

Creación de Documentos Profesionales con \LaTeX

Instalación y Primeros Pasos

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Introducción a L^AT_EX:

- T_EX es un sofisticado programa para la **composición tipográfica** de textos y edición de textos con contenido matemático tales como artículos, informes, libros, etc.
- T_EX es en la práctica un *estándar* para publicaciones científicas en áreas como matemáticas, física, computación, etc.
- L^AT_EX es un conjunto de **macros** T_EX que permite preparar automáticamente un documento de apariencia estándar y de alta calidad
- Para trabajar sólo necesitamos escribir texto y manejar algunos comandos. L^AT_EX se encarga de crear **automáticamente** el documento resultante en función de la clase de documento

Introducción a L^AT_EX:



“T_EX está destinado a la creación de libros bellos, y especialmente para libros que contienen un montón de matemáticas”

—Donald Knuth—

Introducción a L^AT_EX:



- **Fichero fuente:** documento de texto en el que el contenido se introduce de acuerdo a una determinada sintaxis que indica la estructura final que se desea
- **Compilador:** procesa el fichero fuente para darle formato y componerlo
- **Visualizador/Impresor:** permiten visualizar o imprimir la composición realizada, respectivamente

Introducción a L^AT_EX:

The screenshot shows a LaTeX editor window with the following content:

```

1 \documentclass{book}
2 \usepackage{amsmath}
3 \begin{document}
4 $0^0$ es una expresión indefinida. Si  $a > 0$  entonces  $a^0 = 1$  pero
5 Si  $a > 0$  entonces  $a^0 = 1$  pero
6 Sin embargo, conviene en que  $0^0 = 1$  es adecuado para que algunas
7 algunas fórmulas se puedan expresar de manera sencilla, sin recurrir a casos especiales,
8 sin recurrir a casos especiales,
9 
$$e^x = \sum_{n=0}^{\infty} \frac{x^n}{n!}$$

10 
$$(x+a)^n = \sum_{k=0}^n \binom{n}{k} x^k a^{n-k}$$

11 \end{document}

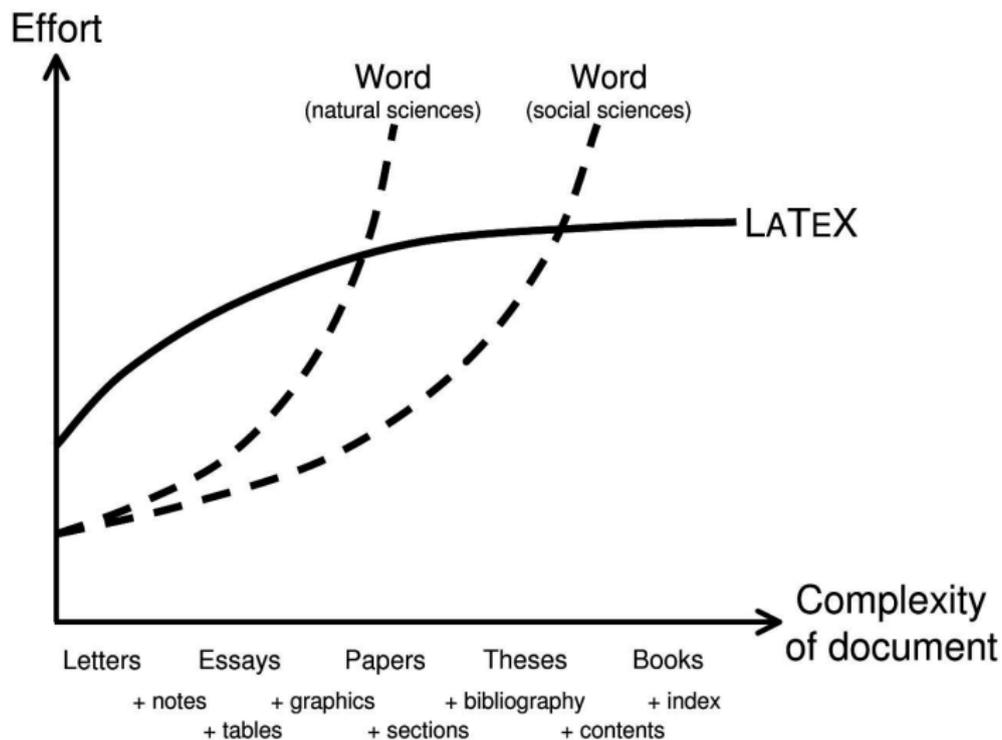
```

The PDF preview window shows the rendered output of the code above, including the mathematical formulas for e^x and the binomial expansion.

