

Workshop: organization with a computational lab book, \LaTeX and GIT

Maria Beatriz Walter Costa

beatriz.costa@colaborador.embrapa.br

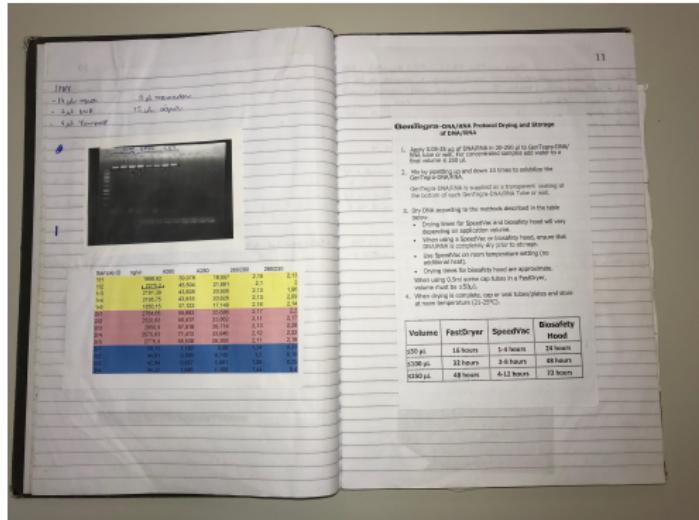
LBB - EMBRAPA/Agroenergia

Outline

- 1 Organising your work environment
- 2 Latex: a document preparation language
- 3 GIT and GITHUB
- 4 Practical part

Lab Book

- legal document to certify research
- paper versions (wet labs)
- any advantages writing in the computer? (.mk, .tex, .docx, .py)



Lab book of MSc Etienne Medeiros

Computational Lab Book

- Transfer text to article, reports, etc
- Keep track of ref. & experiments
- Organise and plan
- Develop your own organisation method
- Programming logic (LaTeX language)

4.6 16

4.6.1 DE pipeline, diagnostics and analysis - Jessica's data - done

- Working Folder (newest): /Documents/Downloads/_conservatory/Yeastgape/Jessica_RNAseq/counts_matrices/

- R script (WK): deseq2_pipeline.R

Today I will filter the data in an organized and structured way, including writing a clean code and then I will run DESeq for each of my cases. The filtering will be based on the comparisons (or cases) I want to make:

- Compare the commercial strand JP_I against the others, respecting the same time (0h and 6h separately) - 6 comparisons in total
- Compare each strand in regards to time: 0h versus 6h - 4 comparisons in total

For the first point, I will show the results in more detail of JP_I against G10 in 0h, as an example of the different kinds of analysis I can make for all others. First we have the diagnostic plots, for instance the MA plot (fig. 4.2).

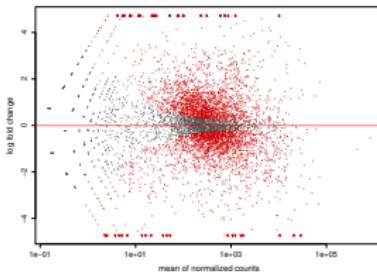


Figure 4.2: MA plot for strand JP_I against G10 in 0h time point. This plot represents each gene with a dot, with the x axis as the average expression over all samples and the y axis as the log-fold change between treatment and control. Genes with an adjusted p-value below 0.05 are shown in red.

How to structure your Lab Book

- Choose a platform: **word**, **LaTeX**, markdown, jupiter (python)
- Try it out and change if appropriate
- Chapters: month and year, Sections: day; or
- Chapters: project, Sections: Experiments
- Subsections: tasks (~ trello)
 - experiment
 - meeting
 - presentation
 - seminar
 - planning (workflows/pipelines)
- Start the day with a block in regard to the task

How to structure your Lab Book - example

5.9 18

5.9.1 Figures - article *T. lentiforme* - done

- Working folder (workstation LBB): *Documents/Figures_Tlentiforme/*
 - R proj and script (WF): *Figures_Tlentiforme.Rproj* and *figure2_makr.R*
 - Manuscript folder (workstation LBB): *Documents/Manuscripts/T_lentiforme/*

I am working today at the article of *T. lenticiforme*. I will produce the last figures of CAZy family heatmaps and send them to Gláucia, who is writing the bio part.

