

\LaTeX -Editoren

\LaTeX -Kurs der Unix-AG

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TU Kaiserslautern

reine \LaTeX -Editoren

Editoren nicht nur für \LaTeX

Online-Editoren

Live-Editoren

\LaTeX -Abkömmlinge

reine \LaTeX -Editoren

Kile

Texmaker

TeXnicCenter

TeXstudio

TeXworks

WinEdt

Andere Editoren

Editoren nicht nur für \LaTeX

Online-Editoren

Live-Editoren

\LaTeX -Abkömmlinge

Vor- und Nachteile

- + Umfangreiche Hilfen: Codevervollständigung, schnelles Kompilieren
- + Bedienung per Maus und Tastatur
- + QuickPreview, PDF-Liveupdate
- Ursprünglich für Linux/KDE

reine \LaTeX -Editoren

Kile

The screenshot shows the Kile LaTeX editor interface. The title bar reads "Document: /home/wijnhout/Documents/work/PROEFSCHRIFT/super/super_3d.tex - Kile". The menu bar includes "File", "Edit", "View", "Build", "Project", "LaTeX", "Wizard", "Bookmarks", "Tools", "Settings", and "Help". The toolbar contains various icons for file operations and editing.

The left sidebar shows a project tree for "Proefschrift". The tree structure is as follows:

- Proefschrift
 - Images
 - other
 - packages
 - proefschrift.tex
 - appendices.tex
 - basedon.tex
 - colofon.tex
 - d0branes.bib
 - d0branes.tex
 - introduction.tex
 - notation.tex
 - super.bib
 - super.tex
 - super_3d.tex (selected)
 - super_concl.tex
 - super_gauge.tex
 - super_int.tex
 - super_motiv.tex
 - super_susy.tex

The main editor window displays the source code for "super_3d.tex". The code includes LaTeX commands for labels, equations, and matrices. A context menu is open over the code, listing commands such as `\label{eq:CartanD34}`, `\end{equation}`, `\begin{equation}`, `\ref{eq:c}`, `\begin{equation}`, `[h_1, e`, `[e^+`, `\end{equation}`, `\begin{displaymath}`, `\begin{pmatrix}`, and `eq:cartanaffineg`.

The bottom status bar shows the project name "Project: Proefschrift" and the current cursor position "Line: 467 Col: 10 INS NORM *".

The bottom right window shows the log output:

```
[BibTeX] proefschrift.aux => proefschrift.bbl (bibtex)
[BibTeX] Done!

[LaTeX] proefschrift.tex => proefschrift.dvi (latex)
[LaTeX] 0 errors, 2 warnings, 16 badboxes
[LaTeX] Done!
```

Vor- und Nachteile

- + Auf allen Plattformen verfügbar
- + Rudimentäre Projektverwaltung, Masterdokument
- + Einsteigerfreundlich
- Bestimmt irgendwas

reine \LaTeX -Editoren Texmaker

The screenshot displays the Texmaker LaTeX editor interface. The main window shows a document titled "tex-programming.tex" with the following content:

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

The \{dimen\} registers perform their arithmetics internally with 32 bit scaled integers, so called scaled point with unit \{sp\}. It holds |
\pt=65536pt|+52*(18|)|sp|. One of the 32 bits is used as sign. The total number range is |\pt| is |
|12*(|f|)-1|2*(|f|), |2*(|f|)-1|2*(|f|)| =
|-16383.9999,+16383.9999|5\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 \code{\macro\argcontent} is also some kind of string variable, but token registers are special: their contents won't be expanded when used with \code{\the\toks\meta{number}}. This can be used for fine grained expansion control, see SECTION-\ref{sec:expansion-control} below.
\end{command}