Introducción a L^AT_EX: Ventajas

- Funciona, es estable y multiplataforma
- Alta calidad en la edición de ecuaciones
- Permite redactar fácilmente documentos estructurados
- Facilidad en la construcción de macros y comandos
- Se escribe en ASCII
- Es gratis

Introducción a \LaTeX : Ventajas



Introducción a L^AT_EX: Inconvenientes

- No es un editor WYSIWYG (What You See Is What You Get)
- Es más complejo que otros procesadores de texto
- Debemos proporcionar a T_EX la información sobre las características tipográficas del texto (*i.e.*, márgenes, tipos de letra,...)
- Filosofía diferente: **estructura global del texto**

Distribuciones T_EX:

- Una distribución T_EX contiene el núcleo principal del programa, paquetes y extensiones adicionales
- Integra todo lo que hace falta para poner a funcionar T_EX con una o varias extensiones (dialectos) del programa T_EX (por ejemplo, XeL_AT_EX, ConT_EXt, LuaT_EX, pdfL_AT_EX, etc.) sobre un sistema operativo
- Una vez que instalamos T_EX usando alguna distribución, **es conveniente tener un editor** no sólo para editar de manera cómoda el texto, también para acceder de manera sencilla a las tareas usuales de una sesión L_AT_EX: editar, compilar y visualizar

Distribuciones T_EX:

En la actualidad existen diversas distribuciones T_EX:

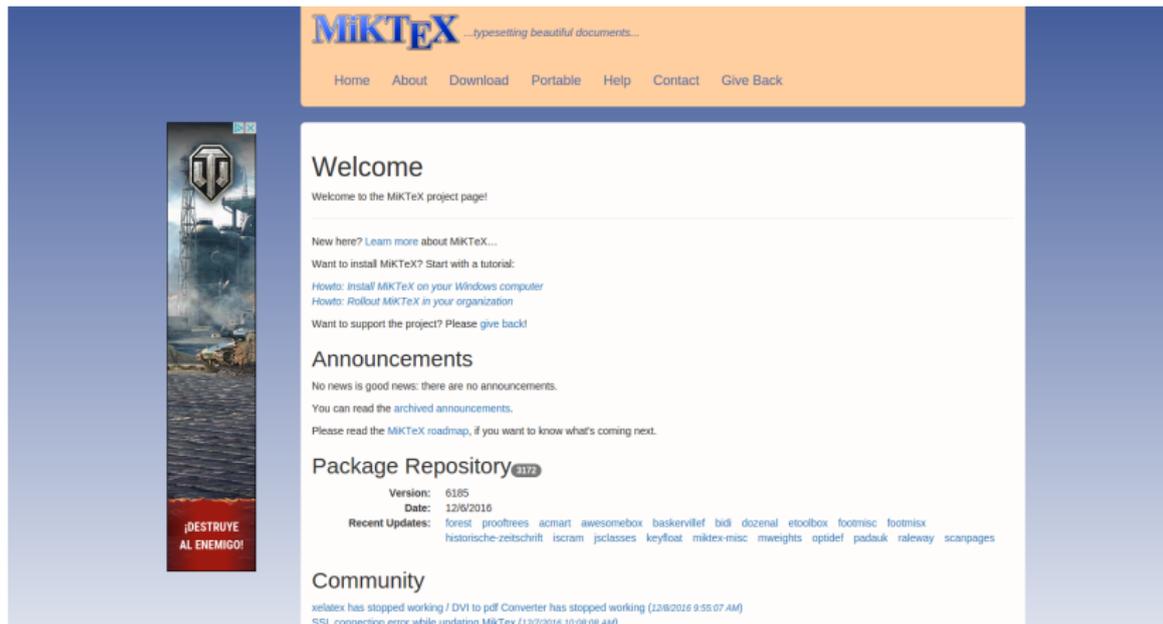
- TeXLive (Windows, Linux, Mac)
- Mactex (Mac OS X)
- Miktex (Windows)

¿Cuál es la mejor distribución?