I already did the CAZy figures for families GH and AA on the 24-25 of January. Today I cleaned up the scripts and ran the codes for all families both the heatmap and the colorkey. After I produced these two figures for each family, I combined them into one final figure using `inkscape`. The GH CAZy family is the largest, to the figure was more troublesome (Fig. 5,3). But the GH others were easy enough after I tested and cleaned up the code to work best for our purposes. The code for producing the GH figures follow on the next page.

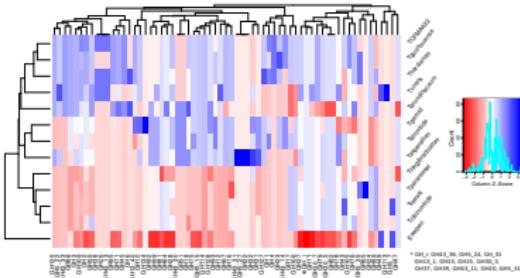


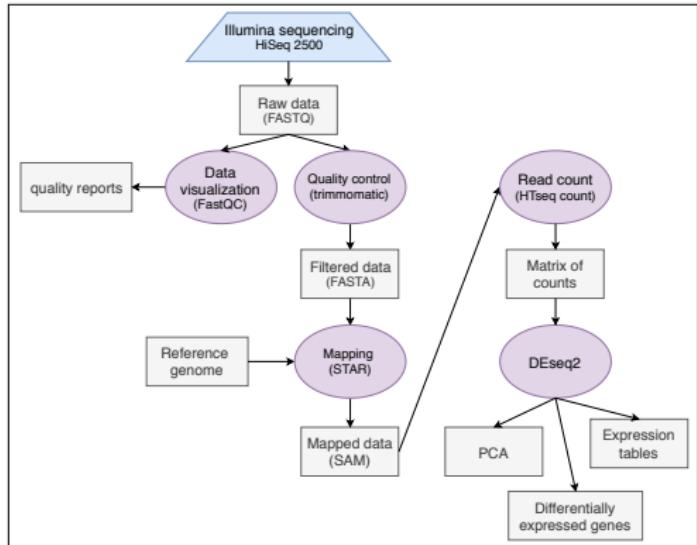
Figura 5.3: Heatmap of the GH family of CAZy for the *Trichoderma* genus plus an outgroup (*E. weberi*).

How to structure your Lab Book - details

- Grey blocks contain:
 - Working folder (which computer?): folder path
 - Lib (which repository? Is it a GIT one?): lib path
 - Script: which specific script did you use for this experiment?
 - Website or tool: if you used a tool (e. g. BLAST), add the website/manual here
 - any other relevant info, so you can reproduce the experiment
- Develop your own organisation method
- Learn logic and structure

Pipelines/workflows are very useful for organization

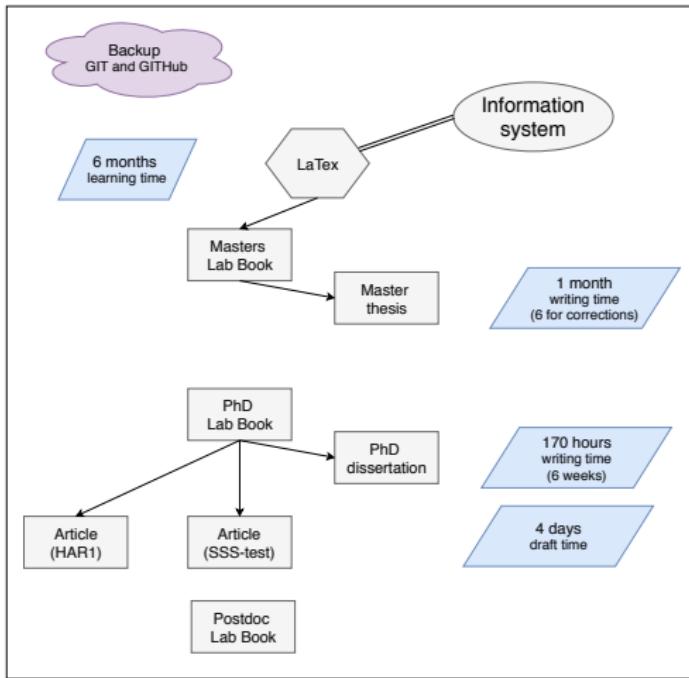
- Write down your tasks in the form of a workflow (pipeline)
 - draw.io, inkscape, corel draw, etc
 - ALL steps of the experiment **must** be included (reproducibility)



