

Take off lecture



The LaTeX panorama

The LaTeX panorama

Dr. S. Parthasarathy

<https://drpartha.org.in/>

drpartha@gmail.com

20190309a

Objectives of this tutorial (3 days)

- Motivation to use LaTeX
- What LaTeX is all about
- Using LaTeX for mathematically-rich text
- Write your thesis with LaTeX

Dr.S.Parthasarathy (drpartha@gmail.com)

Engineering Doctorate from INPG, Grenoble, France.

Post-Doctoral work in INRIA, France.

Several **research assignments** in Europe. Research interests: **safety-critical systems, formal methods, artificial intelligence**

14 years in CMC R&D, and 11 years as independent entrepreneur, before taking up teaching assignments.

Professor, Computer Science

Visiting Director of Research, Centre National de Recherches Scientifiques (CNRS), France.

Invited Expert, United Nations International Institute for Software Technology, Macau.

Senior Guest Scientist, Institute for Control and Automation Engineering (IfRA), Tech. University of Braunschweig, Germany.

More details:

<http://algolog.tripod.com/nupartha.htm>

e-mail:

drpartha@gmail.com



A special request ...



Please switch-off your cell-
phones (mobile phones)
NOW. The lecturer will
pause for two minutes, to
help you do this.



***To stop the teacher, just raise your hand.
NO PENALTY for improper use !***



All demos and explanations will be done using software based on Linux/FOSS.



Microsoft worshippers, please abstain.

A L^AT_EX panorama

S. Parthasarathy
drpartha@gmail.com

Ref. : panorama-invite.tex
Ver. : 20190312b

Abstract

This 3-day course presents a panorama of L^AT_EX, based on three ebooks by the same author. It can be very helpful in jump-starting your L^AT_EX learning experience.

1 Course synopsis

L^AT_EX¹ is a very powerful and versatile typesetting system, for high-quality publishing. It is used internationally by a wide variety of users. It was originally conceived by Prof. Donald E. Knuth, the greatest computer scientist of our times. L^AT_EX is available for free (gratis), on all, modern, Linux systems.

This course presents a panorama of L^AT_EX, based on three ebooks by the same author.

1. Let's learn L^AT_EX [2]
2. L^AT_EX for mathematicians [3]
3. Thesis in a hurry [4]

Have you seen the course announcement?

2 Course Outline

(Text marked by ??????? are to be filled up by the host institution)

- **Venue :** ???????
- **Dates :** ??????? & ???????
- **Time and Duration :** Each day, from ???? to ?????. Each day will comprise of 4 sessions of 90 minutes each, with appropriate inter-session breaks.
- **Tentative course structure :**

Day 1	
0	Takeoff and briefing
1	What is \LaTeX ?
2	Learning by Hacking
3	Demo #1 (Hello world. Font sizes, styles)
4	Demo #2 (Line spacing, multicolumn)
Day 2	
5	Demo #3 Bibliography Management
6.	Principles of maths writing
7.	\LaTeX for mathematicians
8.	Demo #4 Creating mathematical texts
Day 3	
9	Writing a thesis
10	Divide and conquer
11	Institutional responsibility
12	Wrapup and debriefing

3 Profile of the Instructor

Prof. Parthasarathy is an experienced user and promoter of \LaTeX [6]. He was a special editor of PracTex journal, the official journal of the TeX Users Group (TUG). He is the author of a number of ebooks and tutorial articles on \LaTeX , all of which are available (under a CC-BY-SA license) on the w-w-web at [7]

Your course handout

- The material (slides) used in this presentation is available in OpenOffice and PDF formats, on the handout CDROM.
- Your handout CDROM will give you plenty of related reading material too !
- All this will be under a CC-BY-SA license.
- A walk-through of your handout CDROM will be done at the end of this session.



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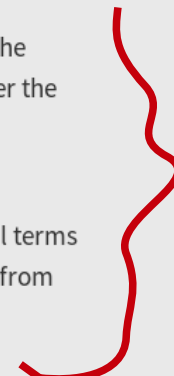


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Notices:

Highlights of the course

CDROM

- **Important Social message**
- **ALL** the presentation materials (visuals) used in this course
- **HUGE** amount of background material on LaTeX (more than 800 MB, 7000+ files, plenty of tutorials and manuals)
- **PLENTY** of sample LaTeX files, which you can hack and play around
- **Innovative ebooks** for learning LaTeX

Dr. Partha's books on LaTeX

S. Parthasarathy
drpartha@gmail.com

[About the author](#) | [What is LaTeX ?](#)
The [learning by hacking](#) way of life.

[A LaTeX panorama](#)

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LaTeX for mathematicians (LFM)

This is an improved and enhanced version of another book published earlier.