En las discusiones en Internet **no hay un acuerdo** entre usuarios de cuál es *la mejor distribución* porque eso depende de las motivaciones para hablar bien de una u otra distribución

Distribuciones T_EX: Instalar MiK_TE_X (Windows)

<https://miktex.org/>



The screenshot shows the homepage of the MiKTeX project. At the top, the MiKTeX logo is displayed with the tagline "...typesetting beautiful documents...". Below the logo is a navigation menu with links for Home, About, Download, Portable, Help, Contact, and Give Back. On the left side, there is a vertical banner image with a dark, industrial scene and the text "¡DESTRUYE AL ENEMIGO!". The main content area features a "Welcome" section with a heading and a sub-heading "Welcome to the MiKTeX project page!". Below this, there are several links and text blocks: "New here? Learn more about MiKTeX...", "Want to install MiKTeX? Start with a tutorial:", "Howto: install MiKTeX on your Windows computer", "Howto: Rollout MiKTeX in your organization", "Want to support the project? Please give back!". The "Announcements" section follows, stating "No news is good news: there are no announcements." and providing links to "archived announcements" and a "roadmap". The "Package Repository" section lists the current version (6185) and date (12/6/2016), along with a list of recent updates. Finally, the "Community" section includes a list of error messages from users.

MIK_TE_X ...typesetting beautiful documents...

[Home](#) [About](#) [Download](#) [Portable](#) [Help](#) [Contact](#) [Give Back](#)

Welcome

Welcome to the MiKTeX project page!

New here? [Learn more](#) about MiKTeX...

Want to install MiKTeX? Start with a tutorial:

[Howto: install MiKTeX on your Windows computer](#)

[Howto: Rollout MiKTeX in your organization](#)

Want to support the project? Please [give back!](#)

Announcements

No news is good news: there are no announcements.

You can read the [archived announcements](#).

Please read the [MiKTeX roadmap](#), if you want to know what's coming next.

Package Repository 91172

Version: 6185
Date: 12/6/2016

Recent Updates: forest prooftrees amart awesomebox baskerville bidi dozenal etoolbox footmisc footmisc
historische-zeitschrift iscrum jclasses keyfloat miktex-misc mweights optdef padauk railway scanpages

Community

xelatex has stopped working / DVI to pdf Converter has stopped working (12/6/2016 9:55:07 AM)
SSL connection error while updating MiKTeX (12/7/2016 10:08:08 AM)

Distribuciones T_EX: Instalar MiK_TE_X (Windows)

- 1 Acceder a <https://miktex.org/download>
- 2 Descargar la última versión de MiK_TE_X (supongamos que se descarga `setup-2.9.3959.exe`)
- 3 Ejecute `setup-2.9.3959.exe` y siga las instrucciones. En algún momento deberá elegir la opción `Download MiKTEX`



- 4 Ejecutar de nuevo `setup-2.9.3959.exe` y elija la opción `Install MiKTEX`. Ahora se instalará MiK_TE_X desde la carpeta de descarga que eligió en el paso anterior

Distribuciones T_EX: Instalar T_EXLive (Ubuntu)

A continuación se describen las alternativas para instalar T_EXLive en distribuciones de Ubuntu:

- A través del gestor de paquetes Ubuntu Software Center:
 - 1 Se debe buscar la opción `tex live`
 - 2 Marcar la opción buscada y seleccionar *Instalar*
- Introducir el siguiente comando en una terminal:

```
sudo apt-get install texlive-full
```

