

tug 2025

zpráva z konference a zážitky z cest

vít starý novotný
valné shromáždění cstugu
13. prosince 2025, brno



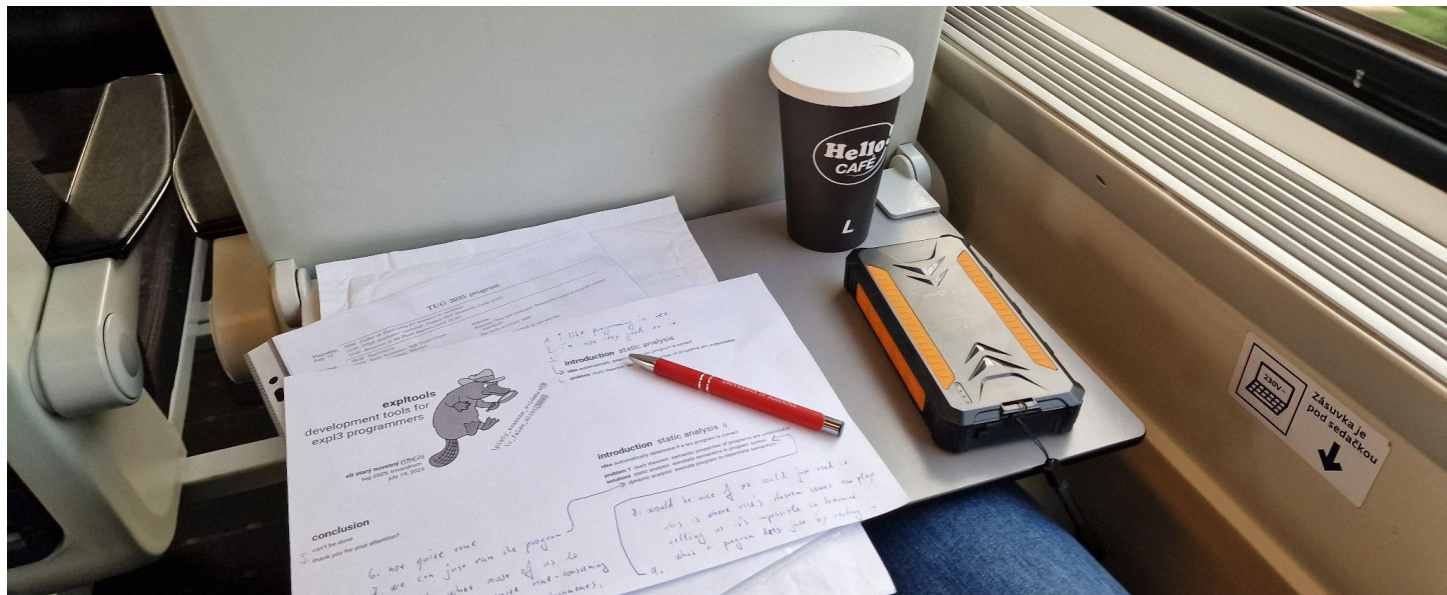
tug 2025

termín pátek 18. července až neděle 20. července 2025 **místo** trivandrum, kerala



středa 16 z brna do trivandra i

nejprve vlakem z brna do prahy



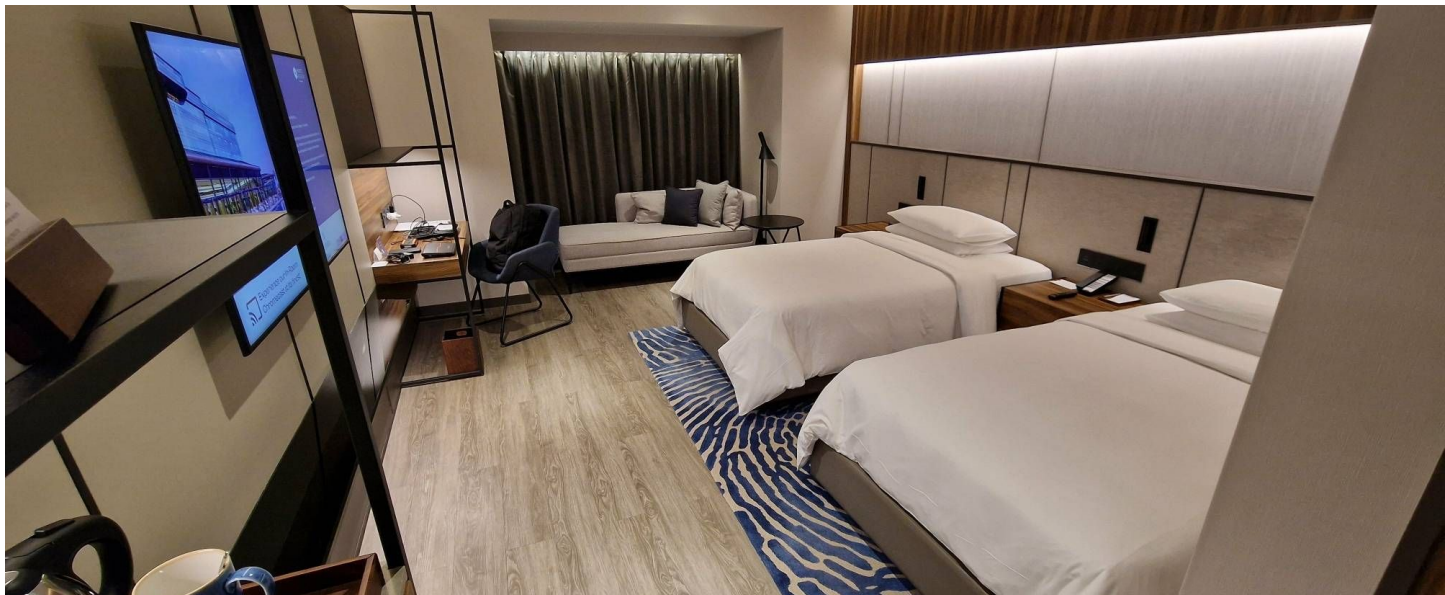
středa 16 z brna do trivandra *ii*

poté z prahy přes katar do trivandra



čtvrtek 17 z brna do trivandra *iii*

z letiště taxíkem do konferenčního hotelu hyatt



čtvrtek 17 toulky trivandrem *i*

výhled z hotelového pokoje na východ



čtvrtek 17 toulky trivandrem ii

centrum pro vývoj pokročilých výpočetních technologií



čtvrtek 17 toulky trivandrem *iii*

palác kanakakunnu (19. století)



čtvrtek 17 toulky trivandrem *iv*

napierovo muzeum (19. století)





UNIVERSITY OF KERALA

കേരള സർവ്വകലാശാല





čtvrtek 17 latexový workshop a recepce



CVR and friends at reception.

workshop. Registration of workshop attendees was done on the spot, and we collected speaker introductions to share with session chairs. Had interesting

zdroj: tugboat 46(2). 183

top running Fedora 42, the devices were detected automagically and PipeWire²¹ (plus WirePlumber) made those instantly available for use.

