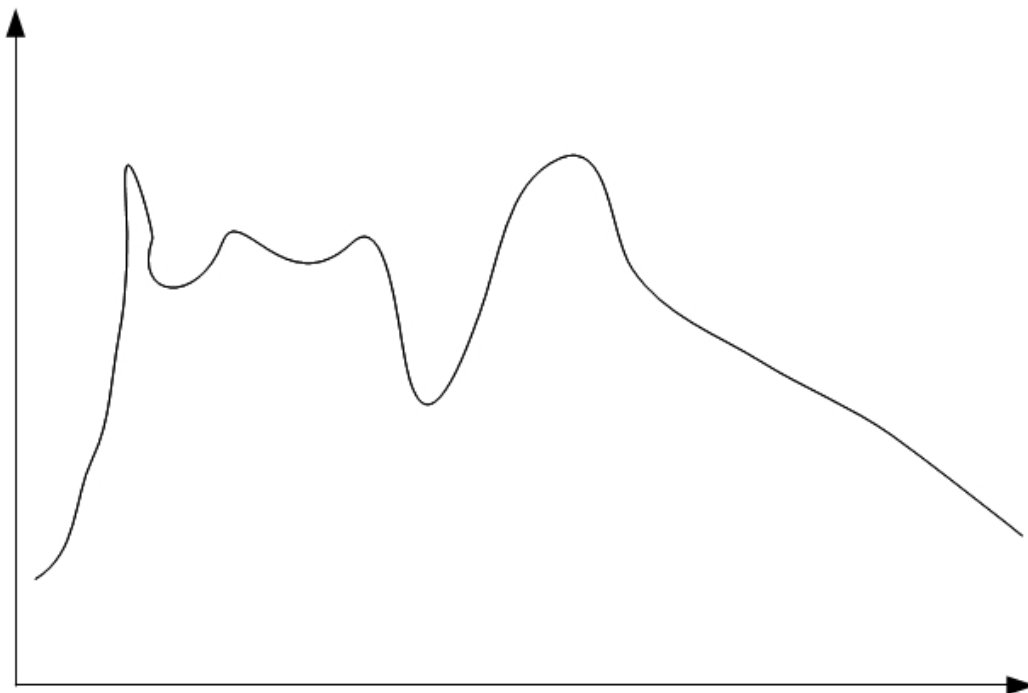

Figura 1: *First example to describe how short and long caption work for figures. Everything written in the square brackets will be listed in the list of figures, everything written in the curly brackets will be shown directly underneath the figure.*

Here I will reference the first figure (see figure 1). Also, in 4.1 a figure with multiple subfigures is shown.

The we can make a list of different things:

- First item on the list

- Second item on the list

- Third item on the list

2.2 Segunda secção

3 Métodos

3.1 Inicio de um capítulo

In the two-sided layout a new chapter always begins on a right side. Therefore, empty pages will be generated automatically at the end of the previous chapter if necessary. The one-sided layout does not do this. If you want an additional empty page, you have to insert it manually.

3.2 Tabelas grandes

Tables are a bit complex to generate in latex, a big help are table generators like: `https://www.tablesgenerator.com/`. Small tables fit within the text flow.
Bigger tables can be put on separate pages.

Tabela 1: *Material needed for gels*

material (conc.)	volume per gel	conc. in gel
Chemical 1 (40 mg/mL)	15 µL	3.00 µg/mL
TBS	15 µL	—
Chemical 2	15 µL	3.75 µg/mL
Chemical 3	27.5 µL	$5.7x10^5$ cells
Chemical 4	27.5 µL	$5.7x10^5$ cells
Chemical 5	100 µL	5.00 mg/mL

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Tabela 2: *A lot of complex columns and rows*

Tube 1		Tube 2		Tube 3		Tube 4	
Antibody	Volume	Antibody	Volume	Antibody	Volume	Antibody	Volume
AB1	20 µL	AB2	20 µL	AB3	20 µL	AB4	20 µL
APC	MSC-	FITC	MSC-	PE	MSC-	PE	MSC-
Antibody	Volume	Antibody	Volume	Antibody	Volume	Antibody	Volume
AB5	2 µL	AB6	5 µL	AB7	5 µL	AB8	5 µL
FITC	MSC+	APC	MSC+	PerCP-Cy5.5	MSC+	PerCP-Cy5.5	MSC-

