

# THÈSE DE DOCTORAT DE

AGROCAMPOUS OUEST

DELIVERÉE CONJOINTEMENT AVEC

L'UNIVERSITÉ DE RENNES 1

PONTIFÍCIA UNIVERSIDADE CATÓLICA DE MINAS GERAIS — BRASIL

COMUE UNIVERSITE BRETAGNE LOIRE

ÉCOLÉ DOCTORALE N° 601

*Mathématique et Sciences et Technologies*

*de l'Information et de la Communication*

Spécialité : voir liste des spécialités

Par

**Prénom-Composé NOM-COMPOSÉ**

**THESIS TITLE**

THESIS SUBTITLE

**Thèse présentée et soutenue à Lieu le 7 octobre 2019**

**Unité de recherche : IRISA — UMR6074**

**Thèse N° : 00000**

## Rapporteurs avant soutenance :

Dr. George POMPIDOU — Fonction — établissement d'exercice

Dr. Alain PROST — Fonction — établissement d'exercice

## Composition du jury :

*Attention, en cas d'absence d'un des membres du Jury le jour de la soutenance, la composition ne comprend que les membres présents*

Présidente : Dr. Ada LOVELACE — Fonction — établissement d'exercice

Examineurs : Dr. Donald Ervin KNUTH — Fonction — établissement d'exercice

Dr. Leslie LAMPORT — Fonction — établissement d'exercice

Dir. de thèse : Dr. Jeanne D'ARC — Fonction — établissement d'exercice

Co-dir. de thèse : Dr. Ayrton SENNA DA SILVA — Fonction — établissement d'exercice

## Invité :

Dr. Ricardo CARLINI — Fonction — établissement d'exercice



*“Moving on, is a simple thing, what it leaves behind is hard”.*

Dave Mustaine *À Tout le Monde*



*à Julia et Fernanda*



## *Acknowledgements*

Je remercie Dr. Ada Lovelace, Fonction — établissement d'exercice, qui me fait l'honneur de présider ce jury.

Je remercie Dr. George Pompidou, Fonction — établissement d'exercice, et Dr. Alain Prost, Fonction — établissement d'exercice, d'avoir bien voulu accepter la charge de rapporteur.

Je remercie Dr. Donald Ervin Knuth, Fonction — établissement d'exercice, et Dr. Leslie Lamport, Fonction — établissement d'exercice, d'avoir bien voulu juger ce travail.

Je remercie enfin Dr. Jeanne d'Arc, Fonction — établissement d'exercice, et Dr. Leslie Lamport, Fonction — établissement d'exercice, qui a dirigé ma thèse.





# Résumé Étendu

*Il vaut mieux faire que dire.*

ALFRED DE MUSSET

## Contents

<b>Instructions sur les paramètres modifiables</b> . . . . .	<b>ix</b>
<b>1<sup>ère</sup> de couverture</b> . . . . .	<b>x</b>
<b>4<sup>e</sup> de couverture</b> . . . . .	<b>x</b>

Afin de garantir le respect des chartes graphiques des établissements et la cohérence du support, les logos, les noms des établissements, le numéro de l'école doctorale, le nom de l'école doctorale, l'image de fond et le titre : Thèse de Doctorat ne sont pas modifiables.

## Instructions sur les paramètres modifiables

- (1) Indiquer dans le cas d'une co-tutelle des 2 établissements de délivrance du diplôme (Docteur de établissement 1 Docteur de établissement 2)
- (2) Si la thèse est en co-tutelle, mettre le logo des 2 établissements
- (3) Indiquer la spécialité
- (4) Attention : le prénom doit être en minuscules (Jean) et le NOM en majuscules (BRITTEF)
- (5) Donner le titre complet de la thèse, éventuellement le sous titre, si nécessaire sur plusieurs lignes
- (6) Indiquer la date et le lieu de soutenance de la thèse
- (7) Indiquer le nom du (ou des) laboratoire (s) dans le(s)quel(s) le travail de thèse a été effectué, indiquer aussi si souhaité le nom de la (les) faculté(s) (UFR, école(s), Institut(s), Centre(s)...), son (leurs) adresse(s)...
- (8) Indiquer le N° de thèse, si cela est opportun, ou faire disparaître cet item de la couverture
- (9) Indiquer le Prénom en minuscules et le NOM en majuscules, le titre de la personne et l'établissement dans lequel il effectue sa recherche. Exemples :
  - Professeur, Université d'Angers
  - Chercheur, CNRS, École Centrale de Nantes
  - Professeur d'université — Praticien Hospitalier, Université Paris V
  - Maître de conférences, Oniris
  - Chargé de recherche, INSERM, HDR, Université de Tours

S'il n'y a pas de co-direction, faire disparaître cet item de la couverture.