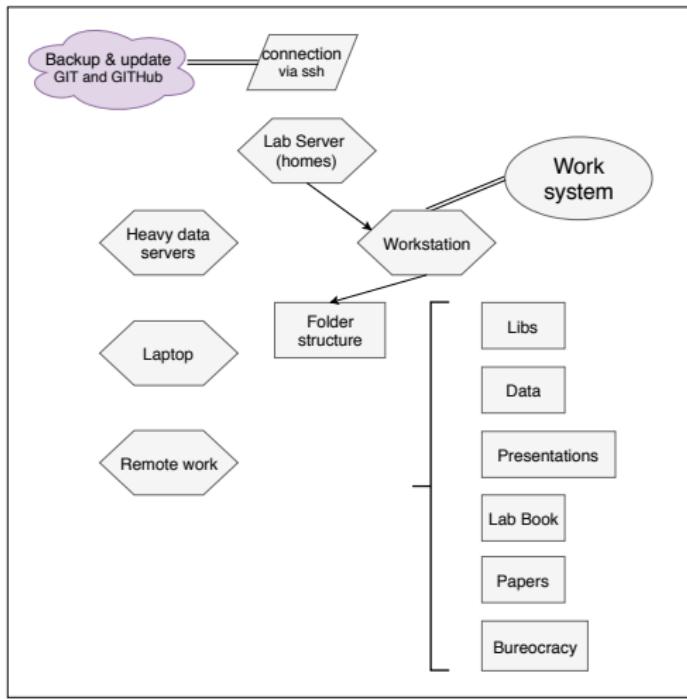
Solve the problems using a logical structure

- Define the problem
- Propose a solution
- Which steps do you need to do in order to solve it?
- Enumerate the tasks, or draw them in a pipeline
- Checklist before doing it:
 - Ask a more experienced researcher;
 - Check literature - has anyone solved it yet?
 - **Can it be solved at all?** Especially for programmers, mathematicians, and related fields

Work organization



Folder organization



Latex: a document preparation language



The LaTeX Project

Home About Get LaTeX3 Publications Help News

LaTeX – A document preparation system

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents. LaTeX is available as [free software](#).

Recent News

- Mar 8, 2017
[Videos from the 2016 TUG conference](#)
- Jan 26, 2017
[New LaTeX release --- Issue 26 of LaTeX2e news released](#)
- Dec 7, 2016
[Videos from the memorial for Sebastian Rahtz \(13.2.1955 - 15.3.2016\)](#)

Why choose \LaTeX over Word?

Pros

- **Typographical quality**
- Formatting is done for you
- Citation/fig/table referred automatically
- Backup (associated to GIT)
- Programming logic
- Control your documents
- Free and safe (*pdf*)
- pseudocodes and formulas

Cons

- **You need time and patience for learning**
- There is a needed “getting use to it” if you are not used to coding
- problems in the code can be difficult to spot in the beginning
 - Tip: comment the bug-lines and compile the document to a bug-free stage

Hello world!

- Plain text file: `.tex` with the actual content
 - Preamble
 - Document
- LaTex uses control statements defining format
- LaTex compiler compiles your `.tex` and transform it to a `.pdf`

