Writing your thesis with LateX

Using the TUB_PhDThesisTemplate

vorgelegt von
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Gutachter: Prof. D
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Berlin 2016

Zusammenfassung

Hier kommt der deutsche Abstrakt rein... ÜÖ sind ok.

Abstract

Put your abstract here...

Dedicated to ...

Acknowledgements

I would like to acknowledge the thousands of individuals who have coded for open-source projects for free. It is due to their efforts that scientific work with powerful tools is possible.

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Abbreviations

This document is incomplete. The external file associated with the glossary 'abbreviations' (which should be called `thesis.gls-abr`) hasn't been created.

Check the contents of the file `thesis.glo-abr`. If it's empty, that means you haven't indexed any of your entries in this glossary (using commands like `\gls` or `\glsadd`) so this list can't be generated. If the file isn't empty, the document build process hasn't been completed.

Try one of the following:

- Add `automake` to your package option list when you load `glossaries-extra.sty`. For example:
  `\usepackage[automake]{glossaries-extra}`
- Run the external (Lua) application:
  `makeglossaries-lite.lua "thesis"`
- Run the external (Perl) application:
  `makeglossaries "thesis"`

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- Run the external (Perl) application:
  `makeglossaries "thesis"`

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1 Introduction

1.1 put section name here

Write your text without any further commands, like this:.... Any organised system requires energy, be it a machine of some kind or a live organism. Energy is needed to win the uphill battle against entropy and pull together lifeless molecules to be able to do something in this world, like complete a PhD.

1.1.1 Name your subsection

Different organised systems have different energy currencies. The machines that enable us to do science like sizzling electricity but at a controlled voltage[1]. Earth's living beings are no different, except that they have developed another preference. They thrive on various chemicals.

Most organisms use polymers of glucose units for energy storage and differ only slightly in the way they link together monomers to sometimes gigantic macromolecules. Dextran of bacteria is made from long chains of α-1,6-linked glucose units.

Starch of plants and glycogen of animals consists of α-1,4-glycosidic glucose polymers [**lastname07**]. See figure 1.1 for a comparison of glucose polymer structure and chemistry.

Two references can be placed separated by a comma [**lastname07**, **name06**].

Insulin stimulates the following processes:

- muscle and fat cells remove glucose from the blood,
- cells breakdown glucose via glycolysis and the citrate cycle, storing its energy in the form of ATP,
- liver and muscle store glucose as glycogen as a short-term energy reserve,
- adipose tissue stores glucose as fat for long-term energy reserve, and