Tabela 3: *Some more antibodies for FACS analysis*

Tube 1		Tube 2		Tube 3		Tube 4	
Antibody	Volume	Antibody	Volume	Antibody	Volume	Antibody	Volume
AB1	20 µL	AB2	20 µL	AB3	5 µL	AB4	5 µL
FITC	EC+	FITC	EC+	FITC	EC+	FITC	EC-
Antibody	Volume	Antibody	Volume	Antibody	Volume	Antibody	Volume
AB5	20 µL	AB6	2 µL	AB7	20 µL	AB8	20 µL
APC	EC-	APC	EC-	APC	EC+	APC	EC+

3.3 Secção

3.3.1 Subsecção

Subsubsecção

Here we have some random equations:

$$V = d^2 \cdot \frac{\pi}{4} \cdot L \tag{3.1}$$

$$S = d^2 \cdot \frac{\pi}{4} + \pi \cdot d \cdot L \approx \pi \cdot d \cdot L \tag{3.2}$$

$$V = \frac{S^2}{\pi^2 \cdot L^2} \cdot \frac{\pi}{4} \cdot L = \frac{S^2}{4\pi \cdot L} \tag{3.3}$$
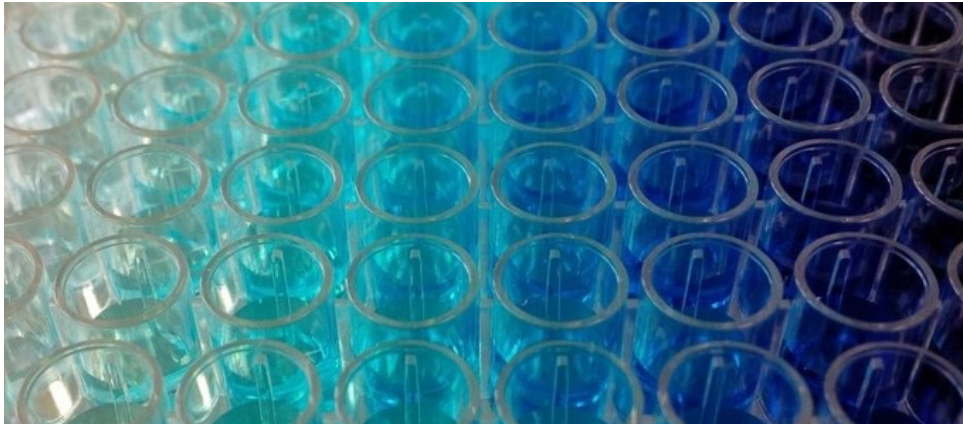
$$L = \frac{S^2}{4\pi \cdot V} \tag{3.4}$$

$$s = \sqrt{\frac{\sum_{i=1}^{n}(x_i - \bar{x})^2}{(n-1)}} \tag{3.5}$$
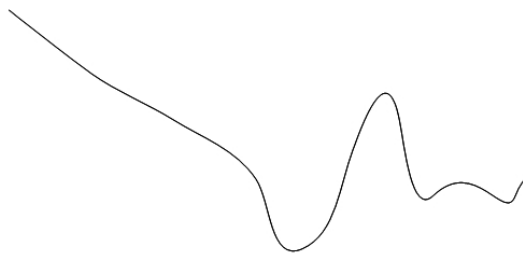
4 Resultados