## 1<sup>ère</sup> de couverture

### Informations obligatoires

- Le nom de l'établissement qui délivre le doctorat et le nom de l'école doctorale. Dans le cas d'une cotutelle internationale de thèse, mentionner le nom de chacun des établissements.
- L'unité de recherche.
- Le type de doctorat.
- Le champ disciplinaire dans lequel est soutenue la thèse.
- Le titre de la thèse ou l'intitulé des principaux travaux (le choix des mots du titre est particulièrement important, tous ces mots étant indexés systématiquement dans les catalogues).
- Les prénoms (en minuscules) et noms (en majuscules) de l'auteur. La règle administrative veut que soit utilisé d'abord le nom patronymique, suivi éventuellement du nom d'usage, qu'il résulte du mariage ou de la filiation. Les deux noms sont indexés et interrogeables dans les catalogues et bases de signalement des thèses.
- Les mentions « épouse », « époux », « dit » ou « née » ne doivent pas être utilisées. Pour qu'il n'y ait pas de confusion possible entre les noms et prénoms de l'auteur, tous les noms doivent apparaître en majuscules.
- Les prénoms et noms du directeur de recherche.
- S'il y a deux directeurs, mentionner en premier le directeur principal. Pour les thèses qui sont soutenues dans le cadre d'une cotutelle internationale, utiliser une barre oblique « / » pour séparer les deux directeurs de thèse.
- La toponymie éventuelle.
- La date de soutenance si elle est définitive.
- La composition du jury.
- Les noms et prénoms des membres du jury selon les mêmes règles que celles décrites précédemment, avec indication de la fonction de la personne et du rôle au sein du jury.

N.B. : La page de titre est la première page du document. Elle est comptabilisée dans la pagination mais n'est jamais numérotée. . .

## 4<sup>e</sup> de couverture

Informations obligatoires (à inscrire également sur le bordereau d'enregistrement national) :

**Le résumé en français** : Composé au maximum 1700 caractères, espaces compris, il est précis et permet de comprendre comment le sujet est abordé. Tous les mots du résumé sont indexés et peuvent servir à la recherche.

**Les mots clés en français** : Ils sont choisis par l'étudiant en accord avec son directeur de thèse, en fonction de la terminologie en vigueur dans sa discipline. La bibliothèque de l'établissement se servira des mots choisis pour définir l'indexation Rameau, langage en usage dans les catalogues collectifs.

**Le titre de la thèse en français** : Le choix des mots du titre est particulièrement important, tous ces mots étant indexés systématiquement dans les catalogues.

TABLEAU 1 – Les effets des traitements X et Y sur les quatre groupes d'étude The effects of treatments X and Y on the four groups studied.

Groups	Treatment X	Treatment Y
1	0.2	0.8
2	0.17	0.7
3	0.24	0.75
4	0.68	0.3

**Le titre en anglais :** Il sert au signalement de la thèse dans des bases de données internationales. Tous les mots sont indexés et peuvent servir à la recherche.

**Abstract :** Composé au maximum de 1700 caractères, espaces compris, il est la transposition fidèle en anglais du résumé français, sans être une traduction littérale pure. *Dans le cas d'une thèse en cotutelle internationale, si la langue de la thèse n'est pas le français, un résumé substantiel en français est requis en plus des résumés prévus ci-dessus. Ce condensé, d'une dizaine de pages, est alors placé avant la table des matières.* **Les mots-clés en anglais :** Ils servent au signalement de la thèse dans des bases de données internationales et au moissonnage OAI.