Editores de \LaTeX : TeXMaker

<http://www.xmlmath.net/texmaker/>

The screenshot displays the TeXMaker application window. The main editor shows the following LaTeX code:

```

\end{codeexample}
The same rules with expansion of macros after
assignments apply here as well.

The  $\text{\dimen}$  registers perform their arithmetics
internally with 32 bit scaled integers, so called
'scaled point' with unit  $\text{\sp}$ . It holds
 $\text{\lpt=65536sp}=2^2\text{\{16\}sp}$ . One of the 32 bits is used
as sign. The total number range in  $\text{\lpt}$  is
 $5[-(2^{30})-1]/2^2\text{\{16\}}$ ,  $(2^{30})-1)/2^2\text{\{16\}}$  ] =
[-16383.9999, +16383.9999]\footnote{Please note that
this does not cover the complete range of a 32 bit
integer. I do not know why.}
\end{command}

\begin{command}\toks\meta{number}\}
\label{cmd:toks}

There are also 255 token registers which can be
thought of as special string variables. Of course,
every macro assignment  $\text{\vdef\macro}\{\marg\content\}$ 
is also some kind of string variable, but token
registers are special: their contents won't be
expanded when used with  $\text{\the\toks}\{\meta{number}\}$ .
This can be used for fine grained expansion control,
see Section  $\text{\ref{sec:expansion:control}}$  below.
\end{command}

\subsection{Allocating Registers}
\subsection{Using More than 256 Registers}
\subsection{Arithmetics in  $\text{\TeX}$ }
\begin{command}\advance\meta{register}\texttt{
by}\meta{quantity}\}
\begin{codeexample}[]
\count0=2
\advance\count0 by 10
The value is now  $\text{\the\count0}$ .
\end{codeexample}

\begin{codeexample}[]
\dimen0=\lpt
\advance\dimen0 by 10pt
The value is now  $\text{\the\dimen0}$ 

```

The right-hand pane shows a Table of Contents and an Index:

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1 Introduction

This document is intended to provide a direct start with \TeX programming (not necessarily \TeX typesetting). The addresseed audience consists of people interested in package or library writing. At the time of this writing, this document is far from complete. Nevertheless, it might be a good starting point for interested readers. Contact the literature given below for more details.

2 Programming in \TeX

2.1 Variables in Registers

\TeX provides several different variables and associated registers which can be expanded freely.

Editores de L^AT_EX: TexStudio

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

The screenshot displays the TexStudio interface with the following components:

- Source Editor:** Shows LaTeX source code for a document titled "Ein Testdokument". The code includes:

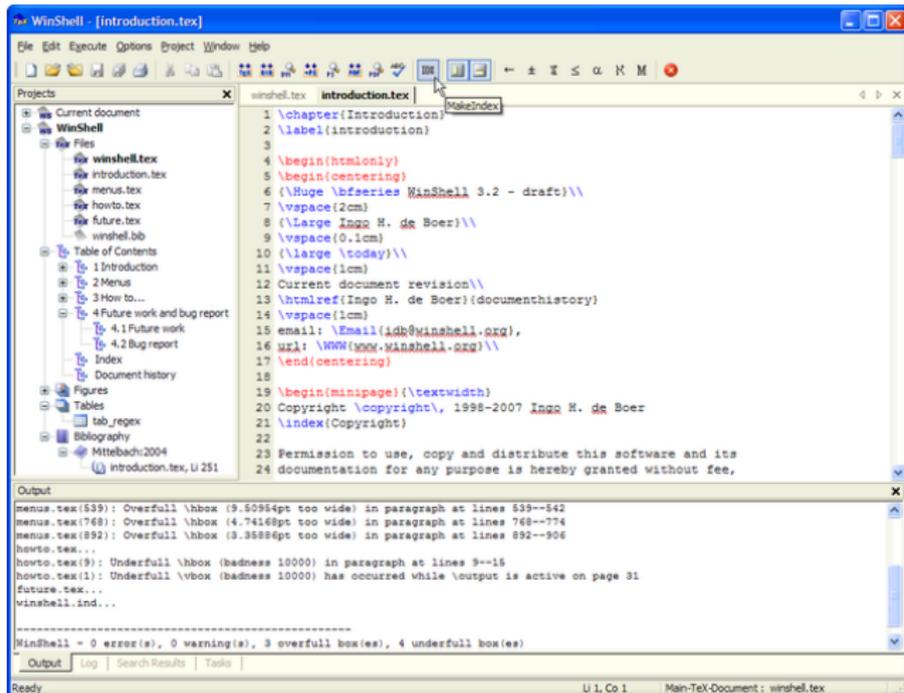

```

\title{Ein Testdokument}
\author{Otto Normalverbraucher}
\date{05. Januar 2004}
\begin{document}
\maketitle
\tableofcontents
\section{Einleitung}
Hier kommt die Einleitung. Die Überschrift
kommt automatisch in das Inhaltsverzeichnis.
\LaTeX{} ist auch ohne Formeln sehr nützlich
und
einfach zu verwenden. Grafiken, Tabellen,
Querverweise aller Art, Literatur- und
Stichw  $E = mc^2$ 
Formel  $m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$ 
ein
einfac
berühmtesten Formeln lauten:
\begin{align}
E &= mc^2 \\
m &= \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}
\end{align}
Aber wer keine Formeln
damit auch nicht zu bes
\end{document}