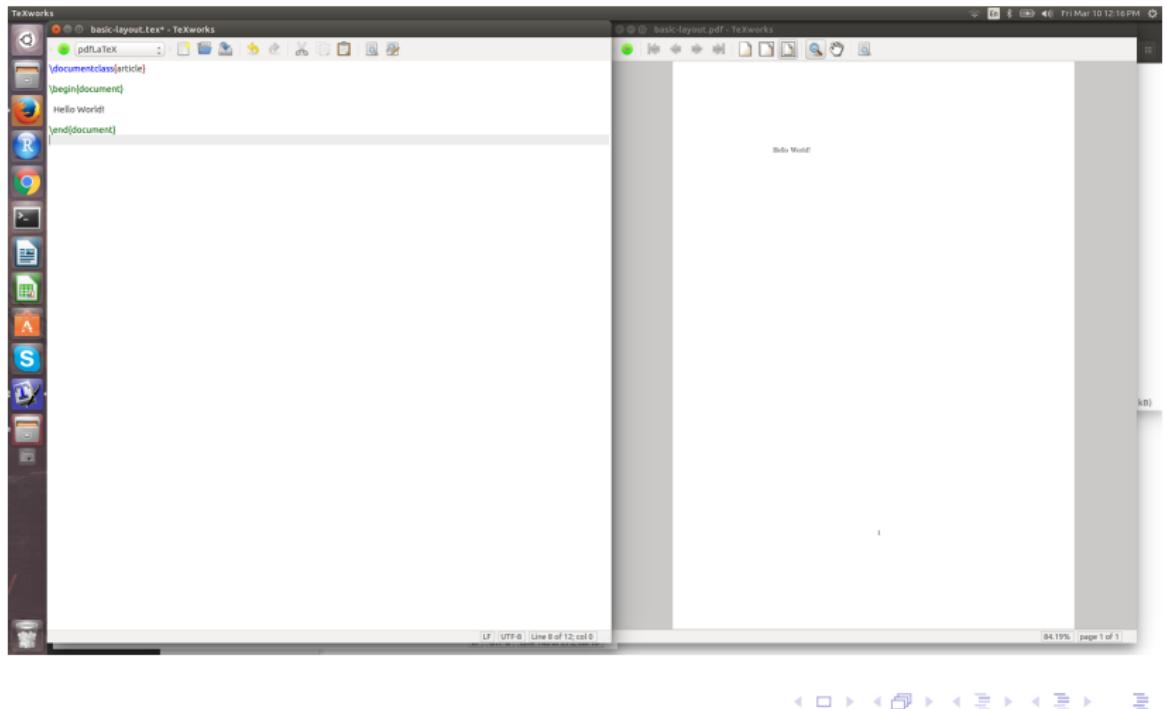
```
\documentclass{article}
```

```
\begin{document}
```

Hello World!

```
\end{document}
```

Compiling a *.tex* and producing a *.pdf*



Basic .tex document

- text beginning with \ indicates instructions for the compiler
 - \commandname{option}
 - \documentclass{article} indicates document's layout (article, book, report, etc.)
- Environment indicates a set of rules is applied within block

```
\documentclass{article}
```

```
\begin{document}
```

Hello World!

```
\begin{environment1}
```

```
    \begin{environment2}
```

```
        \end{environment2}
```

```
\end{environment1}
```

```
\end{document}
```



Automatic format by class - CV/Report

John Smith	
123 Broadway City, State 12345 (000) 111-1111 or (111) 111-1112	
OBJECTIVE	A position in the field of computers with special interests in business applications programming, information processing, and management systems.
EDUCATION	Bachelor of Science, Interdisciplinary Science Rensselaer Polytechnic Institute, Troy, NY, expected December 1990 Concentration: Computer Science Minor: Management
COMPUTER SKILLS	Languages & Software: COBOL, IFPS, Focus, Megalcalc, Pascal, Modula2, C, APL, SNOBOL, FORTRAN, LISP, SPIRES, BASIC, VSPC Autotab, IBM 370 Assembler, Lotus 1-2-3. Operating Systems: MTS, TSO, Unix.
EXPERIENCE	Business Applications Programmer Fall 1990 Allied-Signal Bendix Friction Materials Division, Financial Planning Department, Latham, NY • Developed four "user friendly" forecasting systems each of which produces 18 to 139 individual reports. • Developed or improved almost all IFPS programs used for financial reports.
Research Programmer	Summer 1990
Psychology Department, Rensselaer Polytechnic Institute	
• Performed computer aided statistical analysis of data.	
Assistant Manager	Summers 1988-89
Thunder Restaurant, Canton, CT	
• Recognized need for, developed, and wrote employee training manual. Performed various duties including cooking, employee training, ordering, and inventory control.	
COMMUNITY SERVICE	Organized and directed the 1988 and 1989 Grand Marshall Week "Basketball Marathon." A 24 hour charity event to benefit the Troy Boys Club. Over 250 people participated each year.
EXTRA-CURRICULAR ACTIVITIES	Elected <i>House Manager</i> , Rho Phi Sorority Elected <i>Sports Chairwoman</i> Attended Kranzler Leadership Conference Headed delegation to Rho Phi Congress Junior varsity basketball team Participant, seven intramural athletic teams

