



# Introduction to Scientific Working

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# Summary of last lecture

## Drawing in $\LaTeX$

- $\TeX$  and  $\LaTeX$  are not useful for drawing
- focus on text processing
- graphics can be included with `\includegraphics`
- The `tikz` package allows drawing in  $\LaTeX$

## $\LaTeX$ presentations

- easy to reuse parts of paper in a presentation
- `beamer` document class

# Lecture Content

## Research and Understanding

Understanding and summarizing of scientific text, Literature research, Internet search, Citing, Practical scientific work

## Structuring Scientific Works

Kinds: Seminar, Bachelor and Master theses, Topic analysis and paper structuring

## L<sup>A</sup>T<sub>E</sub>X

Interaction, Typesetting of text, Images, Diagrams, Lists, Tables, Mathematics, Fonts, Special cases

## Evaluation, Checking and Presentation

**Publish or Perish, Evaluation of work of others,**  
Review system in computer science, Introduction to presentation

# Inauguratory Lectures Discussion

- Academic Titles, Ranks, Positions?
- Bologna Process?
- Regular evaluation of an Academic?
- Promotions?

# Evaluation

## Research activities

- proposing hypotheses, developing foundations
- knowledge discovery
- perform experiments and use new methods
- results that support or falsify a hypothesis

## Publication

- Comparison of results
- Open research data and processes
- Number of publications and citations used to evaluate researchers

# “publish or perish”

## Consequences

- quantitative values are an important part of researcher evaluation
- used for:
  - 1 Professorship position appointments
  - 2 Project acceptance
  - 3 Evaluation of permanent positions
  - 4 Numbers of positions and financial state of institutes . . .

## Example

*In einem 5-Jahreszyklus werden alle wissenschaftlichen Mitarbeiter/innen evaluiert, die unbefristete bzw. länger als 5 Jahre befristete Verträge haben, siehe UG 2002 §14 Abs 7.*

# Alternatives

## *chargé de recherche*

- *chargés de recherche* of CNRS, permanent Position, also offered to young scientists
- Starting salary: € 2.200,- bis € 2.600,-
- Yearly competitions

## “Consequences”

- France is 2nd worldwide when it comes to Fields medalists
  - USA 15, France 13, Austria 1
- 4th: Nobel prizes.
  - USA 411, France 75, Austria 25

# Homework

- 1 Install “Publish or Perish” and evaluate the H-index of Alan Turing as well as two more computer scientists of your choice from fields
- 2 Compare with a number of web services that provide H-indexes
- 3 Find and read documents that suggest how to review
- 4 Imitate two of the three: only the frame (PDF8), a term with its subterms represented by subtriangles (PDF9), a LICS natural deduction proofs.

<http://cl-informatik.uibk.ac.at/teaching/ws23/ewa/imit.tgz>