[1] Footnote example

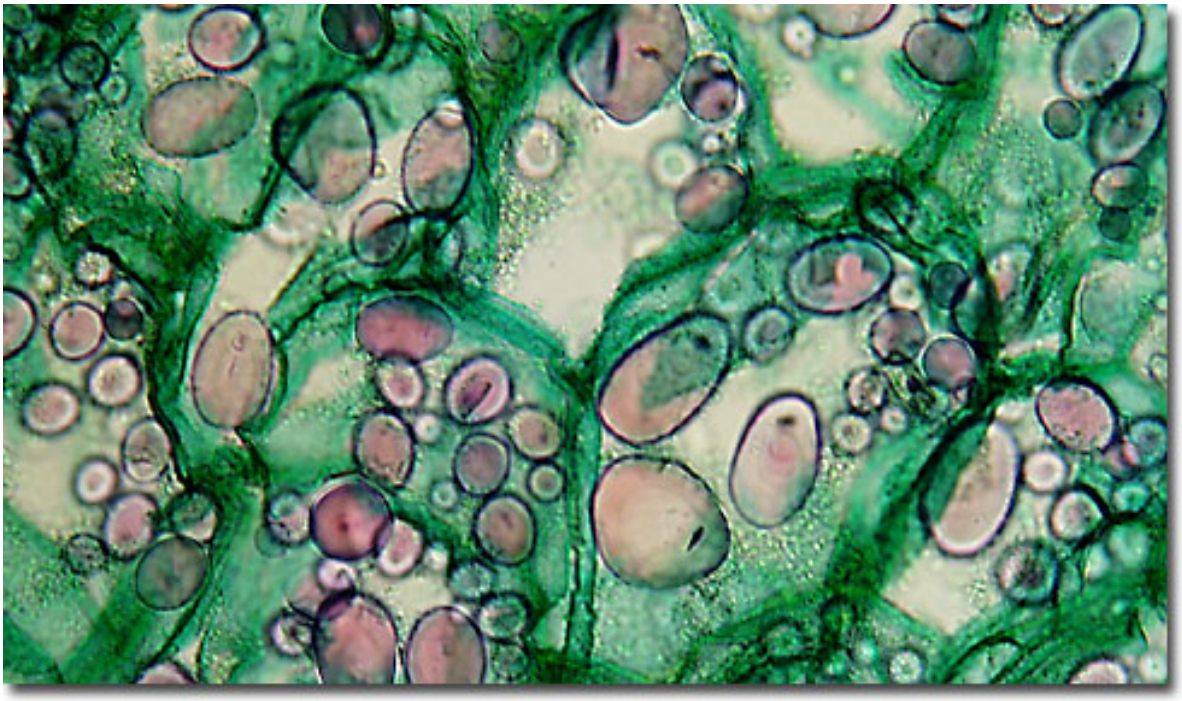

Figure 1.1: A common glucose polymers - The figure shows starch granules in potato cells, taken from Molecular Expressions.

- cells use glucose for protein synthesis.

Gene	GeneID	Length
human latexin	1234	14.9 kbps
mouse latexin	2345	10.1 kbps
rat latexin	3456	9.6 kbps

Table 1.1: title of table - Overview of latexin genes.

1.2 SI-Units

Please use siunitx-package: $1\,\mathrm{V} = 1\,\Omega\ 1\,\mathrm{A}$

2

State of the Art

2.1 Lorem ipsum

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   (b) two two
3. three

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2.2 Some math

Theorem 1 (Residue Theorem) *Let f be analytic in the region G except for the isolated singularities $a_1, a_2, \ldots, a_m$. If γ is a closed rectifiable curve in G which does not pass through any of the points a_k and if $\gamma \approx 0$ in G, then*

$$\frac{1}{2\pi i}\int_\gamma f = \sum_{k=1}^{m} n(\gamma; a_k)\mathrm{Res}(f; a_k)\,.$$

2.2.1 More math

$y = \sin(x)$:

$$y = \int_0^x \cos(x)\,\mathrm{d}x = \frac{e^{\mathrm{i}x} - e^{-\mathrm{i}x}}{2\mathrm{i}} \tag{2.1}$$

Normal text output. This is written with textsf! **And this text with textbf!** `This is Courier font.`

2.3 Preliminary aims

Morbi bibendum est aliquam, hendrerit dolor ac, pretium sem. Nunc molestie, dui in euismod finibus, nunc enim viverra enim, eu mattis mi metus id libero. Cras sed accumsan justo, ut volutpat ipsum. Nam faucibus auctor molestie. Morbi sit amet eros a justo pretium aliquet. Maecenas tempor risus sit amet tincidunt tincidunt. Curabitur dapibus gravida gravida. Vivamus porta ullamcorper nisi eu molestie. Ut pretium nisl eu facilisis tempor. Nulla rutrum tincidunt justo, id placerat lacus laoreet et. Sed cursus lobortis vehicula. Donec sed tortor et est cursus pellentesque sit amet sed velit. Proin efficitur posuere felis, porta auctor nunc. Etiam non porta risus. Pellentesque lacinia eros at ante iaculis, sed aliquet ipsum volutpat. Suspendisse potenti.

