Instructions for the Preparation of an e-Informatyka article in LaTeX

How to write articles in e-Informatyka format

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Streszczenie

These instructions are designed for the Preparation of an article in e-Informatyka format. If they are not adhered to, it may lead to a delay in publication.

Słowa kluczowe: conversion, article, TeX, e-Informatyka.pl

1 Introduction

Because of huge popularity of TeX systems, e-Informatyka prepared a conversion module, which was designed to deal with documents, received in this format. For that reason special class (*einformatyka*) of document was prepared.

Thanks to using einformatyka class definition included in *einformatyka.cls* (stand-alone file) it is possible to do former proparations and visualisations of articles, by using tools for TeX and then sending these articles and correct conversion to e-Informatyka internal format. Einformatyka class file can be added by declaration at the begining of the article:

`\documentclass{einformatyka}`

E-Informatyka style extends TeX format, mainly in article authors description and bibliography context. A majority of popular TeX commands concerning article text format (text formating commands, footnotes, tables, figures and equations) are supported.

In the preambule of article can also be declared packages, which extends the LaTeX usage properties.

`\usepackage[...]{...}`

e.g.

`\usepackage{graphicx}`

- package for inserting graphics

2   Document structure and article info

The main part of the article starts with the environment *document* as shown below:

```
\begin{document}
...
\end{document}
```

Next is necessery to insert environment *articleinfo* and at least one element *section*.

The environment *articleinfo* includes the following elements:

- *title* - obligatory,

- *subtitle* - optional,

- authors description (environment *authorgroup*) - optional,

- keywords (environment *keywordset*) - obligatory,

- *abstract*- obligatory

Template of environment *articleinfo* structure is shown below.

```
  \begin{articleinfo}
    \title{}
    \subtitle{}
    \begin{authorgroup}
    ...
    \end{authorgroup}
    \keywordset{}
    \begin{abstract}[pl]
    ...
\end(abstrakt}
  \end{articleinfo}
```

Authorgroup environment contains one or more authors of the publication in *autor* environment, which give us the information about name, surname, email, name of institution. Template ot author environment is shown below.

```
  \begin{authorgroup}
    \begin{author}
    \firstname{}
    \surname{}
```

```
    \email{}
    \orgname{}
    \orgdiv{}
    \end{author}
    ...
  \end{authorgroup}
```

After *articleinfo* environment article author can insert optional environment *epigraph*. Epigraph includes content and author. Author is located in separate line starting with `--`. Template of this environment is shown below.

```
\begin{epigraph}
..content..
--..author..
\end{epigraph}
```

3 Creation of document structure

Article information part follows part with content od article. In case of proper structure creation commands listed below are defined.

- partition on points

  ```
  \section{}, \paragraph{}
  ```

- partition on subpoints

  ```
  \subsection{}, \subsubsection{}, \subparagraph{}
  ```

- declaration for changing from numbers into letters the way of section numeration

  ```
  \appendix
  ```

Partitioning in that way is recommended, because it helps in making table of contents.

4   Text formation

e-Informatyka supports basic text formats offered by TeX: *italic* **bold** <u>underline</u>.

```
\emph{italic} \textbf{bold} \underline{underline}
```

Supported are also footnotes [1]. Example of declaration is shown below.

```
\footnote{footnote example}
```

4.1   Item listing

Example of item listing using environment *itemize*:

```
\begin{itemize}
\item  one,
\item  two,
\item  three.
\end{itemize}
```

4.2   Tables

It is also possible to define tables according to LaTeX format using environment *table*. Simple example of table declaration is shown below.

```
\begin{table}[h]
\begin{center}
\begin{tabular}{|l|l|r|l|}
\hline
lattice & d & q & tt \\
\hline
square & 2 & 4 & 1.763 \\
\hline
triangular & 2 & 6 & 1.648 \\
\hline
\end{tabular}
\caption{Table 1. This is example of a table.}
\end{center}
\end{table}
```

---

[1] footnote example

The parameter in square brakets, just after table environment declaration defines to location of table on document site. It is possible to create tables with description, which is placed in optional *caption* command. After *table* environment, *tabular* should be declared, which automatically defines the width of particular table columns. This environment has one obligatory parameter, which defines the number of columns and way of justify. For that reason as argument for each column one of letters: l (left), r (right) or c (center) should be given. The char of vertical line defines, that two columns should be splited with that line. Inside the tabular environment next raw is made by double slash and next column by char &. Command

```
\hline
```

inserts raw width horizontal line.