\subsubsection{allocating Registers}

\subsubsection{Using More than 256 Registers}

\subsubsection{Arithmetics in \{tok\}}
\begin{command}{\advance\meta{register}\tcount}
\begin{command}{\meta{quantity}}
\begin{codeexample}[]
\count0=42
\advance\count0 by 18
The value is now \the\count0.
\end{codeexample}

\begin{codeexample}[]
\dimen0=1pt
\advance\dimen0 by 18pt
The value is now \the\dimen0.
\end{codeexample}
\end{pre>
```

4 is available for TeX users who don't wish to use assignments, which can be obtained by means of \code{\the\dimen0} also in TeX users who are interested in details about TeX programming, therefore it is written a complete reference list in complete TeX manual of TeX.

Contents

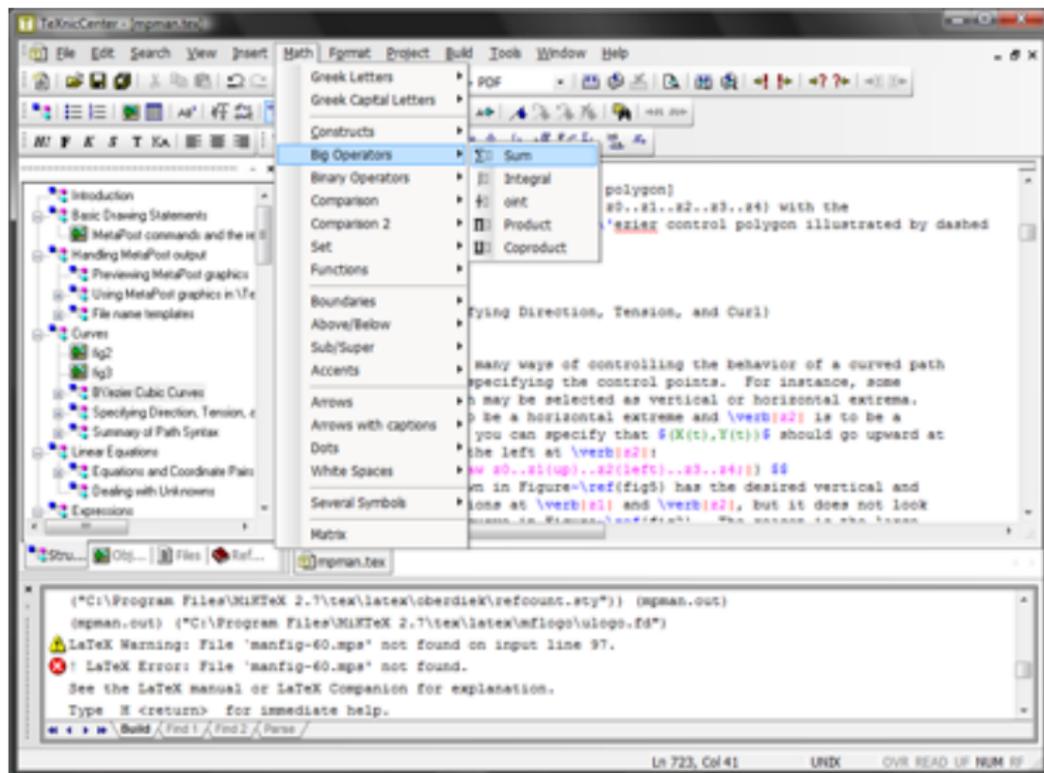
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342	Token Registers	

Vor- und Nachteile

- + Umfangreiche Hilfen: Codevervollständigung, schnelles Kompilieren, etc.
- + Gute Projektverwaltung
- Nur für Windows

reine \LaTeX -Editoren

TeXnicCenter



reine \LaTeX -Editoren

Andere Editoren

\LaTeX -Editoren mit ähnlicher Funktionalität

- ▶ TeXstudio
- ▶ TeXworks
- ▶ WinEdt

reine \LaTeX -Editoren

Editoren nicht nur für \LaTeX

TeXclipse

AUCTeX

Andere Editoren

Online-Editoren

Live-Editoren

\LaTeX -Abkömmlinge

- ▶ Erweiterung für Eclipse (Java-IDE)

Vor- und Nachteile

- + Bekannte Umgebung für Java-Entwickler
- Relativ geringer Funktionsumfang

Editoren nicht nur für \LaTeX

TeXclipse

The screenshot displays the TeXclipse IDE interface. The main editor window shows a LaTeX document with the following text:

It should be noted that LR-parsing is considered significantly harder to debug than LL, but having done extensive testing with SableCC for use in Eclipse we have not found this to be a problem, in part due to the excellent automation and error-detection of SableCC.

See `\cite{Aho:CPT86}` and `\cite{}` for basic information

