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Template for an Acta IMEKO paper

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ABSTRACT
The editorial team of Acta IMEKO encourages authors to follow the instructions as described in this template file to produce their manuscript. The paper must be written in clear English, and figures should be of high quality, readable without the need to zoom in on details or legends. The abstract should contain the essentials of the paper. Important items are the aim of the research, the basic method and the major achievement (also numerically, when applicable). The length of the abstract should not exceed 200 words.

Section: RESEARCH PAPER

Keywords: Journal; template; IMEKO; Microsoft Word

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1. INTRODUCTION

The introduction describes the background of the research, a short review of related research published in recent literature, together with the major claims setting the framework of the present publication. References should be related to the present publication, not just a list of papers merrily showing the authors' knowledge of the literature. This relation must be made explicit. The newly presented method is shortly introduced, as an alternative to previously published methods, with mention of the advantages aimed at.

To minimize editing by the editorial team, authors are asked to follow the styles that go with this template. The font size of the body text is 10 pt and the font type is Garamond. For the header of a section use the style named "Level1Title".

The introduction ends with an outline of the remainder of the paper, for instance as follows. In Section 2 we will discuss how the paper can be divided in sections and subsections, and an indication of the use of numbering and heading format is outlined. In the next two sections the use of illustrations and equations is described. In Section 5 methods for citing references are given. Finally, in the concluding section the major rules are summarized.

2. FIRST PAGE

The first page should have the title of the paper, the authors names (do not use initials for the first and last name), and the author affiliations.

Following should be an abstract and 3 to 5 keywords separated by a semicolon. The next 4 items (citation, editor, dates and copyright) are to be updated by the editor. The paper information section ends with reference to the funding (leave blank if not applicable) and the name and email address of the corresponding author.

The header and footer have information about the publication that is to be updated by the editor. Page numbers appear in the bottom right corner and are updated automatically.

3. ABOUT SECTIONS

The body of the paper is divided into sections and, when readability requires it, subsections. This helps the reader to recognize the various elements of the paper, such as background theory, modelling and simulations, experimental setup, experimental results with evaluation, conclusions, references, acknowledgements and, when appropriate, appendices.

Figure 1. Stamp issued to help people getting familiar with SI units.

Pages should be laid out using two columns, as done in most journals, to increase readability.

3.1. Subsections

If a section is long or deals with different topics, make a subdivision in subsections. Avoid further subdivision of a subsection. When subsections are used, there must be at least two. Use the style named “Level2Title” for the header of a subsection.

3.2. Numbering of subsections

Subsection numbering follows the outline numbering format which is configured in the template. Subsection headings use the Calibri font and are in bold.

This template uses automatic outlined numbering for the sections and subsections. We recommend that the author makes use of this feature. If the author does not feel comfortable with it, he may choose to manually number the sections and subsections.

Figure 2. Microsoft Word frame formatting window. It can be accessed by clicking on the frame content to make the frame border visible, clicking in the frame border to select it and finally right click the frame border to show up the pop-up menu and choosing the option "Format Frame".

Figure 3. Microsoft Word caption insertion window. It can be accessed by right clicking on the picture or table and selecting "Insert Caption" from the pop-up menu.

Configuring a blank Word document to use automatic outline numbering is not always as straightforward as it should be. We point out, nevertheless, that the configuration is already done in this template and the author just can use it. It suffices to place the cursor in the section or subsection title and select the "Level1Title" or "Level2Title" styles already available from the menu or ribbon. This simple procedure is the same that should be used for all other parts of the paper (paper title, main text, abstract, etc.). The author does not have to worry about the numbering at all.

An even simpler procedure would be just to copy and paste an existing section or subsection title and rewrite the text. The author, however, can choose to use manual numbering by deleting the automatic number that comes with the use of the proper style and input the numbers he wishes for each section.

4. ABOUT ILLUSTRATIONS AND TABLES

4.1. Location

Illustrations and tables can have two formats: column wide or page wide. Figure 1 is an example of the first kind [1]. Figure 5 gives an example for a page wide figure.