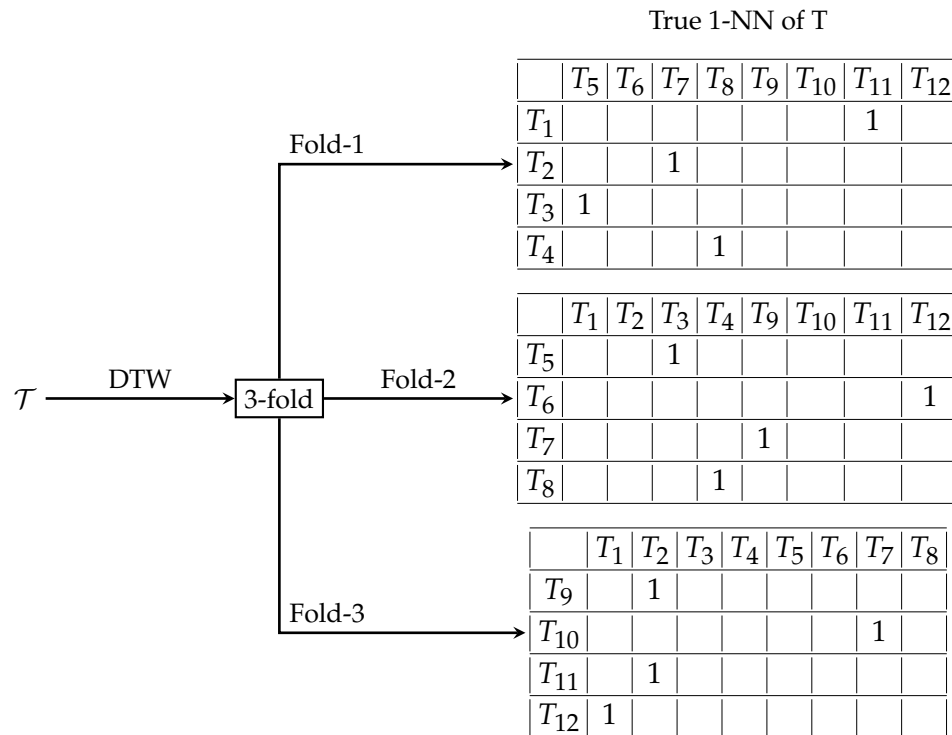


FIGURE 1 – A toy example of the ground-truth construction.

**L'intitulé et l'adresse de l'unité ou du laboratoire de rattachement :** S'ils ne figurent pas en page de titre, en respectant les formes prescrites par l'établissement de soutenance.

---

**Algorithme 0.1** Calculate  $y = x^n$ 

---

**Entrée:**  $n \geq 0 \vee x \neq 0$ **Sortie:**  $y = x^n$  $y \leftarrow 1$ **si**  $n < 0$  **alors** $X \leftarrow 1/x$  $N \leftarrow -n$ **sinon** $X \leftarrow x$  $N \leftarrow n$ **fin si****tant que**  $N \neq 0$  **faire****si**  $N$  is even **alors** $X \leftarrow X \times X$  $N \leftarrow N/2$ **sinon** { $N$  is odd} $y \leftarrow y \times X$  $N \leftarrow N - 1$ **fin si****fin tant que**

---

# Summary

<b>Acknowledgements</b>	<b>vii</b>
<b>Résumé Étendu</b>	<b>ix</b>
Instructions sur les paramètres modifiables . . . . .	ix
1 <sup>ère</sup> de couverture . . . . .	x
4 <sup>e</sup> de couverture . . . . .	x
<b>1 Introduction to the L<sup>A</sup>T<sub>E</sub>X class for the MathSTIC-UBL Doctoral School</b>	<b>15</b>
1.1 Why L <sup>A</sup> T <sub>E</sub> X? . . . . .	15
1.2 How to use the MathSTIC-UBL . . . . .	16
1.3 Another Section . . . . .	17
1.4 An extra section . . . . .	19
<b>2 The Second Chapter</b>	<b>23</b>
2.1 A section here . . . . .	24
2.2 A subsection here . . . . .	24
<b>Contents</b>	<b>29</b>
<b>List of Figures</b>	<b>31</b>
<b>List of Tables</b>	<b>33</b>
<b>List of Algorithms</b>	<b>35</b>
<b>List of Symbols</b>	<b>37</b>
<b>Physical Constants</b>	<b>39</b>
<b>List of Abbreviations</b>	<b>41</b>
<b>A Frequently Asked Questions</b>	<b>43</b>
A.1 How do I change the colors of links? . . . . .	43