```
- Preview Window:** Shows the rendered output of the document, including the title "Ein Testdokument", author "Otto Normalverbraucher", date "05. Januar 2004", and a table of contents. It also displays the equation $E = mc^2$ and the relativistic mass formula $m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$ with numbered labels (1) and (2).
- Palettes:** A Greek character palette is open on the left, and a tooltip for the $\sqrt{\quad}$ command is visible over the source code.
- Status Bar:** Shows "Zeile: 31 | Schreibare Spalte: 13 | Textspalte: 13" and "Seite 1 von 1 | 75%".

Editores de L^AT_EX: WinShell

<http://www.winshell.de/>



Editores de L^AT_EX: ShareL^AT_EX

<https://es.sharelatex.com>

SHAREL^AT_EX

Planes y precios Ayuda -

Regístrate

Ingresar

LaTeX, Evolucionado

El editor de LaTeX fácil de usar, online y colaborativo

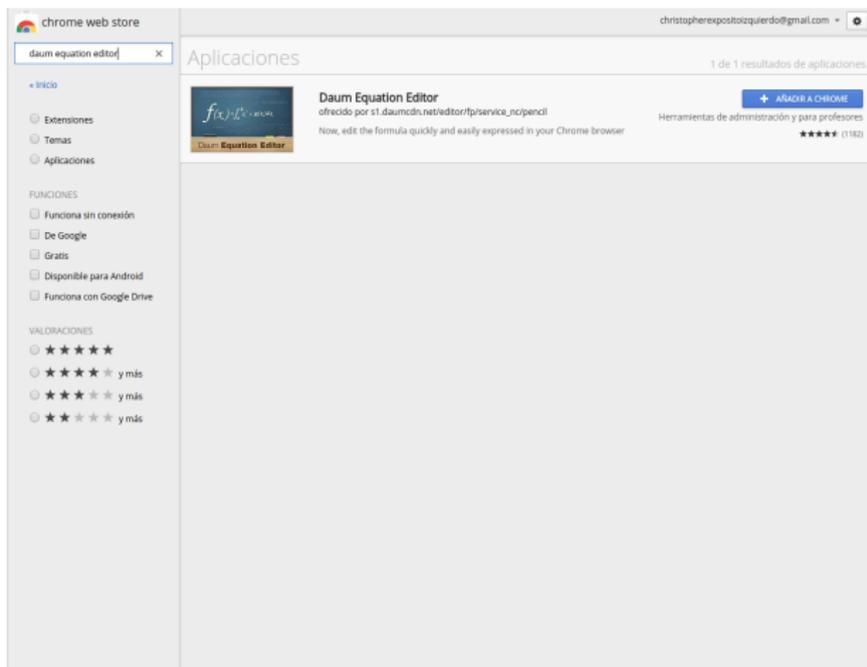
The screenshot shows the ShareLaTeX web interface. On the left is a sidebar with a file explorer showing a project named 'Thesis' with subfolders like 'figures', 'sections', 'instants', 'low-emb...', 'modul-space...', 'm2-branes', and 'polytopes'. The main area displays a LaTeX document with text and mathematical formulas. A 'Recompile' button is visible above the preview. The preview window shows a rendered page with mathematical content, including the equation
$$S = 8 \pi i A_2 \int_{\text{unit}} \text{Vol} \left[\frac{1}{2} \epsilon_{\nu\lambda} \cdot \text{dot} \text{Vrho} A_2 + \text{Vrho} A_2 \text{dot} \text{Vtheta} A_2 - \text{Iq} A_2 \text{Vrho} A_2, \text{Vans}(\text{equation}) \right]$$
. Below the preview, there is a registration form with fields for 'email@example.com', a password field with asterisks, and a 'Regístrate' button.