4.3   Figures

Inserting figure from external file is made by environment *figure*, example shown below.

```
\begin{figure}
\includegraphics[width=4cm, height=6cm]{images/example.jpg}
\caption{Logo}
\end{figure}
```

4.4   Source code

Environment *verbatim* let us insert source code. \begin{verbatim} ... \end{verbatim}

Example shown below:

```
class HelloWorldApp {
    public static void main(String[] args) {
        System.out.println("Hello World!"); //Display the string.
    }
}
```

4.5   Equations

Math equations are defined using special char $. The structure of math equations are the same as in LaTeX. Examples of math equasions are shown below.

```
$2+2=4$
$\oint_{C} x^3\, dx + 4y^2\, dy$
${-b\pm\sqrt{b^2-4ac} \over {2a}}$
```

5   Bibliography

Bibliography is included according to BiBTeX standard in external file with .bib extension. This file should be in the same directory as .tex file of article. Bibliography file declaration is shown below.

```
\bibliography{file_name}
\bibliographystyle{alpha}
```

Command

```
\cite{...}
```

inserts the reference to the bibliography position. Sometimes it happens, that article author wants to add bibliography position, for which reference doesn't appear in article. Then command

```
\nocite{...}
```

is expected.

When defining .bib file, we can use the following types of positions:

- article

  obligatory fields – author, title, journal, year

  optional fields – volume, number, pages, month, note

- book

  obligatory fields – author lub editor, title, publisher, year

  optional fields – volume, series, address, edition, month, note

- booklet (book without publisher)

  obligatory fields – title

  optional fields – author, howpublished, address, month, year, note

- conference (inproceedings synonym)

- inbook (a part of book, chapter or sites)

  obligatory fields – author or editor, title, chapter or/and pages, publisher, year

  optional fields – volume lub number, series, type, address, edition, month, note

- incollection (a part of book with its own title)

  obligatory fields – author, title, booktitle, publisher, year

  optional fields – editor, volume lub number, series, type, chapter, pages, address, edition, month, note

- inproceedings (an article in conference literature)

  obligatory fields – author, title, booktitle, year

  optional fields – editor, volume or number, series, pages, address, month, organization, publisher, note

- manual (technical documentation)

  obligatory fields – title

  optional fields – author, organization, address, edition, month, year, note

- mastersthesis

  obligatory fields – author, title, school, year

  optional fields – type, address, month, note

- misc - publikacja nie pasujaca do zadnego innego typu

  no obligatory fields

  optional fields – author, title, howpublished, month, year, note

- phdthesis

  obligatory fields – author, title, school, year

  optional fields – type, address, month, note

- proceedings (conference literature)

  obligatory fields – title, year

  optional fields – editor, volume or number, series, address, address, month, organization, publisher, note

- techreport - (university or other institution report, published in series)

  obligatory fields – author, title, instutution, year

  optional fields – editor, volume or number, series, address, address, month, organization, publisher, note

- unpublished (article formally unpublished)

  obligatory fields – author, title, note

  optional fields – month, year

Example of simple bibliography record is shown below.

```
@article{JAVA,
        author = "Jan Kowalski and Jan Nowak",
        title = "Java programming",
        journal =  "Your code",
        year =         "1999"
      }
```

<div align="center">or</div>

```
@article{JAVA,
        author = {Jan Kowalski and Jan Nowak},
        title = {Java programming},
        journal =  {Your code},
        year = {1999}
      }
```

It is important to remember, that after each field in record a sign '"' or '{','}' should be inserted.

References