The **Navigator** on the left shows a project structure with files like `techspec.bib`, `techspec.dvi`, and `techspec.tex`. The **Outline** on the left shows a document structure with sections like **Preamble**, **table**, **Purpose and scope of the document**, **Main domain concepts**, **System overview**, **Architectural overview**, **Technical overview**, and **Technical specification per implement**.

The **Console** at the bottom shows the following text:

saving the .bib -files. What bib-files to parse are read from the document's `\verb+\bibliography+` -command. The labels are retrieved whenever the project documents are parsed. They are stored into two similar datastructures (one for completing `\texttt{ref}`) and the other for `\texttt{cite}` commands) in the model, from which the editor's code completion classes can fetch them. The data

The **Tasks** panel shows **Texlipse**.

The status bar at the bottom indicates **Writable**, **Insert**, and **988 : 32**.

The **Article** popup window shows the following details:

Article
author: Donald E. Knuth
title: On the Translation of Languages from Left to Right
journal: J-IC
year: 1965
volume: 8
number: 6
pages: 607-639
note: This is the original paper on the theory of LR(k) parsing.
bibdate: Sat Jan 9 10:03:10 1993

The **Bibliography** popup window shows the following entries:

Aho:CPT86
Beebe:TB144-395-419
GHJV:despatterns95
Gagnon:mth-98
Knuth:J-IC-8-6-607
Knuth:textbook84
Knuth:texprogram86
Lampert:LDP85
Patashnik:Bib-TUG-03-1

Editoren nicht nur für \LaTeX

AUCTeX

- ▶ Erweiterung für Emacs-Editor

Vor- und Nachteile

- + Editor vielseitig einsetzbar
- + Tastenkürzel für fast alles
- + Kompiliert auch BibTeXetc.
- + Preview Modus
- + Projektverwaltung, Git-Integration
- + Abschnitte einklappbar
- Steile Lernkurve
- Kein integrierter PDF-Reader, aber syntex für verschiedene Reader