<b>Bibliography</b>	<b>47</b>
Primary Sources . . . . .	47
Secondary Sources . . . . .	48
<b>Résumé/Abstract</b>	<b>51</b>

## Chapter 1

# Introduction to the $\text{\LaTeX}$ class for the MathSTIC-UBL Doctoral School

*Il vaut mieux faire que dire.*

---

ALFRED DE MUSSET

### Contents

---

1.1	Why $\text{\LaTeX}$ ?	15
1.2	How to use the MathSTIC-UBL	16
1.3	Another Section	17
1.4	An extra section	19

---

This chapter is an introduction to the principal characteristics of the MathSTIC-UBL  $\text{\LaTeX}$  Class. The idea here is to introduce the  $\text{\LaTeX}$  and present the main functionalities and options of the class.

I hope you enjoy it.<sup>1</sup>

## 1.1 Why $\text{\LaTeX}$ ?

Ok, you're a Ph.D. candidate at MathSTIC in Université Bretagne Loire, so probably you are familiar with  $\text{\LaTeX}$ , and so this introduction is **not** for you. However, if it is not your case, and you are not familiar with  $\text{\LaTeX}$ , the question remains: Why I *must* use  $\text{\LaTeX}$ ?

You need to use it because with  $\text{\LaTeX}$  is easily able to professionally typeset documents that run to hundreds or thousands of pages long. With simple mark-up commands, it automatically sets out the table of contents, margins, page headers, and footers and keeps the formatting consistent and beautiful. One of its main strengths is the way it can easily typeset mathematics, even *heavy* mathematics. Even if those equations are the most horribly twisted and most difficult mathematical problems that can only be solved on a super-computer, you can at least count on  $\text{\LaTeX}$  to make them look stunning.

If you are writing a thesis (or will be in the future) and its subject is technical or mathematical (though it doesn't have to be), then creating it in  $\text{\LaTeX}$  is highly recommended as a way to make sure you can just get down to the essential writing without having to worry over formatting or wasting time arguing with your word processor.

$\text{\LaTeX}$  is not a WYSIWYG<sup>2</sup> program, unlike word processors such as Microsoft Word or Apple's Pages. Instead, a document written for  $\text{\LaTeX}$  is actually a simple, plain text file that contains *no*

---

<sup>1</sup>If you have any suggestion or contribution, you are welcome to contribute on [github.com/carlinix/MathSTIC-UBL](https://github.com/carlinix/MathSTIC-UBL).

<sup>2</sup>What You See is What You Get.

*formatting*. You tell L<sup>A</sup>T<sub>E</sub>X how you want the formatting in the finished document by writing in simple commands amongst the text, for example, if I want to use *italic text for emphasis*, I write the `\emph{text}` command and put the text I want in italics in between the curly braces. This means that L<sup>A</sup>T<sub>E</sub>X is a “mark-up” language, very much like HTML.

You can learn how to use it in many sources, I suggest to look at Leslie Lamport, *L<sup>A</sup>T<sub>E</sub>X: a document preparation system: user’s guide and reference manual*, Addison-wesley, 1994, among others.

## 1.2 How to use the MathSTIC-UBL

The MathSTIC-UBL class automatizes *absolute* everything to produces your thesis according to the UBL specifications.

We provide some options, which are used to enable or disable some extra features. Also, new commands are provided to delivery some functionalities.

### 1.2.1 Class options

TODO

#### 1.2.1.1 Commands included

TODO

Example of a magic box:

Title of my box

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like



“Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Example of figure, see Figure 1.1. I’m using the eps only because I wanna to preserve the compatibility with the DVI file, but you can use any ordinary format like pdf, jpg, etc.



FIGURE 1.1 – This is a long caption; we can describe a lot of things here. For example, this photo is impressive. The shot was in Saint-Mathieu by Yann Quivig.

## 1.3 Another Section

This is is a reference to the Chapter 1.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information.

TABLE 1.1 – The effects of treatments X and Y on the four groups studied.