4.1 Figuras com subfiguras

As in this case the figure with subfigures is quite big, it will appear in the next page. If they are smaller, they also fit within the text flow.
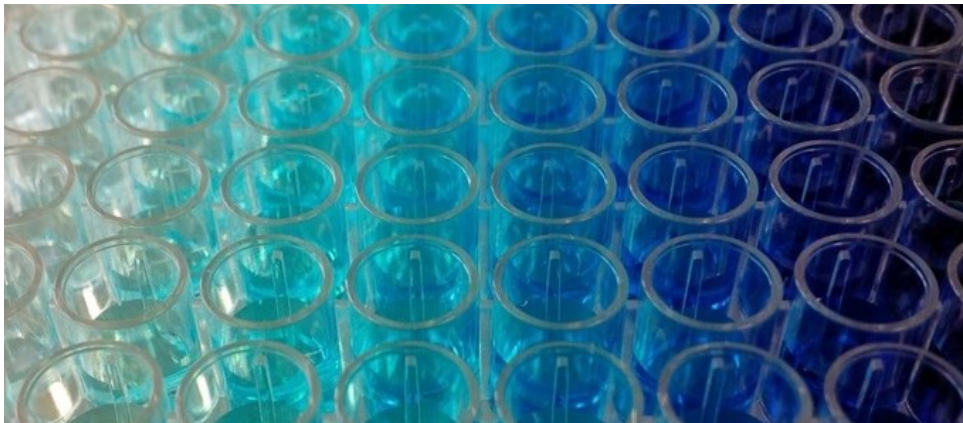
In the square brackets after 'begin figure' or 'begin subfigure, the command 'trim = l b r t' is cutting the figures on the left, bottom, right and top. Additionally, 'clip' is needed afterwards. 'rotate' can be used to rotate the figure. In the curly brackets the size of the figure can be adjusted either by using a defined width eg. 4 cm or by a percentage of the textwidth.

(a) *Caption for the first subfigure*

(b) *Caption for the second subfigure*

(c) *Caption for the third subfigure*

Figura 2: *3 subfigures can be combined in one figure. Each subfigure has a short caption and the figure itself has a caption underneath*

5 Discussão

5.1 Referências no texto

Here we want to discuss and will use some references from our bib file.

In the bib file all your references are collected. Best is to use google scholar (`https://scholar.google.com`), as you can directly copy the Latex code. To add a reference in your text, you cite it [1]. By using the style unsrtdin and its extension, references are sorted automatically in the text [1, 2]. Also, they are compressed if there are more than 3 references in 'a row' [3–6]. The command 'nocite' is used to add a references to your List of References without mentioning in the text .

6 Conclusão

Bibliografia

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Lista de Abreviaturas

ABM	Antibiotic/Antimycotic
$AcLDL$	acetylated low density lipoprotein
EGF	Epidermal growth factor
$EGM-2$	Endothelial cell growth medium 2
$ELISA$	Enzyme-linked immunosorbent assay
$FACS$	Fluorescence-activated cell sorting
HE	Hematoxylin and eosin
$HEPES$	4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid
RNA	Ribonucleic acid
RT	Room temperature
vWf	Von Willebrand factor