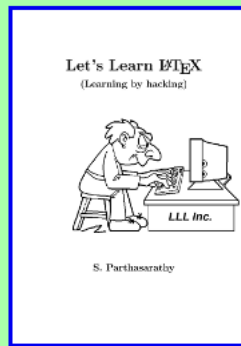
[Synopsis of LFM ebook](#)



[e-book \(pdf\)](#)

Let's Learn LaTeX (LLL)

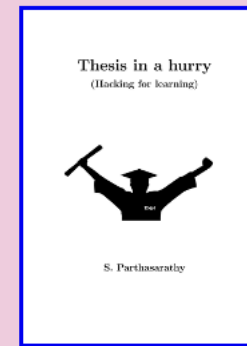
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Thesis in a hurry (TIAH)

[Synopsis of TIAH ebook](#)



[e-book \(pdf\)](#)

Google terms :: Partha, Latex, starter

Dr. Partha's LaTeX starter

drpartha@gmail.com

But, what exactly is LaTeX ?

Visit [Prof. Partha's website](#), where you can learn many things yourself.



[Click on the picture, to see a profile of Dr. Partha](#)

It is easy to master LaTeX.

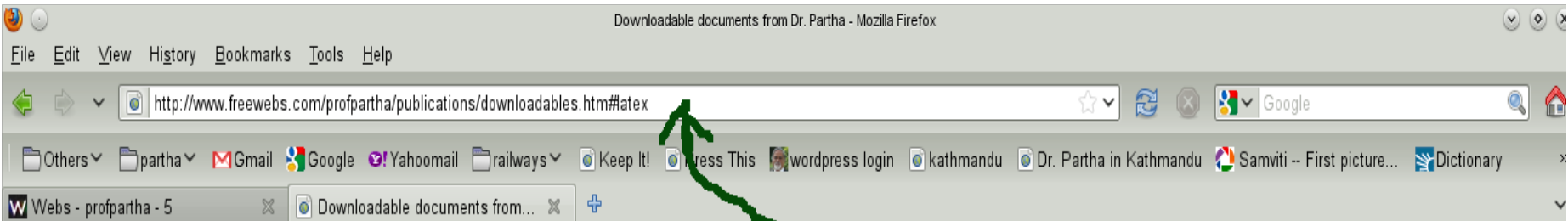
1. Teach yourself LaTeX. [Start here](#)
2. Test your LaTeX. [Start here](#)
3. [Ask Dr. Partha to help](#). Or, ask him for a [one-day seminar on LaTeX](#), at your institution/organisation. (Microsoft worshippers, please abstain)



And then [send a thank you note to Dr. Partha](#)



<https://drpartha.org.in/profpartha/startlatex.htm>



LaTeX

I learnt LaTeX the hard way, so you do'nt have to

These documents are all written using LaTeX.
You can get the LaTeX source of all these documents from Dr. Partha.
You are invited and encouraged to hack the source documents,
and produce your own magic with LaTeX.

Now you can
[Teach yourself LaTeX](#)

<http://www.freewebs.com/profpartha/publications/downloadables.htm#latex>

Hacking is learning

(You can also ask for the LaTeX sources of these files, and hack them)

1. **Begin here** : [Hello world](#), the legendary program which every beginner must learn on his first day at school.
2. [Learning by hacking](#) : A respectable way to learn LaTeX. How to do it well, and do it correctly.
3. [Learning by hacking-- Part II](#) : More on hacking for learning.



[Get to know Latex](#) | [Know to get LaTeX](#)

[Hack and learn](#)

[Lecture slides \(pdf or open office format\)](#)

[Styles in LaTeX](#) | [Maths with latex](#) | [Hack and learn](#) | [Graphics and Tables \(aka "floats"\)](#)

[Bibliographic data with LaTeX](#) | [Presentations with latex](#)

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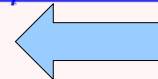
[Free books for you](#) | [Free videos for you](#)

[LaTeX and non-roman scripts](#)

[Write a Ph D thesis with LaTeX](#)

[Miscellaneous \(but useful\) things which do not fit in cleanly in the above list](#)

[Now, try these hands on exercises](#)



Get to know Latex

Hands-on exercises

drpartha@gmail.com

In addition to the exercises given below, a whole lot of exercises can be found in the directory : ../lat4me/latlatex/sandbox .

- **Exercise #1**

Hello world. (LaTeX document layout, Font sizes, font styles)

[PDF file](#) | [LaTeX source](#)

- **Exercise #2**

Line spacing, multi-column text, TOC, Abstract, cross-referencing

[PDF file](#) | [LaTeX source](#)

- **Exercise #3**

Bibliographies

[PDF file](#) | [LaTeX source](#)

- **Exercise #4**

Mathematical texts

[PDF file](#) | [LaTeX source](#)

Use this Free ebook !

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Use this Free ebook !