With everything organized and tested for A/V and live streaming, I went back to get some sleep to wake early on the next day.

Day 1 — Friday

I woke up at 05:30, reached hotel by 07:00, and met with some attendees during breakfast. By 08:45, the live stream for day 1²² started. Boris Veytsman,²³ the outgoing vice-president of TUG, opened TUG 2025 and handed over to the incoming vice-president and session chair Erik Nijenhuis. Erik then introduced Rob Schrauwen²⁴ to deliver the keynote address titled ‘True but Irrelevant’ reflecting on the design of Elsevier XML DTD for archiving scientific articles. It was quite enlightening, especially

pátek 18 snídane a recepce i

pazhankanji, tradiční jihoindické jídlo připravované ze zbytků rýže a vody



pátek 18 snídaně a recepce *ii*

dářečky, hrníčku už jsem bohužel odštípl kousek okraje :(



pátek 18 ranní přednášky i

True but Irrelevant

Rob Schrauwen, Elsevier B.V.



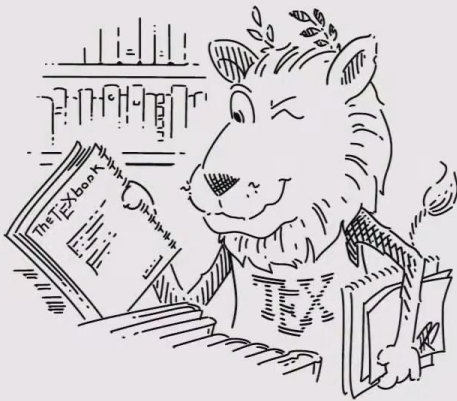
Advancing



pátek 18 ranní přednášky ii

What's CTAN?

Comprehensive T_EX Archive Network



CTAN lion drawing by Duane Bibby

- ▶ Webpage www.ctan.org et al.
- ▶ It contains all sorts of T_EX related stuff, i.e. mostly packages and software
- ▶ Upload management, Catalogue updates, Announcements
- ▶ Synchronization with mirrors
- ▶ Most packages are free software



pátek 18 dopolední přednášky *i*

How we use XeLaTeX at our Ashram

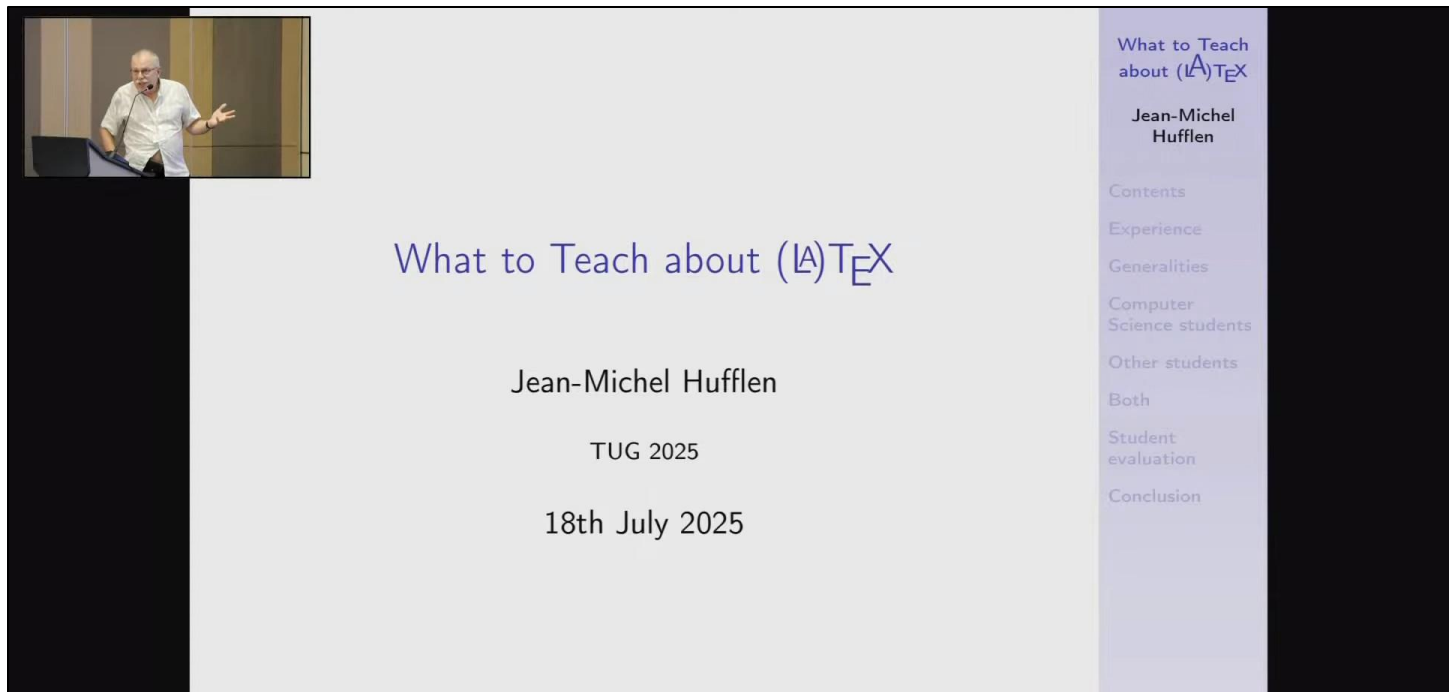
Vrajarāja Govinda

International Society for Krishna Consciousness

18 Jul 2025



pátek 18 dopolední přednášky *ii*



What to Teach about (L)TeX

Jean-Michel Hufflen

TUG 2025

18th July 2025

What to Teach about (L)TeX

Jean-Michel Hufflen

Contents

Experience

Generalities

Computer Science students

Other students

Both

Student evaluation

Conclusion

pátek 18 skupinové foto



pátek 18 odpolední přednášky *i*

Importance of PDFs for STEM documents

- ▶ Accurate rendering of complex formulas
- ▶ Main output format of $\text{\LaTeX}$ -based documents