Page wide figures and tables should be placed inside a frame. Column wide ones can be placed inside a frame or directly in the middle of the body text. In both cases they should be located on top or bottom of the page where they are first referred to in the text if possible. Figures should be configured with the "Figure" style.

4.2. Managing frames

To create a frame, we recommend that the author copies and pastes one of the frames in this template. Before doing that, however, it is important to understand how they are configured.

Fehler! Verweisquelle konnte nicht gefunden werden. shows the window where the configuration is done. It can be accessed by:

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1) clicking on the frame content to make the frame border visible;
2) clicking in the frame border to select it;

Table 1. Overview of styles and font sizes used in this template.

Section	Font	Size (pt)	Format	Special
Title	Calibri	20	bold	Only first letter is capital
Authors	Calibri	12	bold	
Affiliation and email address	Calibri	9	italic	
Abstract text	Calibri	9	normal	
Keywords	Calibri	8	normal	label in bold
Citation	Calibri	8	normal	label in bold
Editor	Calibri	8	normal	label in bold
Dates	Calibri	8	normal	label in bold
Copyright	Calibri	8	normal	label in bold
Funding	Calibri	8	normal	label in bold
Corresponding author	Calibri	8	normal	label in bold
First-level Section headings	Calibri	10	Bold	numbered, all caps
Subsection headings	Calibri	9	Bold	outline numbered
Body text	Garamond	10	normal	justified
Acknowledgements, Appendix	Garamond	10	normal	as body text
Footnotes[1]	Calibri	8	normal	as body text
Equations	Garamond/Symbol	10	italic	numbered
Equations (subscript/superscript)	Garamond/Symbol	70% of 10	italic	numbered
Equations (sub-subscript/superscript)	Garamond/Symbol	60% of 10	italic	numbered
Table text	Calibri	8	normal	bold headings
Figures	Calibri	9	normal	centered
Captions of figures and tables	Calibri	8	normal	justified
References	Garamond	9	normal	numbered

Table 1 summarizing the various styles used in this template, whereas **Fehler! Verweisquelle konnte nicht gefunden werden.** shows a subset of the data given in Table 1.

4.5. Numbering

Microsoft Word permits to have figure and table numbering done automatically. The author is asked to use this feature, if possible, instead of numbering them by hand. The captions in this template already use automatic numbering. The best way for the author is just to copy and paste those captions and change the text accordingly. Because the number in the copied caption label will not be automatically updated, the author can place the cursor in the caption number and press the key F9 to update it (the number background turns grey because it is a "field code").

If the author wants to use automatic caption numbering but creates captions from scratch, he/she can right click on the picture or table and select "Insert Caption" from the pop-up menu. A window will be displayed (**Fehler! Verweisquelle konnte nicht gefunden werden.**) where one can choose the label "Figure" or "Table" and insert the caption text. If those labels are not in the dropdown list the author can add them by using the "New Label" button.

Table 2. Example of a small table.

Section	Font
Title	Calibri
Authors	Calibri
Affiliation and email address	Calibri
Abstract text	Calibri
Keywords	Calibri
Citation	Calibri
Editor	Calibri
Dates	Calibri
Copyright	Calibri
Funding	Calibri
Corresponding author	Calibri
First-level Section headings	Calibri
Subsection headings	Calibri

4.6. Referring to figures and tables in the text

If automatic caption numbering is used the author should refer to the figures and tables in the text using automated references. A reference can be inserted in a given point in the text by going to the menu "References" and choosing "Insert Cross Reference" (Figure 4). Select which figure or table are to be cited, the label type ("Figure" or "Table") and that only the label and number should be used in the citation. Keep the option "insert as hyperlink".

5. ABOUT EQUATIONS

All equations should be numbered consecutively throughout the paper. Do not use outline numbering per section.