```
circ.tex
File Edit Options Buffers Tools Preview LaTeX Command Math Ref Help

3 Der Kreis
Wir betrachten hier nur den Achtelkreis im zweiten Oktanten
(y ≥ x ≥ 0). Hier gelten die oben angegebenen Beziehungen.
Alle anderen Achtelkreise lassen sich durch elementare Spiegelungen
erzeugen.

Die Gleichung eines Kreises ist hier
\begin{equation}
y = \pm\sqrt{r^2 - x^2}
\end{equation}

Der Wert y lässt sich darstellen als Summe einer ganzen Zahl e und
einem Wert f mit -0.5 ≤ f < 0.5. Der Wertebereich von f ist
so gewählt worden, damit e einen auf ganze Zahlen gerundeten Wert
für y darstellt.

Nun gilt:
      e + f = √(r² - x²)
      e² + 2ef + f² = r² - x²      (4) ggg

%
Die Gleichung (\ref{ggg}) hat für x+1 folgende Form:
      e'² + 2e'f' + f'² = r² - x² - 2x - 1      (5) hhh

%
Zieht man die Gleichung (\ref{ggg}) von (\ref{hhh}) ab, so ergibt sich
nach Umsortieren:
      e' = e :
      2e'f' + f'² = 2ef + f² - 2x - 1
      e' = e - 1 :
      2e'f' + f'² = 2ef + f² + 2e - 2x - 2

%
Jetzt wird 2ef + f² mit m getauft. Also:
      e' = e :
      m' = m - 2x - 1

-1:-- circ.tex      51% (224, 0)      (LaTeX/FM Ref Fill)----23:05-----
```

Editoren nicht nur für \LaTeX

Andere Editoren

Ähnliche Erweiterungen auch für andere Editoren

- ▶ vim
- ▶ notepad++

reine \LaTeX -Editoren

Editoren nicht nur für \LaTeX

Online-Editoren

Sharelatex

Overleaf

Live-Editoren

\LaTeX -Abkömmlinge

- ▶ Online-Editor

Vor- und Nachteile

- + Online, Kollaborativ
- + Integrierte Versionsverwaltung
- + Auf eigenen Servern installierbar
- Schwer zu installieren

Thesis

- figures
- sections
- instantons
 - introduction.tex
 - low-ene... v
 - moduli-space...
- m2-branes
- polytopes
- abstract.tex
- conclusion.tex
- introduction.tex
- bibliography.bib
- dmathesis.cls
- logo.pdf
- main.tex
- preamble.tex
- utphys.bst