Perception of PDF accessibility

- ▶ Inaccessible at its core
- ▶ Evil format — move away from it

Reality check

- ▶ What have we been inflicting on users with accessibility needs?
- ▶ Take a typical STEM document and check it out

Conclusions



pátek 18 odpolední přednášky *ii*

Status of the LaTeX Tagged PDF Project Tagging of math with MathML

Ulrike Fischer, Bonn
L^AT_EX Project Team

18.7.2025
TUG 2025



pátek 18 odpolední přednášky *iii*

The screenshot shows a presentation slide within a web browser interface. The slide has a light green background with the Macquarie University logo in the top right corner. The title is 'Tagging of highly-structured information; case study: Bibliographies, using biblatex'. Below the title, the presenter's name and affiliation are listed: 'Ross Moore, Macquarie University, Sydney' and the event details: 'TUG2025, online & Kerala India: 18–20 July 2025'. The bottom of the slide features a red and blue geometric pattern. The browser window includes a top bar with 'All tools', 'Edit', 'Convert', and 'E-Sign' options, and a search bar. On the right side of the browser, there is a video feed of Dr. Ross Moore and a vertical toolbar with various icons. The bottom of the browser window shows a page number '1' and a total of '60' slides.

All tools Edit Convert E-Sign Find text or tools

MACQUARIE University

Tagging of highly-structured information;
case study: Bibliographies, using biblatex

Ross Moore, Macquarie University, Sydney
TUG2025, online & Kerala India: 18–20 July 2025

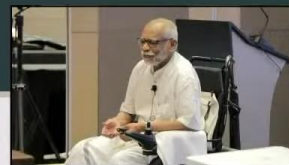
Dr Ross Moore

1 60

zdroj: youtu.be/Eu_qM53tlnw, 2:59:20

pátek 18 večerní přednášky *i*

THIS PRESENTATION IS ABOUT ...



- the state of digital archiving in Malayalam,
- the use of $\text{\TeX}$ and friends to archive the content and
- the methods adopted, described in a qualitative fashion.

pátek 18 večerní přednášky ii



Universität der Bundeswehr München

Dat Com

CODE

L^AT_EX in the CrypTool Project

TUG Conference 2025
Thiruvananthapuram, India
Dr. Doris Behrendt, Bernd Busse
Research Institute CODE
July 18, 2025

RI

C

Video inset: A woman speaking at a podium.



sobota 19 ranní přednášky i

Colours, colours everywhere

- Syntax highlighting of programming languages are very common
- Almost all code editors, IDEs and websites enable it by default

Requirement syntax colouring of $\text{\TeX}$ code snippets in a wiki/webpage used by authors & editors.



```
9 \newcommand\ftnt[1]{\footnote{\raggedright #1}}
10
11 \title{An \opentype\ font with built-in \TeX\ syntax highlighting}
12 \author{Rajeesh K.V.}
13 \address{Rachana Institute of Typography\ Trivandrum, Kerala}
14 \netaddress{rajeesh (at) rachana (dot) org (dot) in}
15 \personalURL{https://rachana.org.in}
16 \author{Radhakrishnan C.V.}
17 \address{Sayahna Foundation\ Trivandrum, Kerala}
18 \netaddress{cvr (at) river-valley (dot) org}
19 \personalURL{http://river-valley.com}
20 \ORCID{0000-0001-7511-2910}
21
22 \begin{document}
23
24 \maketitle
25
26 \begin{abstract}
27 In code editors, typesetting applications and on the Web; syntax-highlighting
28 is achieved via specialized 'grammar' files or JavaScript+CSS\ libraries. Using
29 the colour table in \opentype\ fonts, we present development of a monospace
30 font with basic built-in syntax highlighting for \TeX\ and \LaTeX\ documents.
31 \end{abstract}
```

sobota 19 ranní přednášky ii

explttools
development tools for
expl3 programmers



vít starý novotný (CS )
tug 2025, trivandrum



```
platy-examine-evidence:V  
-false-alibi-bool
```

explttools

development tools for
expl3 programmers

vít starý novotný (CSTUΩ)

tug 2025, trivandrum

july 19, 2025



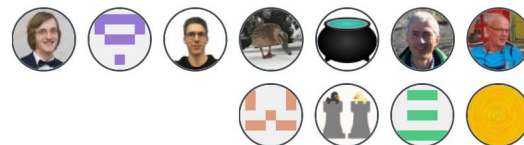
`/platy-examine-evidence:v`
`/c-false-alibi-bool`

introduction expltools

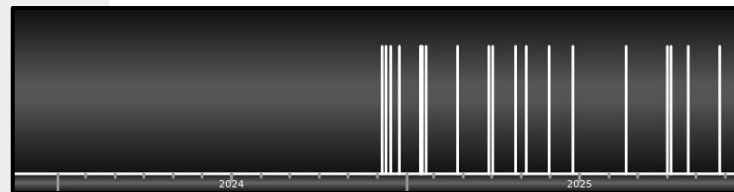
this bundle introduces `explcheck`, a static analysis tool for developers working with `expl3` code currently in its initial release, `explcheck` aims to help developers identify issues and improve code quality in the future, this bundle may expand to include additional development tools for `expl3`

sources	/support/expltools
documentation	 readme.md  list of warnings and errors  project proposal
support	https://github.com/witiko/expltools/discussions
bug tracker	https://github.com/witiko/expltools/issues
announcements	https://github.com/witiko/expltools/releases
repository	https://github.com/witiko/expltools
version	2025-06-242025-11-24
licenses	gnu general public license, version 2 or newer the latex project public license 1.3c
copyright	2024–2025 vlt starý novotný

contributors 11



announcements



community comments

★★★★★ निरंजन 2025-10-18

1 ctan.org/pkg/expltools

conclusion

correctness of tex programs is difficult to check

expl3 is rising in popularity, ~10% of all tex code² in tex live 2025

expl3 programs are much easier to analyze than with regular tex

explcheck is an expl3 linter, developed as part of the tex development fund

expltools bundles explcheck and (soon) other tools for expl3 developers

current version implements ~~~50%~~70% of the planned functionality

~20% of all expl3 code in tex live 2025 is currently well-understood (~2% of all tex code)