Groups	Treatment X	Treatment Y
1	0.2	0.8
2	0.17	0.7
3	0.24	0.75
4	0.68	0.3

Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

Suspendisse vel felis. Ut lorem lorem, interdum eu, tincidunt sit amet, laoreet vitae, arcu. Aenean faucibus pede eu ante. Praesent enim elit, rutrum at, molestie non, nonummy vel, nisl. Ut lectus eros,

malesuada sit amet, fermentum eu, sodales cursus, magna. Donec eu purus. Quisque vehicula, urna sed ultricies auctor, pede lorem egestas dui, et convallis elit erat sed nulla. Donec luctus. Curabitur et nunc. Aliquam dolor odio, commodo pretium, ultricies non, pharetra in, velit. Integer arcu est, nonummy in, fermentum faucibus, egestas vel, odio.

## 1.4 An extra section

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information?

Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

### 1.4.1 Section 2

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this

---

**Algorithm 1.1** Output all maximal complete subgraphs.

---

```

1: input:  $G$  {Graph}
2: output:  $\mathcal{C}$  {Set of all maximal cliques in  $G$ .}
3:  $\text{adj} \leftarrow$  list all adjacent pairs in  $G$ 
4:  $Q \leftarrow \emptyset$  {Queue of candidates}
5:  $\text{subg} \leftarrow$  list of all nodes in  $G$ 
6:  $\text{cand} \leftarrow$  list of all nodes in  $G$  {Candidates to be evaluated}
7:  $u \leftarrow$  node in  $\text{subg}$  with highest cardinality
8:  $\text{ext}_u \leftarrow$  list of nodes in  $\text{cand}$  except the set of adjacent of  $u$ 
9:  $\text{stack} \leftarrow \emptyset$  {Execution stack}
10: while true do
11:   if  $\text{ext}_u \neq \emptyset$  then
12:      $q \leftarrow \text{POP}(\text{ext}_u)$  {next node in the  $\text{ext}_u$  list.}
13:      $\text{cand} \leftarrow \text{cand} - q$  {remove  $q$  node from  $\text{cand}$ .}
14:      $Q \leftarrow \text{PUSH}(Q, q)$  {Push  $q$  in the list  $Q$ .}
15:      $\text{adj}_q \leftarrow$  list of adjacent of  $q$ 
16:      $\text{subg}_q \leftarrow$  subgraph with all adjacents of  $q$ 
17:     if  $\text{subg}_q = \emptyset$  then
18:        $\mathcal{C} \leftarrow Q$ 
19:     else
20:        $\text{cand}_q \leftarrow$  set of nodes in  $\text{cand}$  adjacent to  $q$ 
21:       if  $\text{cand}_q \neq \emptyset$  then
22:          $\text{stack} \leftarrow \text{stack} \cup \{(\text{subg}, \text{cand}, \text{ext}_u)\}$ 
23:          $Q \leftarrow Q \cup \{q\}$ 
24:          $\text{subg} \leftarrow \text{subg}_q$ 
25:          $\text{cand} \leftarrow \text{cand}_q$ 
26:          $u \leftarrow$  node in  $\text{subg}$  with highest cardinality
27:          $\text{ext}_u \leftarrow$  list of nodes in  $\text{cand}$  except the set of adjacent of  $u$ 
28:       end if
29:     end if
30:   else
31:      $\text{POP}(Q)$ 
32:      $\text{subg}, \text{cand}, \text{ext}_u \leftarrow \text{POP}(\text{stack})$ 
33:   end if
34: end while
35: return  $\mathcal{C}$ 