```

205
206 Before discussing the scattering of two
dyonic instantons we will review how the
potential stabilises a single dyonic
instanton. The effective action for a single
dyonic instanton rotating in only one
direction in the gauge group is
207  $\begin{equation}$ 
208  $S = 8 \int d^4x \sqrt{-\det g} \left[ \frac{1}{2} \text{tr} F_{\mu\nu}^2 + \right.$ 
 $\left. \frac{1}{2} \text{tr} \dot{\theta}^2 - \lambda \int d\theta \right]$ 
209  $\end{equation}$ 
210 where  $\lambda$  is the size of the dyonic
instanton and  $\theta$  is its  $U(1)$  gauge
angle. This can be calculated directly from
the inner product of zero-modes of the 't
Hooft ansatz \[Peeters:2001np\] or from
the ADHM data as in Chapter 4 of \[moduli
space\]. The equation of motion for the gauge
angle is a conservation law for gauge
angular momentum,
211  $\begin{equation}$ 
212  $\dot{\theta} = 1,$ 
213  $\end{equation}$ 
214 where  $\lambda$  is some constant. The equation of
motion for  $\theta$  is
215  $\begin{equation}$ 
216  $\dot{\theta} = \lambda \int d\theta + \lambda \int d\theta^2 + \lambda \int d\theta^3$ 
 $= 0.$ 
217  $\end{equation}$ 
218 We can replace  $\dot{\theta}$  by the angular
momentum so that
219  $\begin{equation}$ 
220  $\dot{\theta} = \lambda \int d\theta + \lambda \int d\theta^2 + \lambda \int d\theta^3$ 
 $= 0.$ 
221  $\end{equation}$ 
222
223 In the absence of a potential ( $\lambda = 0$ ),
pure instantons suffer from a slow-roll

```

↻ Recompile

Before discussing the scattering of two dyonic instantons we will review how the potential stabilises a single dyonic instanton. The effective action for a single dyonic instanton rotating in only one direction in the gauge group is

$$S = 8 \int d^4x \sqrt{-\det g} \left[\frac{1}{2} \text{tr} F_{\mu\nu}^2 + \frac{1}{2} \text{tr} \dot{\theta}^2 - \lambda \int d\theta \right] \quad (8.2.1)$$

where λ is the size of the dyonic instanton and θ is the $U(1)$ gauge angle. This can be calculated directly from the inner product of zero-modes of the 't Hooft ansatz [Peeters:2001np] or from the ADHM data as in Chapter 4 of [moduli space]. The equation of motion for the gauge angle is a conservation law for gauge angular momentum.

$$\dot{\theta} = 1, \quad (8.2.2)$$

where λ is some constant. The equation of motion for θ is

$$\dot{\theta} = \lambda \int d\theta + \lambda \int d\theta^2 + \lambda \int d\theta^3 = 0. \quad (8.2.3)$$

We can replace $\dot{\theta}$ by the angular momentum so that

$$\dot{\theta} = \lambda \int d\theta + \lambda \int d\theta^2 + \lambda \int d\theta^3 = 0. \quad (8.2.4)$$

In the absence of a potential ($\lambda = 0$), pure instantons suffer from a slow-roll instability where a small perturbation in the static instanton will result in the instanton spreading out to a constant velocity. Eventually the instanton will spread over the entire space and fall the zero size singularity. We can study this behaviour on the moduli space since the metric in the effective action is flat and the equation of motion for θ becomes $\dot{\theta} = 0$ in the absence of any angular velocity.

The effective action for a dyonic instanton includes a potential term which stabilises the large θ at a fixed size. We can see from the equation of motion that when $\dot{\theta} = 0$, the instanton size and rotational velocity remain constant. This describes a stable dyonic instanton which satisfies the BPS equations exactly. The apparent motion on the moduli space is due to the coordinate transformation that we made in equation (8.2.2).