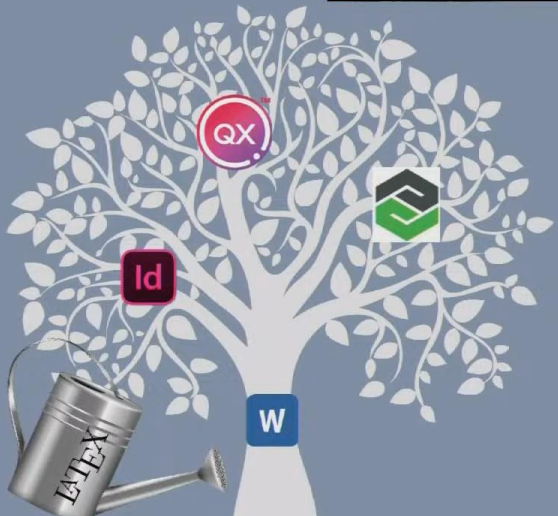
v1.0.0 eta: sometime between november 2025 and september 2026

² witiko.github.io (frank mittelbach in brno, the first public release of explcheck, and expl3 usage statistics)

sobota 19 dopolední přednášky i



Typographic
Branches
from a
(LaTeX)
Word Root





sobota 19 dopolední přednášky *ii*

Constructing and Comprehending Tables Better: a Proposal for New Symbols

Salil B. निरंजन

July 19, 2025



colour+tug2025@gmail.com
hi.niranjan@pm.me

TUG annual conference 2025
Thiruvananthapuram

0/18

sobota 19 toulky trivandrem *i*

chrám sree padmanabhaswamy (~8. století)



sobota 19 toulky trivandrem ii

hodinová věž methan mani socha a panel mahátmy gándhího v gándhího parku



sobota 19 toulky trivandrem iii

rušný bazar podél ulice chalakkambalam



sobota 19 toulky trivandrem *iv*

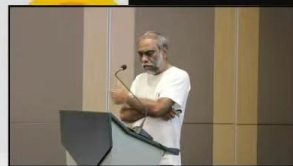
máslové kuře s rýží a čerstvou mangovou šťávou v restauraci statue (čtvrť palayam)