Lista de Figuras

Lista de Tabelas

Agradecimentos

Wenn Du hier auf Deutsch schreiben möchtest, wird durch den Befehl 'selectlanuage' die deutsche Rechtschreibung bzw. Silbentrennung aufgerufen.
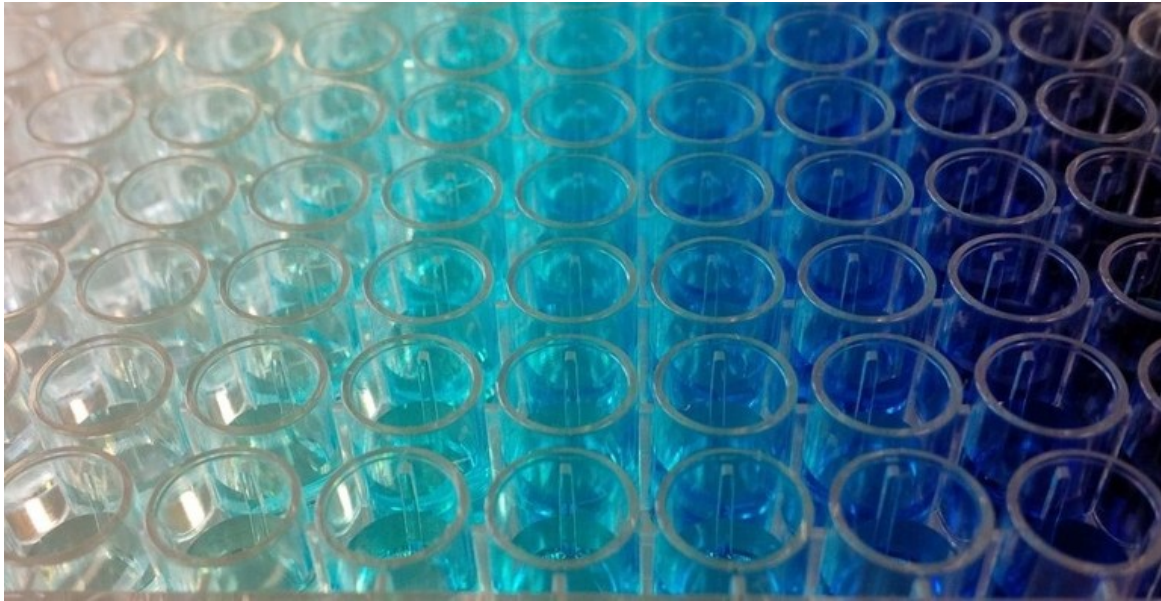
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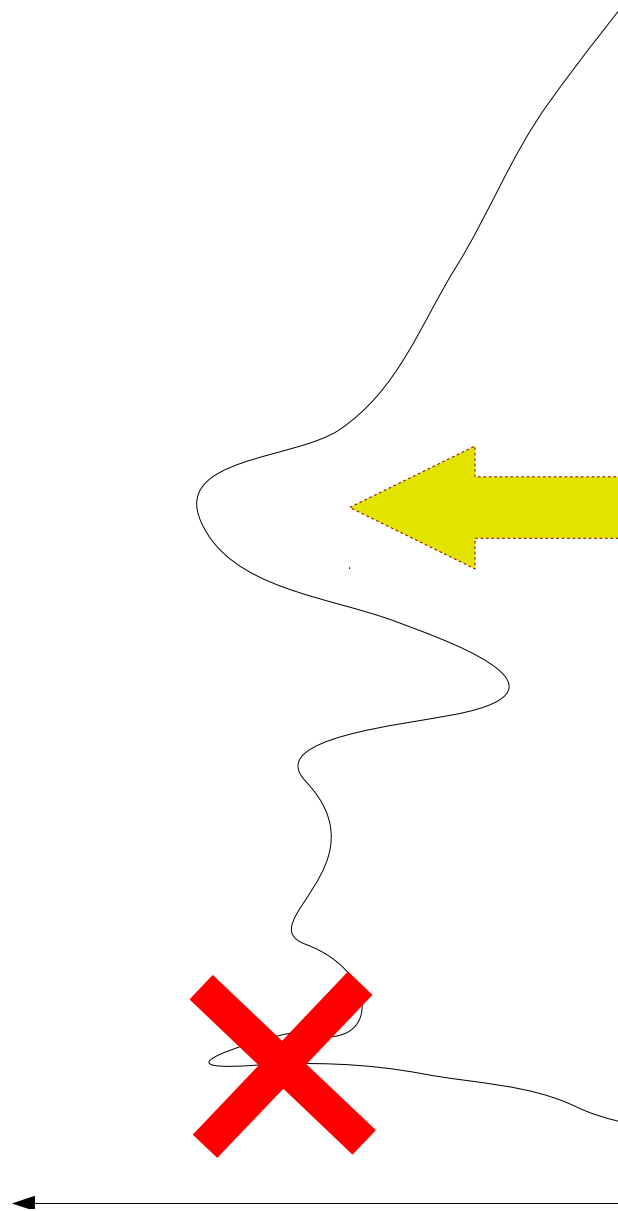

Abbildung 3: *Some cool photo taken in the lab.*

Abbildung 4: *It is possible to add pdf files as figure, while keeping your header and footer from your document. Mostly useful in the appendix.*