Saturday, 27 March 2010

1 Bulleted list example

This is a bulleted list:

- Item 1
- Item 2
- ... and so on

2 This is an example experiment

Suspendisse vel felis. Ut lorem lorem, interdum eu, tincidunt sit amet, laoreet vitae, area. 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.

3 This is another example experiment

Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusc sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.

Class - Article/Book

Journal, Vol. XXX, No. 1, 1-6, 2013
 Additional note

Article Title

John Smith^{1*}, James Smith²

Abstract

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 tellus. Sed ut perspiciatis unde omnis iste natus error sit voluptatis. Nisi ut aliquid ex eius, pariatur etiam nonnulla gravida plasent. Integer sapien est, taculis in, pretium at, magna ac, nunc. Praesent eget seni vel teo ultios blesendus. Aenean laudac. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Cumibar auctor semper nulla. Donec varia sed eti. Reusa. Duis nibh mi, congue eu, accumsan esleand, sagittis quis, diam. Duis eget ero sit amet sed dignissim nraum.

Keywords

Keyword1 — Keyword2 — Keyword3

¹Department of Biology, University of Examples, London, United Kingdom

²Department of Chemistry, University of Examples, London, United Kingdom

*Corresponding author: jms@math.com

Contents

Introduction	
1 Methods	
1.1 Subsection	
1.2 Subsection	
2 Results and Discussion	
2.1 Subsection	
Subsubsection • Subsubsection • Subsubsection	
2.2 Subsection	
Acknowledgments	
References	

Introduction

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 tellus. Sed ut perspiciatis unde omnis iste natus error sit voluptatis. Nisi ut aliquid ex eius, pariatur etiam nonnulla gravida plasent. Integer sapien est, taculis in, pretium at, magna ac, nunc. Praesent eget seni vel teo ultios blesendus. Aenean laudac. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Cumibar auctor semper nulla. Donec varia sed eti. Reusa. Duis nibh mi, congue eu, accumsan esleand, sagittis quis, diam. Duis eget ero sit amet sed dignissim nraum.

Nam sit ligula, fringilla a, estetis sodales, seddicitin vel, wia. Mistic auctor leetn non jono. Nam lacus ibeo.

pitiam at, loborta vita, ultricies et, tellis. Donec aliquet, tortor sed accusan blesendus, ent ligula aliquet magna, vi-
 1 tura eti. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis.
 2 nam. Sed ut perspiciatis unde omnis iste natus error sit voluptatis. Nisi ut aliquid ex eius, pariatur etiam nonnulla
 3 gravida plasent. Integer sapien est, taculis in, pretium at, magna ac, nunc. Praesent eget seni vel teo ultios blesendus.
 4 Aenean laudac. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Cumibar auctor semper nulla. Donec varia
 5 sed eti. Reusa. Duis nibh mi, congue eu, accumsan esleand, sagittis quis, diam. Duis eget ero sit amet sed dignissim nraum.

1. Methods

Quisque ullamcorper plasent ipsum. Cras nibh. Morbi vel
 1 justo vine laus frindit ultios. Lorem ipsum dolor sit
 2 amet, consectetur adipiscing elit. In hac habuisse plas-
 3 sent. Integer tempus consuad, agit. Etiam non. Nunc
 4 malesuada eu, pulvinar at, mollis ac, nulla. Cumibar auctor. Amet etiam nonnulla gravida plasent. Integer
 5 sapien est, taculis in, pretium at, magna ac, nunc. Praesent eget seni vel teo ultios blesendus. Aenean laudac.
 6 Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Cumibar auctor semper nulla. Donec varia
 7 sed eti. Reusa. Duis nibh mi, congue eu, accumsan esleand, sagittis quis, diam. Duis eget ero sit amet sed
 8 dignissim nraum.