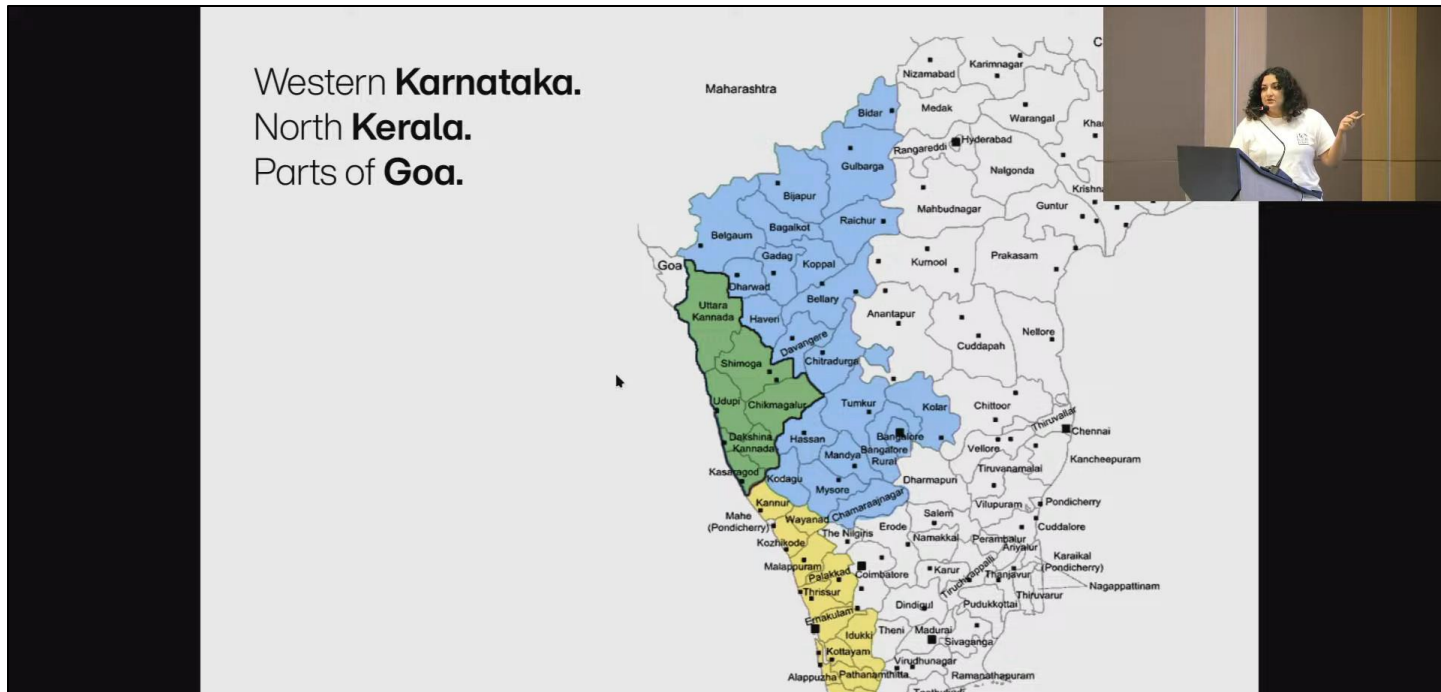
sobota 19 odpolední přednášky *i*

Alphabetic script and logo-syllabic
script

A contradiction
between form and
content



sobota 19 odpolední přednášky *ii*



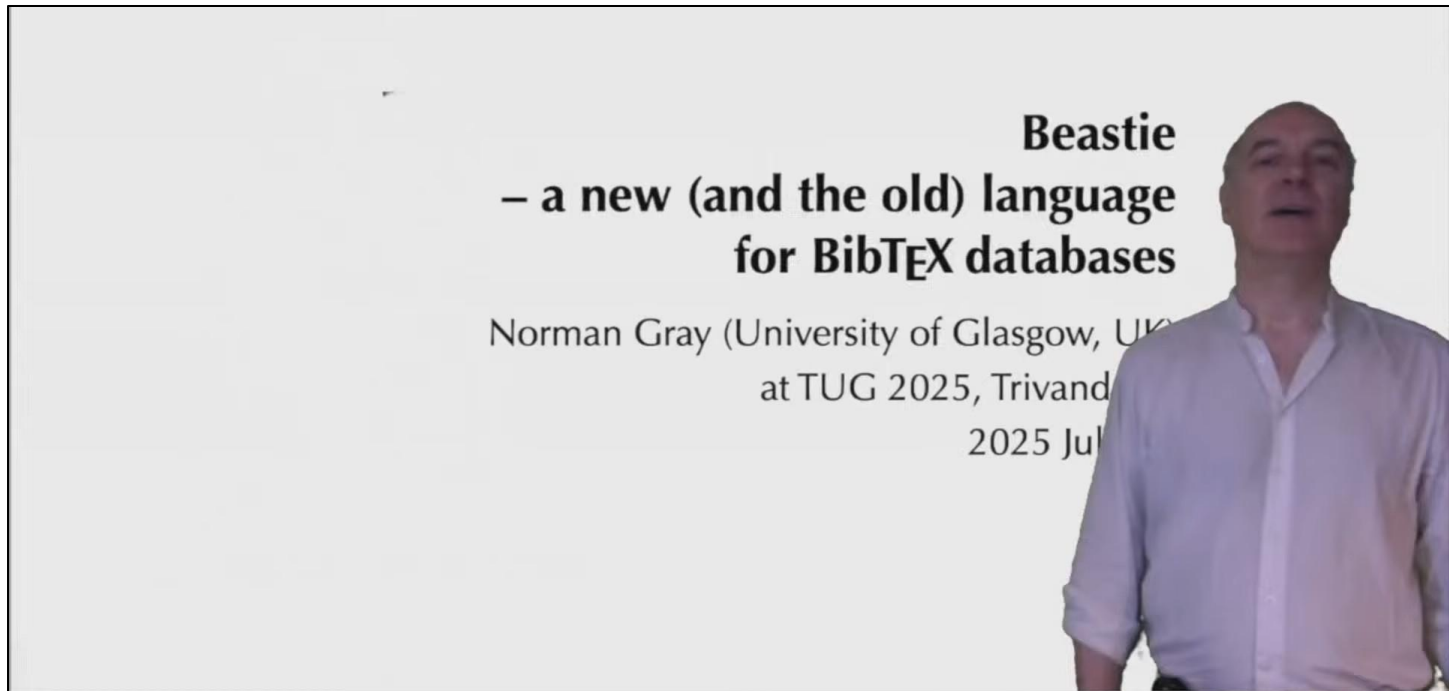
sobota 19 odpolední přednášky *iii*

Linguistics

- A social science that studies human languages
- Core sub-disciplines: Phonology, morphology, syntax, semantics, socio-linguistics
- Various kinds of formalisation, technical jargon, notations, etc. are used