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3

Including tikz

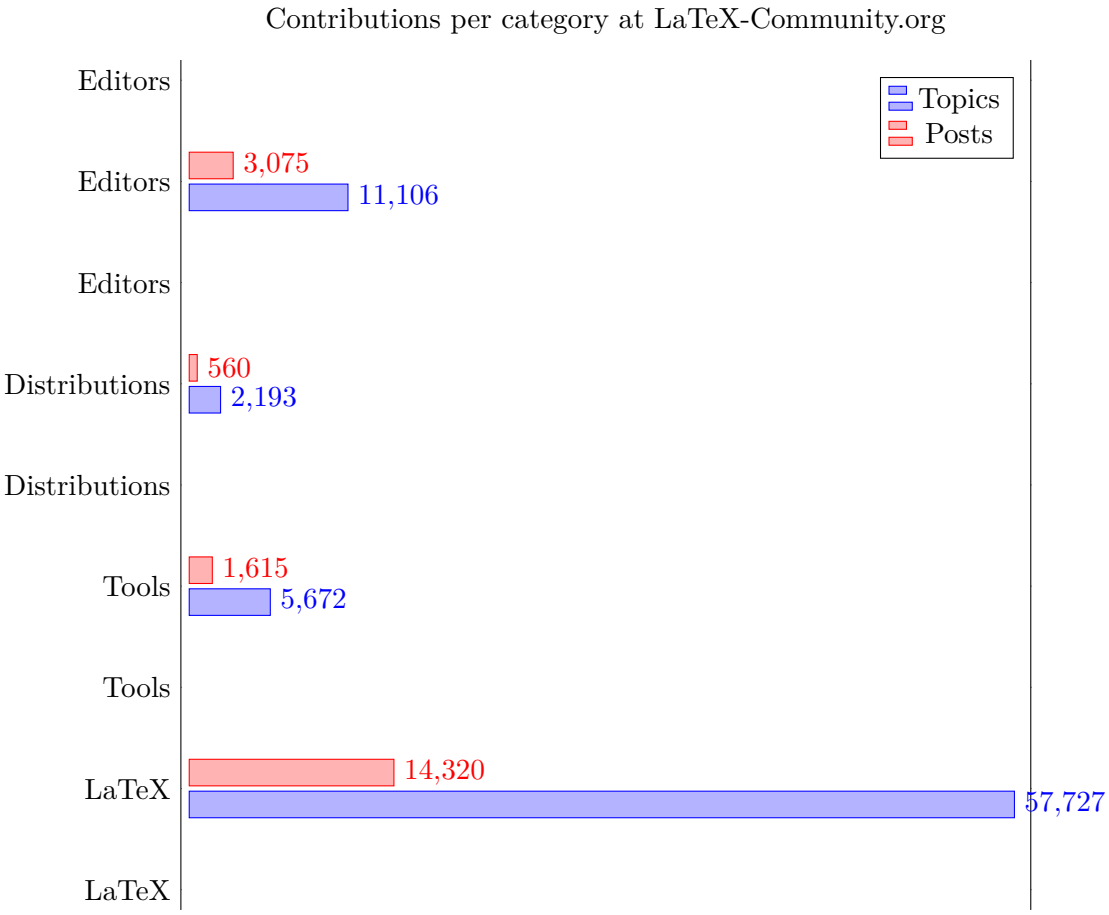

Figure 3.1: Tikz Example.

4

Sum - Algorithm

1: **procedure** SUM($\{x\}$)
2: $y \leftarrow 0$
3: **for** $i \leftarrow 1 : N^x$ **do** ▷ Time series $\{x\}$ has length N^x
4: $y \leftarrow y + x(i)$ ▷ Summing up.
5: **end for**
6: **return** y
7: **end procedure**

Figure 4.1: Implementation of a algorithm for calculating a sum.

5

PGF-plots from python

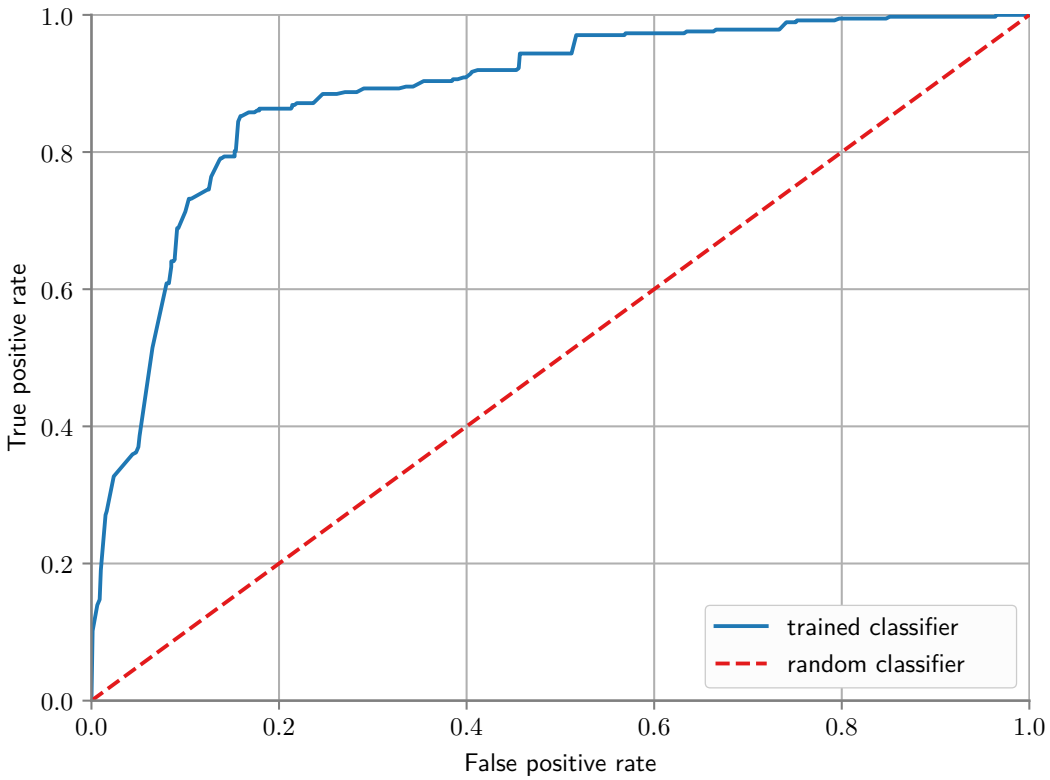

Figure 5.1: Example of using python to generate a pgf-figure which has the same fonts as the main latex document. Run python plot_exemplary_roc.py from the Python directory to generate the pgf-file.

