

Introduction to L^AT_EX: Week 1: Installation

Daryl DeFord, David Freund, and Katie Harding

Dartmouth College
Department of Mathematics

Dartmouth College
Kresge Library Workshop
September 29, 2016

Abstract

Abstract

The first meeting of the workshop series is focused on getting you up and running with L^AT_EX. We will help you install a L^AT_EX compiler and the TeX Maker editor on Linux, Mac, or Windows and practice compiling example documents. Several templates will be provided so that you can begin experimenting immediately. Please bring your laptop.

Table of Contents

① Introduction

Abstract

Outline

② Types of Documents

Standard

③ History of L^AT_EX

Early Days of T_EX

L^AT_EX

Today

④ Installation Guide

⑤ Conclusion

Why L^AT_EX?

Why L^AT_EX?

- Designed for mathematical content

Theorem (D. (2014) [1])

The number of distinct Lucas tilings of a $1 \times n$ bracelet up to symmetry is:

$$\sum_{i=0}^{\lceil \frac{n-1}{2} \rceil} \left[\frac{1}{n-i} \sum_{d|(i, n-i)} \varphi(d) \binom{\frac{n-i}{d}}{\frac{i}{d}} \right]. \quad (1)$$

[1] D. DEFORD: *Enumerating Distinct Chessboard Tilings*, Fibonacci Quarterly, 52(5), 102-116, (2014).

Why L^AT_EX?

- Designed for mathematical content

Why L^AT_EX?

- Designed for mathematical content
- High typographical quality

Why L^AT_EX?

- Designed for mathematical content
- High typographical quality
- Programability

Why L^AT_EX?

- Designed for mathematical content
- High typographical quality
- Programability
- Open source/stability/portability

Why L^AT_EX?

- Designed for mathematical content
- High typographical quality
- Programability
- Open source/stability/portability
- Ease of collaboration

Why L^AT_EX?

- Designed for mathematical content
- High typographical quality
- Programability
- Open source/stability/portability
- Ease of collaboration
- Separation of structural elements from content

Basic Document Types

- Homework Assignments

Basic Document Types

- Homework Assignments
- Exams

Basic Document Types

- Homework Assignments
- Exams
- Homework Solutions

Basic Document Types

- Homework Assignments
- Exams
- Homework Solutions
- Lecture Notes

Basic Document Types

- Homework Assignments
- Exams
- Homework Solutions
- Lecture Notes
- Articles

Basic Document Types

- Homework Assignments
- Exams
- Homework Solutions
- Lecture Notes
- Articles
- Books

Basic Document Types

- Homework Assignments
- Exams
- Homework Solutions
- Lecture Notes
- Articles
- Books
- CVs

Basic Document Types

- Homework Assignments
- Exams
- Homework Solutions
- Lecture Notes
- Articles
- Books
- CVs
- Posters

Basic Document Types

- Homework Assignments
- Exams
- Homework Solutions
- Lecture Notes
- Articles
- Books
- CVs
- Posters
- Slideshows

Animations



Figure: Donald Knuth ¹

[http://www-cs-faculty.stanford.edu/ uno/](http://www-cs-faculty.stanford.edu/uno/)

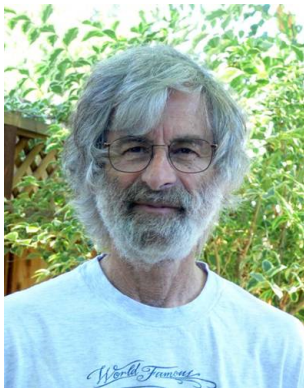


Figure: Leslie Lamport ¹

<http://www.lamport.org/>

URLs for downloads

Compilers

- MacT_EX: <http://tug.org/mactex>
- MikT_EX: <http://miktex.org>

Editors

- T_EXMaker: <http://xm1math.net/texmaker/>
- T_EXWorks: <http://www.tug.org/texworks/>
- LyX: <http://www.lyx.org/>

See you next week!

Thanks!