sobota 19 večerní přednášky *i*

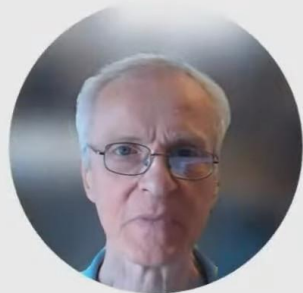


sobota 19 večerní přednášky *ii*

text2bib About bst files Statistics Log in Register

text2bib:
**Converting plain text references
into BibTeX format**

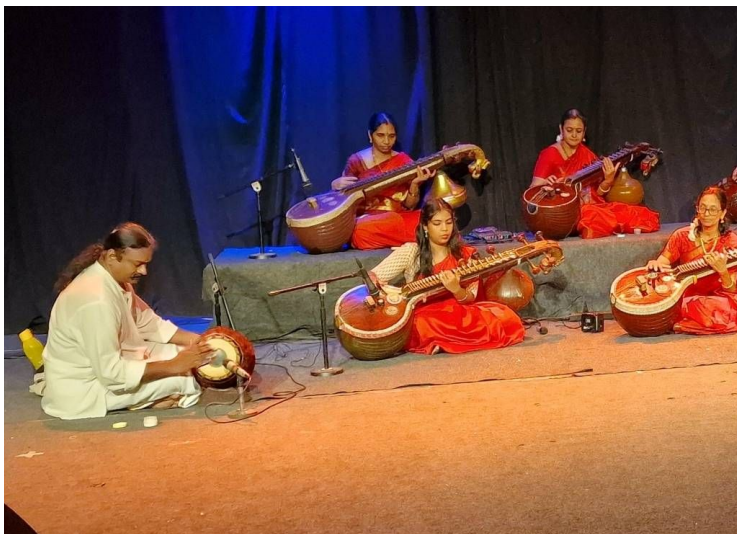
Martin J. Osborne
TUG 2025, 2025.7.19



sobota 19 večerní program

taneční vystoupení kathakali

koncert se sitárem a bubny



neděle 20 ranní přednášky *i*

Efficiently managing XML documents with T_EX and tagged PDF enabled

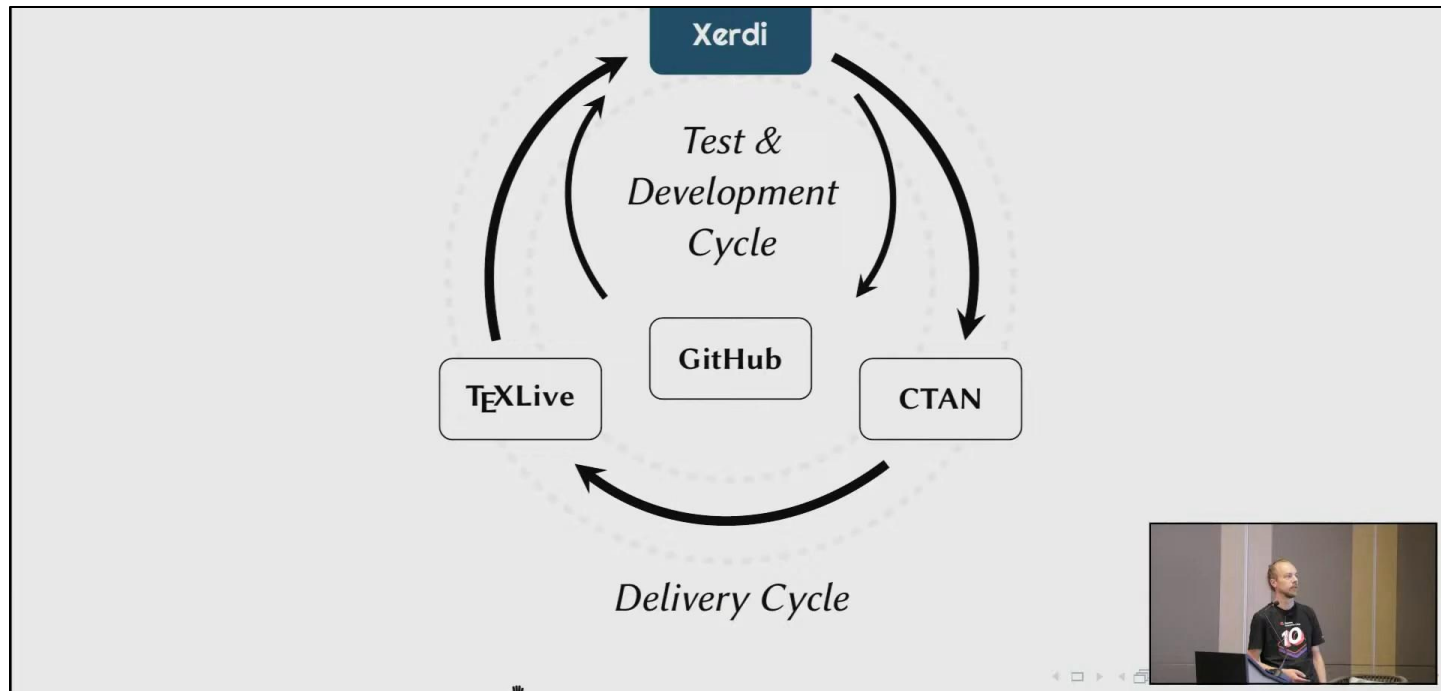
Rishikesan Nair T, Rajagopal CV, and Apu V
STM Document Engineering Pvt Ltd.

T_EX Users Group Conference 2025
Trivandrum, Kerala, India

18–20 July 2025



neděle 20 ranní přednášky ii



neděle 20 dopolední přednášky *i*

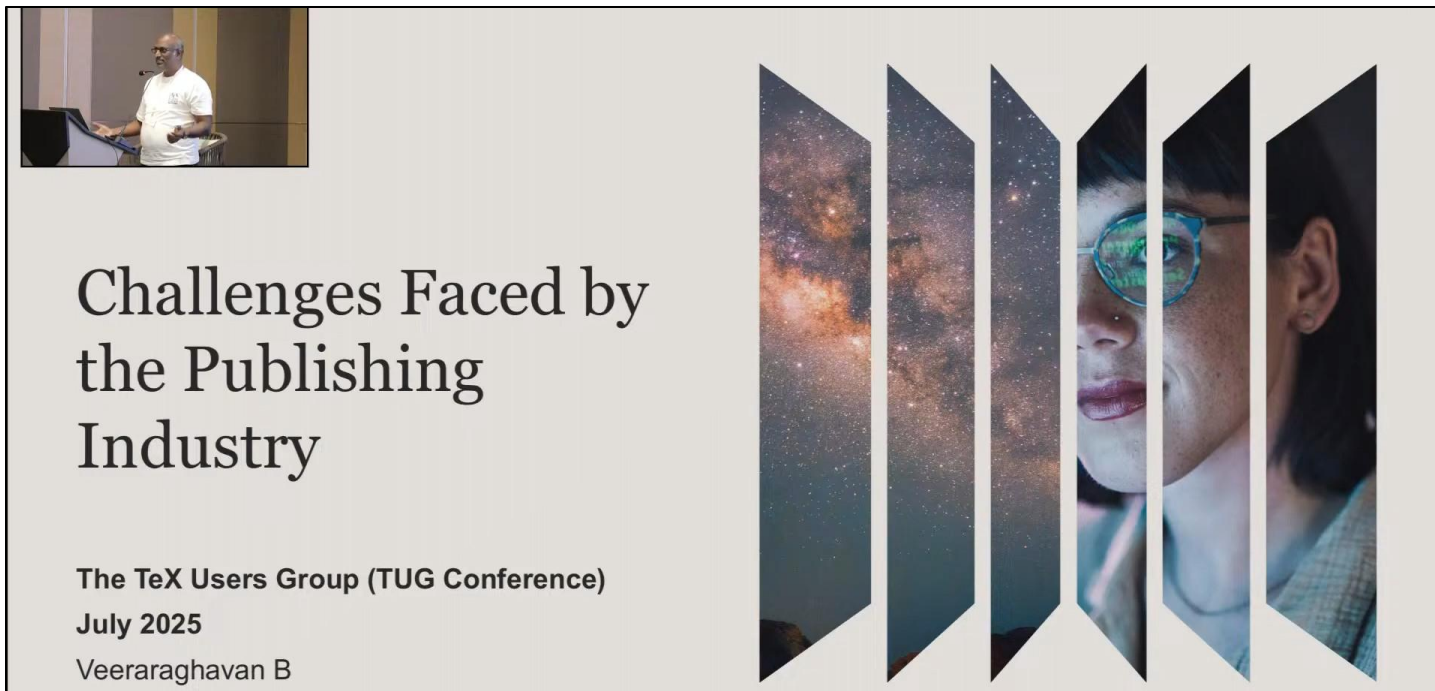
The LaTeX Village at the Chaos Communication Camp—how it started, how it continues