Nam sit ligula, fringilla a, estetis sodales, seddicitin vel, wia. Mistic auctor leetn non jono. Nam lacus ibeo.

2. In-text Elements

2.1 Theorems

This is an example of theorems.

2.1.1 Several equations

This is a theorem consisting of several equations.

Theorem 2.1.1 — **Name of the theorem.** In $E = \mathbb{R}^n$ all norms are equivalent. It has the properties:

$$\|x\| - \|y\| \leq \|x - y\|$$

$$\left\| \sum_{i=1}^n x_i \right\| \leq \sum_{i=1}^n \|x_i\| \quad \text{where } n \text{ is a finite integer}$$

(2.1)

(2.2)

2.1.2 Single Line

This is a theorem consisting of just one line.

Theorem 2.1.2 A set $\mathcal{P}(G)$ is dense in $L^2(G, |\cdot|)$.

2.2 Definition

This is an example of a definition. A definition could be mathematical or it could define a concept.

Definition 2.2.1 — **Definition name.** Given a vector space E , a norm on E is an application, denoted $\|\cdot\|$, $E \rightarrow \mathbb{R}^+ = [0, +\infty]$ such that:

$$\|x\| = 0 \Leftrightarrow x = \emptyset$$

$$\|\lambda x\| = |\lambda| \cdot \|x\|$$

$$\|x + y\| \leq \|x\| + \|y\|$$

(2.3)

(2.4)

(2.5)

report class - sections and subsections - Lab Book

```
\documentclass{report}
```

```
\title{My first document}  
\date{14-03-2017}  
\author{Author Name}
```

```
\begin{document}
```

```
\maketitle  
\newpage
```

```
\section{Hello World!}  
Some text here.
```

```
\subsection{My first subsection}  
Some text here.
```

```
\begin{itemize}  
  \item First item  
  \item Second item  
\end{itemize}
```

```
\subsection{My second subsection}  
Some more text.
```

```
\section{My second section}  
Some more text here as well.
```

```
\end{document}
```

0.1 Hello World!

Some text here.

0.1.1 My first subsection

Some text here.

- First item
- Second item

0.1.2 My second subsection

Some more text.

0.2 My second section

Some more text here as well.

Using *packages* in the preamble

- packages add more functions
 - `\usepackage{url}`¹
 - `\usepackage{amsmath}`²
- If a package is not installed already, you can get it from
CTAN - The Comprehensive TeX Archive Network
<https://www.ctan.org/>
 - Using `tlmgr`: a package and configuration manager
 - `$tlmgr <option> <action>`

¹ URL-sensitive line breaks, intended for emails, hypertext links, directories, etc.

² adapts for use in LaTeX most of the math features of AMS-TeX

Math environment

```
\documentclass{report}  
\usepackage{amsmath}  
  
\title{My first document}  
\date{14-03-2017}  
\author{Author Name}  
  
\begin{document}  
  
\maketitle  
\newpage
```

```
\section{Hello World}  
Some text here.
```

```
\subsection{My first subsection}  
Some text here.
```

```
\begin{itemize}  
    \item First item  
    \item Second item  
\end{itemize}
```

```
\subsection{My second subsection}  
Some more text.
```

```
\section{Math environment}  
equation environment. \\
```

```
\begin{equation}  
F(x) = \int_a_b \frac{1}{3}x^3  
\end{equation}
```

align environment, without numbering equations: \\

```
\begin{aligned}  
f(x) &= x^2 \\  
g(x) &= \frac{1}{3}x^3 \\  
F(x) &= \int_a_b \frac{1}{3}x^3  
\end{aligned}
```

1.1.2 Math environment

equation environment,

$$F(x) = \int_b^a \frac{1}{3}x^3 \quad (1.1)$$

align environment, without numbering equations:

$$\begin{aligned} f(x) &= x^2 \\ g(x) &= \frac{1}{3}x^3 \\ F(x) &= \int_b^a \frac{1}{3}x^3 \end{aligned}$$

Including figures

```
\begin{figure}
\centering
\includegraphics[width=0.6\columnwidth]{figures/texworks-linux.png}
\caption[TexWorks Editor.]{TexWorks editor layout in a Linux machine\\(\url{https://www.tug.org/texworks/})}
\label{texworks}
\end{figure}
```

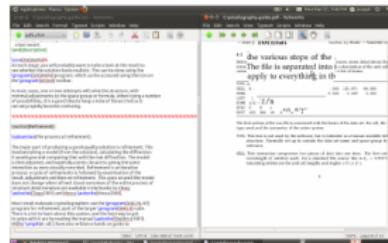


Figure 1.1: TexWorks editor layout in a Linux machine <https://www.tug.org/texworks/>.

