# **Bachelor Thesis Presentation**

Evaluating Probabilistic Preconditioning using DeepOBS
Ludwig Bald

### **Outline for Section 1**

- Dark Frames
  - 1.1 Blind Text
  - 1.2 Structuring Elements
  - 1.3 Numerals and Mathematics
  - 1.4 Figures and Code Listings
  - 1.5 Citations and Bibliography
- Light Frames
  - 2.1 Blind Text
  - 2.2 Structuring Elements
  - 2.3 Numerals and Mathematics
  - 2.4 Figures and Code Listings
  - 2.5 Citations and Bibliography

# Jabberwocky

**Lewis Carroll** 

'Twas brillig, and the slithy toves Did gyre and gimble in the wabe; All mimsy were the borogoves, And the mome raths outgrabe.

"Beware the Jabberwock, my son!
The jaws that bite, the claws that catch!
Beware the Jubjub bird, and shun
The frumious Bandersnatch!"

#### Lists and locales

### Lorem ipsum dolor sit amet

- Nulla nec lacinia odio.
   Curabitur urna tellus.
  - Fusce id sodales dolor. Sed id metus dui.
    - » Cupio virtus licet mi vel feugiat.

- 1. Donec porta, risus porttitor egestas scelerisque video.
  - 1.1 Nunc non ante fringilla, manus potentis cario.
    - 1.1.1 Pellentesque servus morbi tristique.

Nechť již hříšné saxofony ďáblů rozzvučí síň úděsnými tóny waltzu, tanga a quickstepu! Nezvyčajné kŕdle šťastných figliarskych ďatľov učia pri kótovanom ústí Váhu mĺkveho koňa Waldemara obžierať väčšie kusy exkluzívnej kôry. The quick, brown fox jumps over a lazy dog. DJs flock by when MTV ax quiz prog. "Now fax quiz Jack!"

# Text blocks

In plain, example, and alert flavour

This text is highlighted.

# A plain block

This is a plain block containing some highlighted text.

### An example block

This is an example block containing some highlighted text.

#### An alert block

This is an alert block containing some highlighted text.

# Definitions, theorems, and proofs

All integers divide zero

### Definition

 $\overline{\forall a, b \in \mathbb{Z}} : a \mid b \iff \exists c \in \mathbb{Z}} : a \cdot c = b$ 

#### **Theorem**

 $\forall a \in \mathbb{Z} : a \mid 0$ 

#### Proof

 $\forall a \in \mathbb{Z} : a \cdot 0 = 0$ 

### **Numerals and Mathematics**

Formulae, equations, and expressions

1234567890 1234567890  $\hat{x}, \check{x}, \tilde{a}, \bar{a}, \dot{y}, \ddot{y} \iint f(x, y, z) dxdydz$ 

$$\frac{1}{1 + \frac{1}{2 + \frac{1}{3 + x}}} + \frac{1}{1 + \frac{1}{2 + \frac{1}{3 + x}}} \qquad F: \begin{vmatrix} F''_{xx} & F''_{xy} & F'_{x} \\ F''_{xx} & F''_{yy} & F'_{x} \\ F''_{yx} & F''_{yy} & F'_{y} \\ F'_{x} & F'_{y} & 0 \end{vmatrix} = 0$$

$$\iint_{\mathbf{x} \in \mathbb{R}^{2}} \langle \mathbf{x}, \mathbf{y} \rangle \, d\mathbf{x} \qquad \overline{a \alpha^{2} + \underline{b \beta} + \overline{d \delta}} \qquad ]0, 1[ + [x] - \langle x, y \rangle$$

$$e^{x} \approx 1 + x + x^{2}/2! + {n \choose k} = {n \choose k} + {n \choose k-1} + x^{3}/3! + x^{4}/4!$$

Figures
Tables, graphs, and images

Faculty	With T <sub>E</sub> X	Total	%
Faculty of Informatics	1716	2 904	59.09
Faculty of Science	786	5 275	14.90
Faculty of Economics and Administration	64	4 591	1.39
Faculty of Arts	69	10 000	0.69
Faculty of Medicine	8	2014	0.40
Faculty of Law	15	4824	0.31
Faculty of Education	19	8 219	0.23
Faculty of Social Studies	12	5 599	0.21
Faculty of Sports Studies	3	2 0 6 2	0.15

Table: The distribution of theses written using TEX during 2010-15 at MU

# **Figures**

Tables, graphs, and images

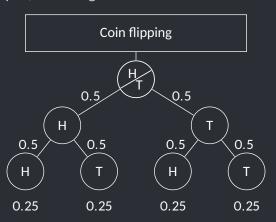


Figure: Tree of probabilities - Flipping a coin<sup>1</sup>

<sup>&</sup>lt;sup>1</sup>A derivative of a diagram from texample.net by cis, CC BY 2.5 licensed

# **Code listings**

An example source code in C

```
#include <stdio.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/wait.h>
// This is a comment
int main(int argc, char **argv)
while (--c > 1 \&\& !fork());
sleep(c = atoi(v[c]));
printf("%d\n", c);
wait(0);
return 0;
```

### Citations

T<sub>E</sub>X, LeT<sub>E</sub>X, and Beamer

T<sub>E</sub>X is a programming language for the typesetting of documents. It was created by Donald Erwin Knuth in the late 1970s and it is documented in *The T<sub>E</sub>Xbook* [1].

In the early 1980s, Leslie Lamport created the initial version of LT<sub>E</sub>X, a high-level language on top of T<sub>E</sub>X, which is documented in LT<sub>E</sub>X: A Document Preparation System [2]. There exists a healthy ecosystem of packages that extend the base functionality of LT<sub>E</sub>X; The LT<sub>E</sub>X Companion [3] acts as a guide through the ecosystem.

In 2003, Till Tantau created the initial version of Beamer, a MEX package for the creation of presentations. Beamer is documented in the User's Guide to the Beamer Class [4].

# Bibliography

Τ<sub>F</sub>X, ŁΤ<sub>F</sub>X, and Beamer

- [1] Donald E. Knuth. *The T<sub>E</sub>Xbook*. Addison-Wesley, 1984.
- [2] Leslie Lamport. Lambert. A Document Preparation System. Addison-Wesley, 1986.
- [3] M. Goossens, F. Mittelbach, and A. Samarin. *The LT<sub>E</sub>X Companion*. Addison-Wesley, 1994.
- [4] Till Tantau. User's Guide to the Beamer Class Version 3.01. Available at http://latex-beamer.sourceforge.net.
- [5] A. Mertz and W. Slough. Edited by B. Beeton and K. Berry. Beamer by example In TUGboat, Vol. 26, No. 1., pp. 68-73.

# **Outline for Section 2**

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## **Numerals and Mathematics**

 $+ x^3/3! + x^4/4!$ 

Formulae, equations, and expressions

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$$e^{x} \approx 1 + x + x^{2}/2! + \binom{n+1}{b} = \binom{n}{b} + \binom{n}{b-1}$$

Figures
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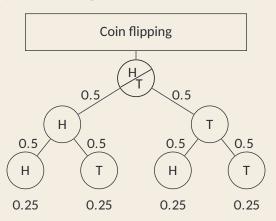


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- [1] Donald E. Knuth. The TeXbook. Addison-Wesley, 1984.
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