Doris Behrendt

20.07.2025



neděle 20 dopolední přednášky *ii*



Challenges Faced by
the Publishing
Industry

The TeX Users Group (TUG Conference)
July 2025
Veeraraghavan B

neděle 20 valné shromáždění tugu i

TUG 2025 Annual General Meeting notes

Jim Hefferon

Boris Veytsman, TUG vice president, opened the TUG annual meeting in Trivandrum, India, at approximately 13:00 IST, Sunday, July 20, 2025. Boris gave a TUG status update and financial report. He showed a series of slides, most of which are included in this report (slides are omitted here if they merely duplicate information from web pages). A few numbers have been corrected for publication here, but the results are substantively the same.

There was one question about how TUG board members are elected. The answer is by majority vote of all current members; details are on the TUG election pages at tug.org/election.

The meeting was adjourned around 13:30.

zdroj: tugboat 46(2). 186

Board Motions

- 2024.4 elect Jim Hefferon as new TUG secretary
(yes: 14, abstain: 1)
- 2024.5 Hold TUG 2025 in Kerala (unanimous)
- 2024.6 Add silver/gold patron membership types (unanimous)
- 2024.7 Budget for 2025 (yes: 14, no response: 1)
- 2025.1 Add electronic trial membership for \$20
(yes: 12, no response 3)
- 2025.2 Award for Karl Berry (yes: 14, abstain: 1)
- 2025.3 Award for Barbara Beeton
(yes: 13, abstain: 1, no response 1)
- 2025.4 Location of TUG 2026 (unanimous)

Financial Status: Profit & Loss (as of end of 2024)

Income		Expenses	
Membership dues	76,385	Cost of goods sold	
Product sales	3,349	TUGboat	28,945
Contributions	12,924	Mailing	3,177
Annual Conference	5,700	Lucida	1,381
Interest	4,899	Software	0
Advertising	230		
Reimbursements	-5,000	Office	
		Payroll	49,573
		Overhead	13,060
Total income		Total expense	96,136
		Net ordinary income	2,351

neděle 20 valné shromáždění tugů *ii*

Activity: Funds awarded in recent years

Development Fund: financially aids the growth of T_EX-related technical projects

2023 \$2,000 (Parts of two projects)

2024 \$1,000 (Part of one project)

2025 \$2,500 (Parts of two projects)

Bursary Fund: provides assistance to attend the annual conference

2022–2020 No awards, since meetings were virtual

2023 \$1,883.53 (Three participants)

2024 \$1,722.52 (One participant)

Membership (as of May 31, 2025)

At the end of May 2025 we had 992 paid members.

- ▶ 931 renewals plus 61 new
- ▶ Total compared to last year at this time: down 18
- ▶ Joint members: 75
- ▶ Institutional members: 23, including 1 gold patron and 1 silver patron
- ▶ Electronic-only: 426 members
- ▶ Auto-renewal: 324 members
- ▶ New members: 29 trial, 19 regular, 1 student, 3 joint, 9 institutional
- ▶ Trial member renewals: 16 of last year's 41

neděle 20 odpolední přednášky i

Our solution: the result



Please choose either

“A very” or “The
most”

Converted to display
and added spacing
before dx

deriving $\rightarrow$ derived

Increased parens and
addes spacing before
 dx

A most interesting relation

$$\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2}$$

can be derived by writing its square

$$\left(\int_0^\infty e^{-x^2} dx \right)^2$$

in polar coordinates.

1. Easy to write for a $\text{\TeX}$ nician
2. Easy to understand for an author

neděle 20 odpolední přednášky ii

The screenshot shows a LaTeX editor interface with the following components:

- Left Panel (Edits & Navigation):** Lists changes to the document, including insertions and deletions at specific line and column numbers.
- Central Editor:** Displays LaTeX source code for a document titled "Journal of STM Docs". The code includes commands for document metadata, class, and packages.
- Right Panel (Article Info):** Contains the article title "A course of pure mathematics", authors "Kevin C.A., Bob B.B., Stuart A.C.", and an abstract.
- Top Bar:** Includes tabs for "Article", "Source Comparison", and "PDF Comparison", along with a "Compile" button.
- Bottom Bar:** Contains a "Queries to Author" section with instructions for confirming names and keywords.

Document Content (TeX Editor):

```
1 \DocumentMetadata{%
2 pdfversion=1.7,% WEB
3 %pdfversion=1.3,% PRINT
4 xmp=false,%
5 testphase={new-or-1}}%
6 \documentclass[lualatex,fleqn,s1,nogcns,tex]{neptune}
7 \beginXML\def\jstmdocsbibmodel{model1}\endXML
8 \usepackage[s.5]{neptune-els-dtd}
9 \bookindate{2025-07-01}
10 \proofdate{2025-07-01}
11 \usepackage[web]{neptune-els}
12
13 \begin{pkg}\pgk\pgk
14 \usepackage{stm-els-tagpdf-alt}
15 \begin{document}
16 \def\stmelscontentsavailableat{River Valley Technologies}
17 \def\ScienceDirect{}
18 \def\jstmdocs{stmtdocs.pdf}
```

Article Info:

A course of pure mathematics^{*,**}
Kevin C.A.[†], Bob B.B.[‡], Stuart A.C.[§]

* *Staphylin Foundation*, 2064 St. Joseph, Thiruvananthapuram, 695014, Kerala, India
† *STM Document Engineering Private Limited*, Mysore, Mysore, 575001, Karnataka, India
‡ *STM Software Engineering Private Limited*, Mysore, Mysore, 575001, Karnataka, India
§ *STM Software Engineering Private Limited*, Mysore, Mysore, 575001, Karnataka, India

ABSTRACT

Pure Mathematics This book has been designed primarily for the use of first year students at the University whose abilities range from approach something like what is usually described as scholarship standard. I hope that it may be useful to other classes of readers, but it is this class whose wants I have considered first. It is in any case a book for Mathematics. I have nowhere made any attempt to meet the needs of students of engineering or indeed any class of students whose interests are not primarily Mathematical. I regard the book as being really elementary. There are plenty of hard examples (mostly at the ends of the chapters) to those I have added, whenever space permitted, an outline of the solution.