If we think of this motion as a point moving around a spherically symmetric potential, like a marble in a bowl, then it is clear that this system is more stable to perturbations in the instanton's size. A small initial velocity for θ will stop as the marble reaches the initial value of θ , but it will not remain indefinitely. The upper and lower bounds of the oscillation are proportional to the initial perturbation.

- ▶ Online-Editor

Vor- und Nachteile

- + Online, Kollaborativ
- + Integrierte Versionsverwaltung
- Nicht auf eigenen Servern zu betreiben
- Kostenpflichtig

The screenshot displays the Overleaf online LaTeX editor interface. At the top, there is a navigation bar with 'writeLaTeX' logo, 'PROJECT' button, and icons for 'VERSIONS', 'SHARE', 'PDF', and 'PUBLISH'. Below this is a toolbar with 'Upload files', 'More', and 'Source', 'Rich Text', 'Find', 'G', 'S', 'B', 'F', 'T', 'I', 'N' icons. A left sidebar shows a file explorer with 'files' containing documents like 'Compare_S.pdf', 'Compare_pulse.pdf', 'Courant_2.pdf', 'Figure1_P_ancien_mod.pdf', 'IEEEtran.bib', 'IEEEtran.bst', 'IEEEtran.cts', 'biblio_traps_dynamics.bib', and 'main.tex'. A 'Download as zip' and 'Save to Dropbox' button are also visible.

The main editor area shows the LaTeX source code for the document. The title is 'Modeling of Trap Induced Dispersion of Large Signal Dynamic Characteristics of GaN HEMTs'. The authors are O. Jardel, S. Laurent, T. Reveyrand, R. Quere, P. Nakala, A. Martin, S. Piotrowicz, M. Camporecchio, S.L. Delage, JIII-V Lab, route de Nozay, 91461 Marcoussis Cedex, France, ZXLIM, 7 rue Jules Verne, 19100 Brive-la-gaillarde, France, and olivier.jardel@3-slab.fr. The abstract text is as follows:

Abstract
We propose here a non-linear GaN HEMT model for CAD including a trapping effects description consistent with both small-signal and large-signal operating modes. It takes into account the dynamics of the traps and then allows to accurately model the modulated large signal characteristics that are encountered in telecommunication and radar signals. This model is elaborated through low-frequency S-parameter measurements complementary to more classical pulsed-IV characterizations. A 8x75 μm AlInN/GaN HEMT model was designed and particularly validated in large-signal pulsed RF operation. It is also shown that thermal and trapping effects have opposite effects on the output conductance, thus opening the way for separate characterizations of the two effects.

Keywords
Trapping effects, thermal effects, low frequency S-parameters, CAD non-linear model, RF pulsed operation.

The right sidebar shows the PDF preview of the document. The title and authors are the same as in the source code. The abstract text is rendered in a professional font. Below the abstract, there is a figure showing a graph of 'Average drain current' versus 'Time' for a 'Pulsed RF signal'. The graph shows a steady-state current level that increases when a pulse is applied, followed by a decay back to the steady state. The caption for the figure is: 'Fig. 1. Representation of the mechanism induced by traps on the average drain current.'

reine \LaTeX -Editoren

Editoren nicht nur für \LaTeX

Online-Editoren

Live-Editoren

Gummi

\LaTeX -Abkömmlinge

- ▶ Live-Editor

Vor- und Nachteile

- + Live-Vorschau
- Wenig Komfort-Funktionen

The screenshot displays the Gummi LaTeX editor window titled "Unsaved Document 1 - Gummi". The interface is split into two main panes: a source code editor on the left and a PDF preview pane on the right.

Source Code Editor (Left Pane):