6

Asymptote

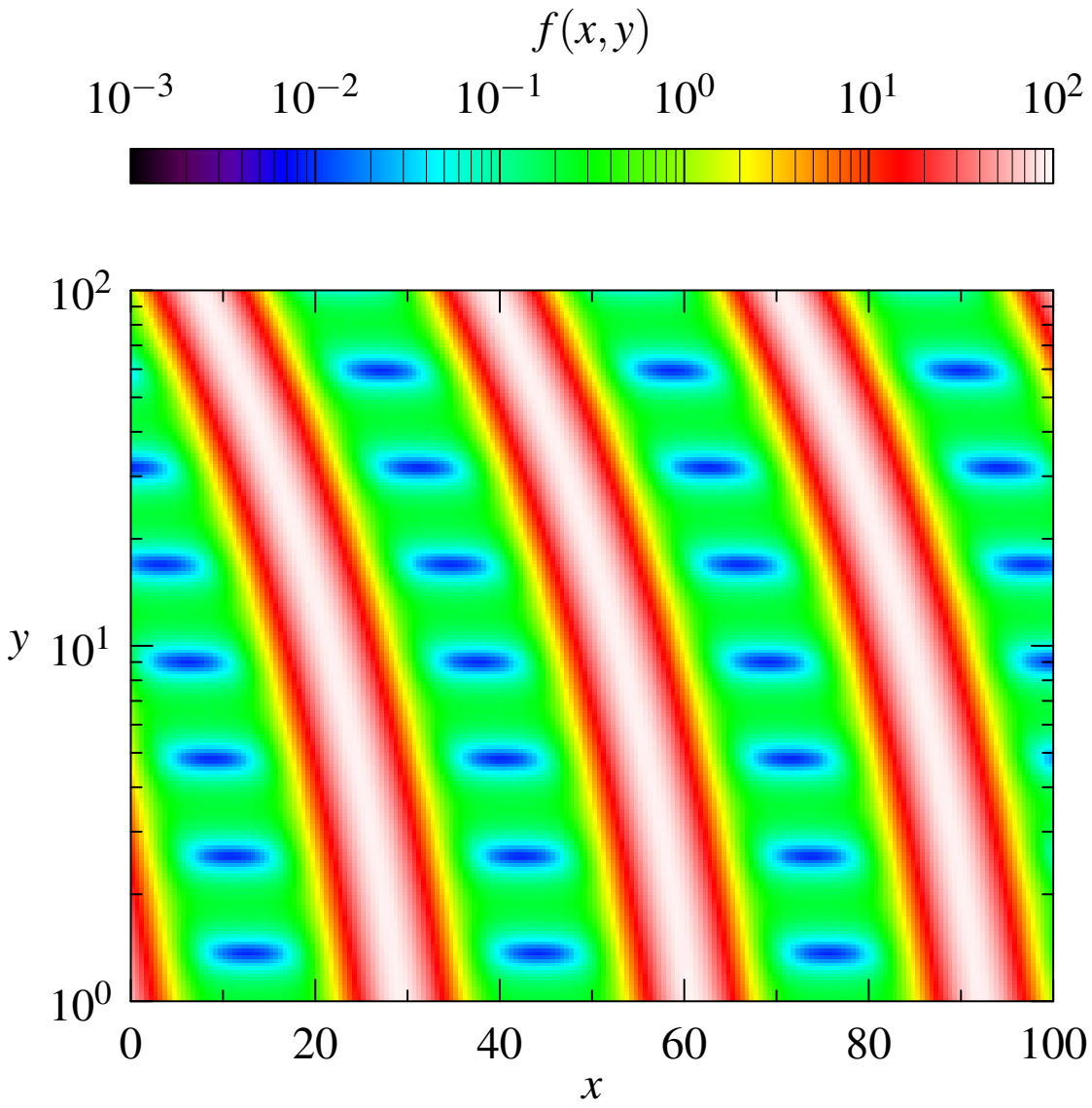

Figure 6.1: Example for plotting with asymptote

7

Discussion

8

Materials and Methods

Appendix A