```

---

text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### 1.4.1.1 Section 2

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

## Chapter 2

# The Second Chapter

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

## 2.1 A section here

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

## 2.2 A subection here

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected



font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

### 2.2.1 A subsection here

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an

impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

### 2.2.2 Another subsection here

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

### 2.2.2.1 A subsubsection here

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

### A subsubsection not numbered here

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of

the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# Contents

<b>Acknowledgements</b>	<b>vii</b>
<b>Résumé Étendu</b>	<b>ix</b>
Instructions sur les paramètres modifiables . . . . .	ix
1 <sup>ère</sup> de couverture . . . . .	x
Informations obligatoires . . . . .	x
4 <sup>e</sup> de couverture . . . . .	x
<b>1 Introduction to the L<sup>A</sup>T<sub>E</sub>X class for the MathSTIC-UBL Doctoral School</b>	<b>15</b>
1.1 Why L <sup>A</sup> T <sub>E</sub> X? . . . . .	15
1.2 How to use the MathSTIC-UBL . . . . .	16
1.2.1 Class options . . . . .	16
1.2.1.1 Commands included . . . . .	16
1.3 Another Section . . . . .	17
1.4 An extra section . . . . .	19
1.4.1 Section 2 . . . . .	20
1.4.1.1 Section 2 . . . . .	22
<b>2 The Second Chapter</b>	<b>23</b>
2.1 A section here . . . . .	24
2.2 A subsection here . . . . .	24
2.2.1 A subsubsection here . . . . .	25
2.2.2 Another subsubsection here . . . . .	26
2.2.2.1 A subsubsection here . . . . .	27
A subsubsection not numbered here . . . . .	27
<b>Contents</b>	<b>29</b>
<b>List of Figures</b>	<b>31</b>
<b>List of Tables</b>	<b>33</b>
<b>List of Algorithms</b>	<b>35</b>
<b>List of Symbols</b>	<b>37</b>
<b>Physical Constants</b>	<b>39</b>
<b>List of Abbreviations</b>	<b>41</b>
<b>A Frequently Asked Questions</b>	<b>43</b>
A.1 How do I change the colors of links? . . . . .	43
<b>Bibliography</b>	<b>47</b>
Primary Sources . . . . .	47
Secondary Sources . . . . .	48
<b>Résumé/Abstract</b>	<b>51</b>



# List of Figures

1	A toy example of the ground-truth construction. ....	xi
1.1	Short caption goes to List of Figures .....	17





# List of Tables

1	Les effets des traitements X et Y sur les quatre groupes d'étudeThe effects of treatments X and Y on the four groups studied. ....	xi
1.1	The effects of treatments X and Y on the four groups studied. ....	18



# List of Algorithms

0.1	Calculate $y = x^n$ .....	xii
1.1	Output all maximal complete subgraphs.....	21



# List of Symbols

$a$	distance	m
$P$	power	W (J s <sup>-1</sup> )
$\omega$	angular frequency	rad



# Physical Constants

Speed of Light

$c_0$

$2.997\,924\,58 \times 10^8 \text{ m s}^{-1}$  (exact)





## List of Abbreviations



## Appendix A

# Frequently Asked Questions

### A.1 How do I change the colors of links?

The color of links can be changed to your liking using:

```
\hypersetup{urlcolor=red}, or
```

```
\hypersetup{citecolor=green}, or
```

```
\hypersetup{allcolor=blue}.
```

If you want to completely hide the links, you can use:

```
\hypersetup{allcolors=.}, or even better:
```

```
\hypersetup{hidelinks}.
```

If you want to have obvious links in the PDF but not the printed text, use:

```
\hypersetup{colorlinks=false}.
```



## **Bibliography**



## Primary Sources

Lamport, Leslie, *LATEX: a document preparation system: user's guide and reference manual*, Addison-wesley, 1994.

Oetiker, Tobias et al., "The not so short introduction to LATEX2 $\epsilon$ ", in: *Electronic document available at <http://www.tex.ac.uk/tex-archive/info/lshort>* (1995).

Tisseau, Gérard and Jacques Duma, "TikZ pour l' impatient", in: *Cité page iv* (2009).

## Secondary Sources

Goossens, Michel, Frank Mittelbach, and Alexander Samarin, *The LATEX companion*, Addison-Wesley Reading, 1994.

Pakin, Scott, *The comprehensive LATEX symbol list*, 2009.







**Titre :** Titre de la thèse: Sous-titre de la thèse

**Mots clés :** de 3 à 6 mots clefs

**Résumé :** Qu'est que c'est?. C'est une phrase français avant le lorem ipsum. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Qu'est que c'est?. C'est une phrase français avant le lorem ipsum. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum

dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper. Qu'est que c'est?. C'est une phrase français avant le lorem ipsum. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

**Title:** Thesis Title: Thesis subtitle

**Keywords:** from 3 to 6 keywords

**Abstract:** Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at

all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.