Teach yourself LaTeX

with this free ebook

Let's Learn LaTeX

(A free, ebook for learning LaTeX)

S. Parthasarathy

drpartha@gmail.com

[About the author](#) | [Get the Basics of LaTeX](#)



[This book is endorsed by TeX Users Group \(TUG\).](#)

[Synopsis of the free ebook](#)

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Can LaTeX profiles be rendered adequately with static CSS?
William Hammond
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Abstracts
[TUG 2014 abstracts \(Bazargan, Berry, Crossland, Cunningham, de Souza, Doob, Farmer, McKenna, Mittelbach, Moore, Raies, Robertson, Tétreault, Wetmore\)](#)
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S Parthasarathy

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Jeffrey Barnett [review of this art book, with personal commentary on the omission of Computer Modern]

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LaTeX tutorials:

- List of [LaTeX tutorials and reference documentation](#) given in the [TeX FAQ](#).
- [Spoken \(video\) tutorial on LaTeX](#), and on [XFig with math](#), from [spoken-tutorial.org](#).
- Video tutorial series on LaTeX from [sharelatex.com](#).
- [LaTeX tutorials from Andy Roberts](#).
- [LaTeX tutorials and information from Nicola Talbot](#).
- [LaTeX tutorials from TUGIndia](#), the Indian TeX Users Group.
- [A Simplified Introduction to LaTeX](#) by Harvey J. Greenberg.
- [Let's Learn LaTeX](#) by S. Parthasarathy.

LaTeX templates:

All of these collections would welcome additions and corrections.

- [latex2e.texi templates](#) for TUGboat, book, beamer.
- [LaTeX Boilerplate](#) by Biafra Ahanonu.
- [howtotex.com/templates](#).
- [LaTeXTemplates.com](#).
- [German templates by Juergen Fenn](#).
- [German templates by Axel Sommer](#).

LaTeX reference:

- [LaTeX2e reference manual](#), an ongoing project to create a reference manual for LaTeX2e (help welcome).
- [LaTeX 2e reference pages](#) (from Martin Herbert Dietze).

Let's Learn L^AT_EX: A hack-to-learn ebook

Parthasarathy S

Abstract

Let's Learn L^AT_EX is an innovative ebook which aims to speed up your L^AT_EX learning experience using the “hack-to-learn” approach. It offers many lessons which you can copy and modify freely, to create your own L^AT_EX document. Each lesson highlights some specific aspects of L^AT_EX.

Description

Perhaps you have a basic knowledge of L^AT_EX, or have heard about it vaguely or seen it at work earlier. You are in a hurry to try your hand at L^AT_EX. You are overwhelmed by the complexity of L^AT_EX. Reading traditional books and tutorial material to understand L^AT_EX seems to be too cumbersome for you. You believe in D-I-Y, even for learning. If any or all of this applies to you, now you have a way out [6]. The ebook *Let's Learn L^AT_EX* gives you a total of 170+ pages in 234 PDF documents (called lessons), each

book in a softcopy form (such as a DVD) to access the L^AT_EX sources. The softcopy version of this book makes best use of ebook format created by L^AT_EX.

Availability

Let's Learn L^AT_EX was prepared and tested under a GNU/Linux system, and will work best there. In any case, you will have to ensure that your PDF reader, your text editor, and your web browser are properly installed, configured, and are working satisfactorily. You will need a live connection to the web to browse the web links in the book. To get the book with all its resources, download the provided zip bundle, unzip, and follow the instructions in the `aboutme.txt` file.

Finally, this book is not expected to replace any of the traditional and popular books on L^AT_EX. It is a L^AT_EX practitioner's attempt to make L^AT_EX accessible to all who want to get proficient quickly in the use of L^AT_EX. You may refer to any of the three books [2, 3, 4], or use any of the many resources accessible on the web [5]. Indeed, keep these resources handy as you work on L^AT_EX using this book.

For submission to The PracT_EX Journal

Draft of March 4, 2008

Available on your course DVD
Also, downloadable from the web

The "hacking for learning" paradigm in L^AT_EX

S. Parthasarathy*

drpartha@gmail.com

Abstract This article argues a case for making hacking an accepted way of learning. It uses the example of L^AT_EX to show why hacking is not so bad, as it is made out to be. It also gives some warnings on the down-side of hacking-for-learning.

This paper was published in Practex Journal Vol. 2007-1, Mar. 2007

1 Preamble

For several years now, traditional teaching, or learning, has been based on some

For submission to The PracT_EX Journal
Draft of July 9, 2007

Available on your course DVD Also downloadable from the web.

The "hacking for learning" paradigm in L^AT_EX – Part 2 *

S. Parthasarathy[†]
drpartha@gmail.com

Abstract This article is a sequel to an article published earlier in this journal [1]. The earlier article argued a case for making hacking an accepted way of learning L^AT_EX . We now examine certain basic principles, which will make hacking an effective way of mastering L^AT_EX . Much of this advise comes from the author's own experiences.

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Note :

This presentation has been prepared without the use of any Microsoft product.

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Start **NOW** !

Thank you

Dr. S. Parthasarathy
<https://drpartha.org.in/>
drpartha@gmail.com