Including tables

```
\begin{table}[!htb]
  \caption{table1}
  \centering
  \begin{tabular}{ccc}
    \hline species&changes&score \\
    \hline
    Macaque&4&0.0 \\
    Human&2&14.9 \\
    Orangutan&0&0.0 \\
    Pan&0&0.0 \\
    Gorilla&0&0.0 \\
    \hline
  \end{tabular}
  \label{table1}
\end{table}
```

Table: table1

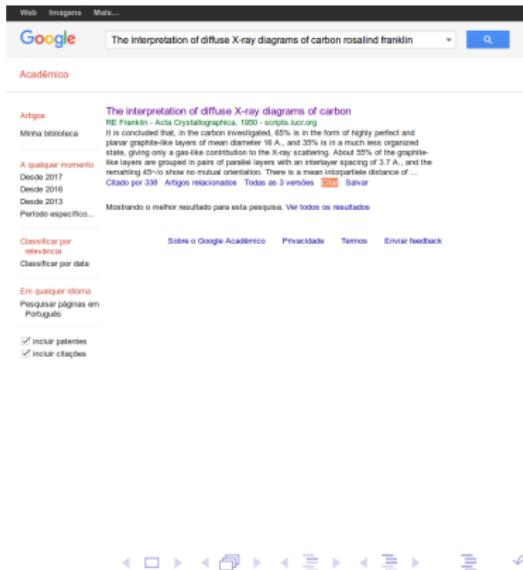
species	changes	score
Macaque	4	0.0
Human	2	14.9
Orangutan	0	0.0
Pan	0	0.0
Gorilla	0	0.0

Referencing figures and tables in the main text

- Add a label to your figure or table
 - `\label{alias}`
- Refer to your table or figure on the text using its alias
 - `table~\ref{alias}`
- If you change the position of your figure in the text, latex will change its numbering for you

Bibliography using *.bib*

- Create a separate text file *.bib* (in the same folder)
- Indicate in the main file *.tex* the formatting parameters of the Bibliography
 - `\bibliographystyle{apalike}`
 - `\addcontentsline{toc}{chapter}{Bibliography}`
 - `\bibliography{ref}`
- Add the references there in the *.bib* format
- Cite it in the main text using its alias
 - `\cite{alias}`



Use the report class to build your own Lab Book

The screenshot shows the Texworks interface divided into two panes. The left pane displays the LaTeX source code for a lab book, while the right pane shows the generated PDF output.

Left Pane (LaTeX Source Code):

```
\documentclass[12pt]{article}
\usepackage{amsmath}
\usepackage{graphicx}
\usepackage{hyperref}
\usepackage{caption}
\usepackage{color}
\usepackage{ipnsize}[caption]
\captionsetup{compatibility=false}
\usepackage{fullpage}
\usepackage{fancyhdr}
\usepackage{framed}
\usepackage{fancyvrb}
\usepackage[T1]{fontenc}
\usepackage{amsmath}
\usepackage{color}
\usepackage{array}
\usepackage{pdftricks}
\usepackage{psdflatopdf}

\renewcommand{\ab}[1]{\texttt{[\#1]}}
\renewcommand{\com}[1]{\texttt{[!]\#1}}
\renewcommand{\tit}[1]{\texttt{[\#1] Lab Book}\texttt{[\#1] project title}\texttt{[\#1] Author}}
\renewcommand{\aut}[1]{\texttt{[\#1] Advisor}\texttt{[\#1] Institute} \texttt{[\#1] Date}\texttt{[\#1] Author}\texttt{[\#1] Date}\texttt{[\#1] Month}\texttt{[\#1] Year}\texttt{[\#1] Section}\texttt{[\#1] Course}\texttt{[\#1] URL}\texttt{[\#1] Description}\texttt{[\#1] Note}\texttt{[\#1] Comment}\texttt{[\#1] command}\texttt{[\#1] pdflatex lab-book.tex}}
```