1. Introduction

In the first place, let us consider the number of systems which in the time t pass into or out of the specified element by p_1 passing the limit p_1 . It will be convenient, and it is evidently allowable, to suppose t so small that the question p_1, q_1, d_1 , etc., which represent the increments of p_1, q_1 , etc., in the time t shall be infinitely small in comparison with the infinitesimal differences $p_1', q_1', d_1', \dots$, which determine the magnitude of the element of extrusion in phase. Our new number models are constructed on the tensor product Hilbert space $H_1 \rightarrow H_2 \otimes H_3$. There is a natural representation $F_1 \rightarrow F_2 \otimes F_3$, and a vector $d_1 \rightarrow d_2 \otimes d_3$. For $x \in H_1$, we define $F_{1,x} \rightarrow x^{(1)} \otimes x^{(2)} \otimes x^{(3)}$. These considerations will make the reader familiar with tensor operations without the special difficulties of the four-dimensional treatment (see Figs. 1-5).

Table 1

Characteristics of main participants.

Source: Taken from [10], [11], [12], [13], [14], [15], [16], [17], [18], [19], [20], [21], [22], [23], [24], [25], [26], [27], [28], [29], [30], [31], [32], [33], [34], [35], [36], [37], [38], [39], [40], [41], [42], [43], [44], [45], [46], [47], [48], [49], [50], [51], [52], [53], [54], [55], [56], [57], [58], [59], [60], [61], [62], [63], [64], [65], [66], [67], [68], [69], [70], [71], [72], [73], [74], [75], [76], [77], [78], [79], [80], [81], [82], [83], [84], [85], [86], [87], [88], [89], [90], [91], [92], [93], [94], [95], [96], [97], [98], [99], [100].

Table 1 (continued)

Participant	Age (years)	Gender	Height (cm)	Weight (kg)	Body Mass Index (BMI)	Heart Rate (b/min)	Blood Pressure (mmHg)	Cholesterol (mg/dL)	Glucose (mg/dL)
Participant 1	25.8	Male	175.2	75.5	24.5	72	120/80	180	100
Participant 2	26.5	Female	165.0	65.0	23.8	68	110/70	160	90
Participant 3	27.0	Male	180.0	80.0	25.0	75	125/85	190	110
Participant 4	28.0	Female	170.0	70.0	24.0	70	115/75	170	95
Participant 5	29.0	Male	185.0	85.0	25.0	78	130/90	200	115
Participant 6	30.0	Female	175.0	75.0	24.5	72	120/80	180	100
Participant 7	31.0	Male	190.0	90.0	25.5	80	135/95	210	120
Participant 8	32.0	Female	180.0	80.0	25.0	75	125/85	190	110
Participant 9	33.0	Male	195.0	95.0	25.5	82	140/100	220	125
Participant 10	34.0	Female	185.0	85.0	25.0	78	130/90	200	115

Equation (1):

$$W(\mathbf{x}) = \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{1}{2} \mathbf{x}^T \mathbf{C}^{-1} \mathbf{x}\right)$$

How must the $\mathbf{x}'$ be expressed in terms of the $\mathbf{x}_i$ in order that equations may be equivalent to each other? Regarding the $\mathbf{x}'$ expressed as functions of the $\mathbf{x}_i$, we can write, by Taylor's theorem, for small values of the $\mathbf{x}_i$,

$$\mathbf{x}' = \mathbf{x} + \mathbf{C} \mathbf{x} + \frac{1}{2} \mathbf{C}^2 \mathbf{x} + \dots$$

The heuristic value of the theory of invariant, which arises from the theory of space (equivalence of all directions), becomes evident

neděle 20 odpolední přednášky *iii*

A toy Lezer $\text{\LaTeX}$ grammar

```
@tokens {  
  controlSequence { "\\\" @asciiLetter + }  
  openBrace { "{" }  
  closeBrace { "}" }  
  word { @asciiLetter+ }  
  space { @whitespace+ }  
}
```

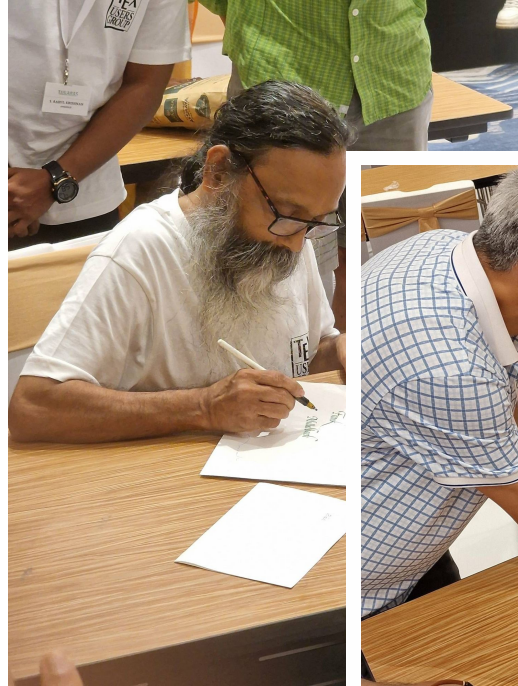
```
@top Top { Content }  
Content { (Command | Text | space)* }  
Command { controlSequence  
          (openBrace Content closeBrace)* }  
Text { word }
```

```
Top {  
  Content {  
    Command { Content { Text } }  
    Command { Content { Text } }  
    Text  
    Command { Content { Text } }  
    Text  
    Text  
    Command { Content { Text } }  
    Command { Content { Text } }  
  }  
}
```

Figure: Flat structure in parse result



neděle 20 kaligrafický workshop



neděle 20 návrat

děkuji vám za pozornost

sochy tanečnicka kathakali
a nandího, posvátného vozidla šivy