Numbers are placed between parentheses aligned right, and without a label, see equation (1) as an example, expressing the saturation current I_D in a MOSFET transistor [2]:

$$I_D = \frac{W\ \mu\ \varepsilon_0\ \varepsilon_{ox}\ V_{GS}^2}{2\ L\ t}, \tag{1}$$

where W is the channel width, L the channel length, ε_0 the dielectric constant of free space and ε_{ox} of the oxide, μ is the

[1] Footnotes must be kept short, preferably not more than 3 lines.

mobility in the channel, t the oxide thickness and V_{GS} the gate voltage [2]. Make sure that all symbols are defined unambiguously. When confusion may arise, add the units of the parameters between parentheses. Use SI and derived units only [3].

Equations should be placed into the left column of a two-columns table without frame lines. Use the right column for the equation number and a spacing of 6 pt above and below.

Long equations that normally span more than one column should be wrapped over more lines, broken at a suitable place by arithmetic symbols (=, +, −, ×) as separator. An example is equation (2) about the surface heat flux per unit area along a flat plate [4]

$$P_f''(x) = 0.538\,\kappa_f \left(\frac{Pr}{\upsilon}\right)^{\frac{1}{3}} \left(\frac{\tau_w(x)}{\mu}\right)^{\frac{1}{2}} \times \int_0^x \left\{ \int_{x_1}^x \sqrt{\frac{\tau_w(\xi)}{\mu}}\,\mathrm{d}\xi \right\}^{-\frac{1}{3}} \frac{\partial T_w(x_1)}{\partial x_1}\,\mathrm{d}x_1. \quad (2)$$

Equations are considered part of the previous sentence and should, when appropriate, have a period or a comma after them, as in (2).

Note that punctuation of equations must follow the normal rules of grammar. Therefore, for example, equations can be followed by a dot only if the sentence is finished.

Very short equations that are not further referred to may be inserted in line with the text, for instance $R = V/I$. Make sure that all variables are in italic, also when used in the main body.

Note that the font size for equations is 10 pt and that it must be reduced to 70 % and 60 % in the case of subscript/ superscript and sub-subscript/superscript respectively.

Mind proper notations. Some typical errors or wrong formats should be avoided at the very beginning:

- variables must be italic: V_2
- numbers and units not: 3 V
- space between value and unit: 3 kHz, 10 %, 5 °C
- units never between square brackets [...].

6. ABOUT REFERENCES AND CITATIONS

References are limited to published works or papers that have been accepted for publication and should give full bibliographical information. They are placed in the section References at the end of the manuscript, in order of their appearance in the text.

References are cited in the text by a number between square brackets. Ensure that every reference cited in the text is also present in the reference list and vice versa.

Citation of multiple or consecutive references must follow the notation [1], [2], [4] or [1]-[3], respectively.

Unpublished results and personal communications may be included in the reference section following the standard reference style and should include a substitution of the publication date with either "Unpublished results" or "Personal communication".

Citation of a reference as "in press" implies that the item has been accepted for publication.

The format of references is as follows:

a. For journal articles: Initials and last name(s) of each author, Title of article (first word only capitalized), Journal title, volume number, (year), pages.
b. Book references: Author(s) as above, Title of book (main words capitalized), publisher, city of publication, year, ISBN.
c. For a chapter in an edited book: Author(s) as above, Title of article (first word only capitalized), in: Title of book (main words capitalized). Editor(s). Publisher, city of publication, year, ISBN, pages.
d. Conference proceedings: Initials and last names of each author, Title of article (first word only capitalized), name of the conference, place, country, date, pages.
e. Links to web content, for example freely downloadable papers, can be included as shown in [5].
f. Where available, DOIs of references must be added as shown in [1].
g. References that are not in English, must be followed by the language, for example, in the form [In Italian] as shown in [7].

There is a section break at the end of the paper (after the references) so that the content of the last page is equally divided between the two columns.

7. CONCLUSIONS

The concluding section contains the major achievements of the research presented in the manuscript. It should be concise but informative. When numerical results are an essential part of the research, for instance a wider measurement range, higher uncertainty [6], they should be included in the conclusions.

Notice that conclusions are not the same as an abstract.

ACKNOWLEDGEMENT

Here persons or institutes may be acknowledged for their technical, scientific or financial support. List them in this section, and not as a footnote or otherwise.

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