Right Pane (PDF Output):

Chapter 1
March 2017

1.1 4 - 20 - Course: Programming for Evolutionary Biology

For two exciting weeks I will be learning programming in a Bioinformatics course in Leipzig <http://evop.bioinf.uni-leipzig.de/>

1.1.1 14 - Learning **BTEx**

BTEx is a high-quality typesetting system, available as free software, which allows to produce scientific or technical documents [ProjectLatex](#). I am using BTEx to create a Bioinformatics Lab Book. To compile my Lab Book, I can use a command line, as follows below. Afterwards I can visualise the produced [\(M\).pdf](#) file using evince or another reader. Alternatively, I can use a LaTeX editor, such as TexWorks (<https://www.tug.org/texworks/>), which allows me to write the code and control the pdf file in the same environment (Figure 1).

texlive-lab-book.tex
texlive-lab-book.pdf &

Figure 1: TexWorks editor layout in a Linux machine. <https://www.tug.org/texworks/>

Writing your thesis using LaTex



UNIVERSITY NAME

DOCTORAL THESIS

Thesis Title

Author:
John Smith

Supervisor:
Dr. James Smith

A thesis submitted in fulfillment of the requirements
for the degree of Doctor of Philosophy
in the

Research Group Name
Department or School Name

November 23, 2016

University of Bristol Thesis Template

Student



Department of Engineering Mathematics
UNIVERSITY OF BRISTOL

A dissertation submitted to the University of Bristol in ac-
cordance with the requirements of the degree of DOCTOR OF
PHILOSOPHY in the Faculty of Engineering.

APRIL 2013

Word count: ten thousand and four



Krishna Kumar
Department of Engineering
University of Cambridge

This dissertation is submitted for the degree of
Doctor of Philosophy

King's College

May 2016

University of London
Imperial College of Science, Technology and Medicine
Department of Computing

INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

Codimension-Two
Free Boundary Problems



How to prepare documents in Latex?

- You can use any text editor to write your `.tex` file (vim, emacs, gedit)
- You can compile your `.tex` using a simple command line:
`pdflatex`
- You can also use a LaTex editor, such as TexWorks, which can be installed in Linux, MacOS or Windows
- Online platform - ShareLatex:
<https://pt.sharelatex.com/>

Beamer

- Class to make presentations
- The slides are environments
- Tables, figures, citation, etc are the same as in the other classes
- Overleaf has different layout options

Presentation class: beamer

GIT

- GIT: platform for version control (by Linus Torvalds)
- ideal for programmers (codes)
- indirect backup
- platform for working in different computers with the **same** versions
- GITHUB: online account for keeping your repositories
 - Start by updating the repository (git pull)
 - Work on the repository
 - Update the repository (git commit and git push)

Summary

- Work organization
- Folder organization
- Computational Lab Book
- Solving a problem
- LaTex documents (classes, sections, referencing)
- GIT/GITHUB

Practical part of the workshop

- Create a GITHUB account
- Add a GIT Repository for your Lab Book online
- Clone your GitHub Lab Book Rep into a workstation
 - \$git clone website
 - start/update the lab book, start a beamer presentation
 - \$git add fig fig document
 - \$git commit -a
 - \$git push
- Start to organize your folders in an organized way
(separate Libs from Data)

References

- **LaTex for beginners:** <https://www.latex-tutorial.com/tutorials/beginners/how-to-use-latex/>
- **LaTex templates:**
<https://www.latextemplates.com/> and
<https://www.overleaf.com/>
- **CTAN:** <https://www.ctan.org/>
- ***tlmgr* package and configuration manager**
<https://www.tug.org/texlive/doc/tlmgr.html>
- **GIT:** <https://en.wikipedia.org/wiki/Git>
- **Interview with Linux and GIT creator Linus Torvalds:**
<https://www.linuxfoundation.org/blog/2015/04/10-years-of-git-an-interview-with-git-creator-l>