ShareLaTeX es usado por más de 1,000,000 estudiantes y académicos en:



Editores de Ecuaciones: Extensiones de Chrome

Daum Equation Editor



The screenshot shows the Chrome Web Store interface. At the top, the browser address bar displays "chrome web store" and the user's email "christopherexpositoizquierdo@gmail.com". A search bar contains the text "daum equation editor". The left sidebar includes navigation options: "Inicio", "Extensiones", "Temas", and "Aplicaciones". Under "FUNCIONES", there are checkboxes for "Funciona sin conexión", "De Google", "Gratis", "Disponible para Android", and "Funciona con Google Drive". Under "VALORACIONES", there are four star rating options, each with a "y más" link. The main content area shows the search results for "Aplicaciones", with "1 de 1 resultados de aplicaciones". The first result is "Daum Equation Editor", offered by "s1.daumcdn.net/editor/tp/service_rc/pencil". The description reads: "Now, edit the formula quickly and easily expressed in your Chrome browser". A blue button labeled "¡¡¡AGRA A CHROME" is visible. Below the button, it says "Herramientas de administración y para profesores" and shows a 5-star rating with "(1182)" reviews. The extension's icon features the text "fix the math" and "Daum Equation Editor".

Editores de Ecuaciones: Extensiones de Chrome

Daum Equation Editor

Not signed in to Chrome
(You're missing out—sign in)



Web Store



Google Docs



YouTube



Google Drive



Google Search



Gmail

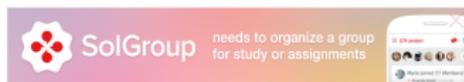


Daum Equation Editor



Editores de Ecuaciones: Extensiones de Chrome

Daum Equation Editor



L^AT_EX

Preview Save as Text Save as Image Save to Google Drive

Editores de Símbolos: Detexify

<http://detexify.kirelabs.org/classify.html>

Detexify

classify symbols



Want a Mac app?

Lucky you. The Mac app is finally stable enough. See how it works on [Vimeo](#). Download the latest version [here](#).

Restriction: In addition to the LaTeX command the unlicensed version will copy a reminder to purchase a license to the

 \amalg

Score: 0.0345225429013179

`\amalg`
mathmode

 \vdash

Score: 0.03488673579246663

`\usepackage{amsymb}`
`\Vdash`
mathmode

 \coprod

Score: 0.03557835081101794

`\coprod`
mathmode

 \prod

Score: 0.03750677595382976

`\prod`
mathmode

 \Uppsi

Score: 0.03843061256245825

`\usepackage{upgreek}`
`\Uppsi`
mathmode

Convertir Documentos Word a L^AT_EX: Writer 2 L^AT_EX

<http://writer2latex.sourceforge.net/>

Writer 2 L^AT_EX
Last update: 2015/05/12

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Project page at SourceForge

Writer 2 L^AT_EX

Writer2LaTeX, Writer2BibTeX, Writer2xhtml and Calc2xhtml

News 2015/05/12: New development release **Writer2LaTeX 1.5.2 alpha** is [available](#)
 News 2015/02/16: New stable release **Writer2LaTeX 1.4** is [available](#)

Writer2LaTeX is a utility written in [java](#). It converts documents in [OpenDocument](#) format – in particular documents containing formulas – into other formats. It is actually a collection of four converters:

Writer2LaTeX:	Writer2xhtml:
Writer2LaTeX converts documents into LaTeX 2ε format for high quality typesetting.	Writer2xhtml converts documents into XHTML 1.0 , XHTML 1.1 , XHTML 1.1+MathML 2.0 or HTML5 with CSS2 . This provides standards-compliant XHTML and brings your math to the web. In addition, Writer2xhtml converts documents into EPUB format for reading on a variety of devices.
Writer2BibTeX:	Calc2xhtml:
Writer2BibTeX is a companion to Writer2LaTeX that extracts bibliographic data from a document and stores it in BibTeX format.	Calc2xhtml is a companion to Writer2xhtml that converts spreadsheet documents to XHTML 1.0 or XHTML 1.1 with CSS2 to display your spreadsheets on the web.