```
Unsaved Document 1 *
1 \documentclass[11pt]{article}
2 %Gummi|065|=)
3 \title{\textbf{Welcome to Gummi 0.6.5}}
4 \author{Alexander van der Mey\
5         Wei-Ning Huang\
6         Dion Timmermann}
7 \date{}
8 \begin{document}
9
10 \maketitle
11
12 \section{Before you start}
13
14 You are now using Gummi 0.6.5. Many new exciting
15 features have been added to the 0.6 series. The
16 document editor is now a tabbed instance, allowing
17 multiple documents to be worked on simultaneously.
18 Using the new projects menu, you can group files
19 together for easy access.
20
21 Support for two high-level  $\LaTeX$  building
22 systems,  $\emph{rubber}$  and  $\footnote{\text{https://}}
23 \text{launchpad.net/rubber}$  and  $\emph{latexmk}$ 
24  $\footnote{\text{https://www.phys.psu.edu/~collins/}}
25 \text{software/latexmk-jcc}$  has been added to this
26 release as well. Your preferred typesetter can be
27 configured through the Compilation tab in the
28 Preferences menu. Typesetters that are not
29 installed on your system will not be selectable.
```

PDF Preview Pane (Right Pane):

The preview pane shows the rendered output of the source code. It includes a title page with the text "Welcome to Gummi 0.6.5" and the authors "Alexander van der Mey", "Wei-Ning Huang", and "Dion Timmermann". Below the title page, there are three sections:

- 1 Before you start**: A paragraph explaining the new features of Gummi 0.6.5, including the tabbed editor, projects menu, and support for \LaTeX building systems like \emph{rubber} and $\emph{latexmk}$.
- 2 Feedback**: A paragraph expressing gratitude for user feedback and providing contact information: "If you have comments, suggestions or wish to report an issue you are experiencing - contact us at: <http://source.muhimbi.com>".
- 3 One more thing**: A paragraph mentioning that the template menu can be used to access and edit templates, with links to <https://source.muhimbi.com/rubber/> and <http://www.phys.psu.edu/~collins/software/latexmk-jcc/>.

At the bottom of the preview pane, there are navigation arrows, a page indicator "1 of 1", and a "Fit Page Width" button.

reine \LaTeX -Editoren

Editoren nicht nur für \LaTeX

Online-Editoren

Live-Editoren

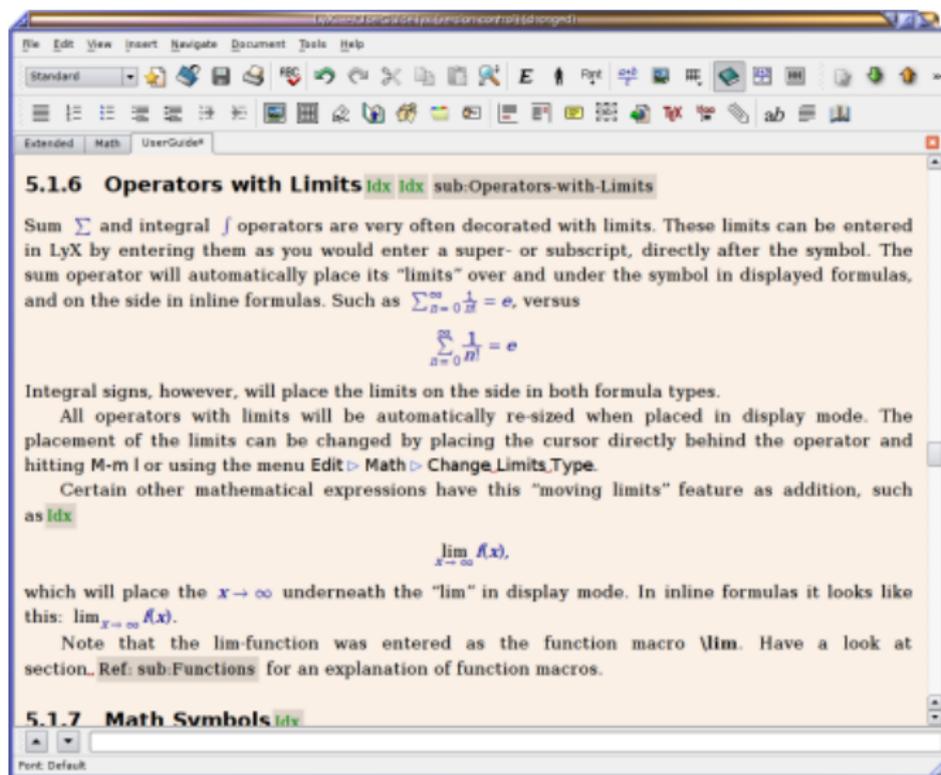
\LaTeX -Abkömmlinge

LyX

- ▶ Dokumenteditor, der auf L^AT_EX aufbaut

Vor- und Nachteile

- + Einfach zu lernen
- + Grafisch
- Nicht mit L^AT_EX kompatibel, eigenes Format



The screenshot shows the LyX application window. The title bar reads "LyX: /usr/share/lyx/lyx.texinfo (utf8) (utf8) (utf8)". The menu bar includes File, Edit, View, Insert, Navigate, Document, Tools, and Help. The toolbar contains various icons for file operations, editing, and mathematical functions. Below the toolbar, there are tabs for "Extended", "Math", and "UserGuide". The main text area displays the following content:

5.1.6 Operators with Limits `\dx` `\dx` sub:Operators-with-Limits

Sum \sum and integral \int operators are very often decorated with limits. These limits can be entered in LyX by entering them as you would enter a super- or subscript, directly after the symbol. The sum operator will automatically place its "limits" over and under the symbol in displayed formulas, and on the side in inline formulas. Such as $\sum_{n=0}^{\infty} \frac{1}{n!} = e$, versus

$$\sum_{n=0}^{\infty} \frac{1}{n!} = e$$

Integral signs, however, will place the limits on the side in both formula types.

All operators with limits will be automatically re-sized when placed in display mode. The placement of the limits can be changed by placing the cursor directly behind the operator and hitting M-m | or using the menu Edit > Math > Change_Limits_Type.

Certain other mathematical expressions have this "moving limits" feature as addition, such as `\dx`

$$\lim_{x \rightarrow \infty} f(x),$$

which will place the $x \rightarrow \infty$ underneath the "lim" in display mode. In inline formulas it looks like this: $\lim_{x \rightarrow \infty} f(x)$.

Note that the lim-function was entered as the function macro `\lim`. Have a look at section. Ref: sub:Functions for an explanation of function macros.

5.1.7 Math Symbols `\dx`

Port: Default