Writer2LaTeX contains...

- **Writer2LaTeX** – a standalone command line utility and java library
- **Writer2LaTeX** – a LaTeX and BibTeX export filter for [LibreOffice](#) and [Apache OpenOffice](#) Writer
- **Writer2xhtml** – an XHTML, XHTML+MathML and EPUB export filter for LibreOffice and Apache OpenOffice Writer and Calc
- **Writer4LaTeX** – an extension for LibreOffice and Apache OpenOffice integrating Writer with your LaTeX installation

The current version is usable for documents of any size, but you may find that it lacks a few features for book-size documents, see the [feature list](#).

Writer2LaTeX is available under the [Gnu Lesser General Public License](#) and can be [downloaded here](#).

Convertir Documentos Word a L^AT_EX: Word 2 T_EX

<http://www.chikrii.com/products/word2tex/dl/>

 Chikrii Softlab

Products

Word2TeX 5.0

What is that?
Features
30-day Evaluation
Samples
User Manual (PDF)

TeX2Word 3.0

What is that?
Features
30-day Evaluation
Samples
User Manual (PDF)

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Getting help
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Word2TeX: Download

Although we are confident that you will be impressed by Word2TeX features, we understand that you might want to try it yourself before purchasing it. Using the instructions presented here, you can download Word2TeX and try it out for 30 days, free of charge.

I want to start evaluating Word2TeX now!



[word2tex.exe \(5.4 MB\)](#)

Or, if your antivirus/firewall doesn't allow downloading executables, please download ZIP archive:



[word2tex.zip \(4.9 MB\)](#)

What to expect after installing the evaluation

You will have 30 days in which to enjoy all the features of Word2TeX, but with the following restrictions: only first 7 (seven) equations will be translated for every document; only one (first) table will be translated for every document; only one (first) figure will be translated for every document.

At any time, before or after the evaluation period ends, you can purchase a valid license number by going to the Chikrii Softlab web site at www.chikrii.com, then click on "Buy Now!" under Store.

All my friends want to try Word2TeX

Feel free to send a link to this page to your friends and colleagues, so they can try Word2TeX for themselves. You are free to use image presented below to put links to this page on your own webpages.



Convertir Documentos Word a L^AT_EX: Word 2 L^AT_EX

<http://www.wordtolatex.com/>



Word-to-LaTeX Converter *software & services*

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Word to LaTeX / TeX / XML Converter

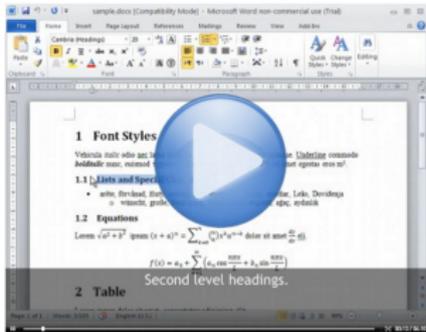
Use Word-to-LaTeX tool to convert any Microsoft Word document to LaTeX, TeX, or clean XML. The software is fast, accurate, and highly configurable. Word-to-LaTeX runs on MS Windows XP/Vista/7/8 with MS Office XP/2003/2007/2010/2013 installed. [Download Word-to-LaTeX](#) and join the huge community of our [users](#).

You Upload MS Word Documents and We Convert

At Word-to-LaTeX we convert all kinds of Microsoft Word documents to LaTeX, TeX, AMS-LaTeX, and other TeX flavors. Simply [upload your document](#) and we will do the rest. You will receive a camera-ready document (in TeX/LaTeX and PDF) without the need to know anything about TeX/LaTeX.

Create EPS Graphics From a MS Word Figure or Table

Among other things, Word-to-LaTeX converter allows you to export any part of a Microsoft Word document into an EPS graphics file. Do you need to insert your Excel graph, a Word table, or an image in a LaTeX document? Let Word-to-LaTeX do its job.



[Word-to-LaTeX Converter Video \(4:10\)](#)

Creación de Documentos Profesionales con \LaTeX

Instalación y Primeros Pasos

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