Requirements for Manuscripts Published in «Applied Computer Systems»

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Abstract – Give a concise summary (400-500 characters) of the paper: research focus, research methods used, the results and the main conclusions and recommendations. Use this document as a template if necessary or follow the instructions below to compose your manuscript. The Editorial Board will also ask you to provide an extended summary of the manuscript as a separate file.

Keywords – Choose up to four key words or phrases and locate them in alphabetical order just after the abstract of your paper, separated by commas. The scientists from the fields of electrical engineering, communication technologies, computer sciences and other similar fields can use a list of suggested keywords from http://www.ieee.org/organizations/pubs/ani_prod/keywr98.txt

I. INTRODUCTION

This document provides instructions for preparing manuscripts for publishing in The Scientific Journal of Riga Technical University. The document is also a sample of layout for the manuscripts submitted for publication.

The journal does not have article processing charges (APCs) nor article submission charges.

Manuscripts should be in their final form when they are submitted so that proofs will require only correction of typographical errors. It is very important that the authors observe precision and correctness of language. The authors bear responsibility for all language mistakes.

The copyright for the articles is transferred to Riga Technical University. The manuscripts are not returned. The Editorial team of the series has the right to edit the submitted articles. If due to the request of the Editorial team, the author makes amendments to the manuscript, the Editorial team evaluates it anew.

The Editorial team decides if the manuscripts for the particular volume of RTU Scientific Journal should be only in English or may be in other languages.

II. GENERAL REGULATIONS

The manuscript should be submitted to in an electronic format. Use this file as a template if necessary. Prepare the manuscript with Microsoft Word (not older than MS Word 2000). The recommended length of the manuscript is 6-10 pages (some RTU journals, however, may have other limitations), including information about the authors, abstract and images. Write the text in two column layout. Left and right justify the columns. When writing the manuscript use Times New Roman font.

TABLE I

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Use tables and figures to adjust column length. On the last page adjust the length of columns so that they are equal. Use hyphenation only if it is necessary. Use Spell check. The Roman numerals used to number the sections are optional. If you do use them, do not number ACKNOWLEDGMENT and REFERENCES, and arrange subheadings with letters.

A. Page Layout

Use page setup with the following options: paper size A4 (height = 29.4 cm; width = 21 cm); left and right margins = 1.1 cm; top and bottom margins = 2.66 cm; gutter = 0.51 cm. Use option “multiple pages” with value “mirror margins” (in the “Page” field). Use two-column layout with the following parameters: column width = 8.89 cm and spacing = 0.51 cm. Do not number the pages and leave the header and footer areas blank.

B. Type Sizes

When entering headings and text use the Quick style set or follow the instructions in Table I (1 point is about 0.35 mm - the size of the lowercase letter “j” will give the point size). Times New Roman is the preferred font.

III. ILLUSTRATIONS AND TABLES

Preferable options for graphic images and photographs are: 300 dpi resolution, 8 bits per pixel, grayscale. It must be noted that all the papers will be printed using grayscale printing technology. The number of distinctly printable grayscale halftones is 6 to 8 (including pure white and black). For this reason using the photographs is not encouraged. At least avoid using low contrast photographs and images.

The mentioned printing technology is the reason why using colors is not encouraged too. Authors themselves must take care about the legibility of their color images in grayscale representation (always remember that the maximal number of printable grayscale halftones is 8).

Place figures and tables at the top or bottom of columns. Avoid placing them in the middle. Try to place them before their first mention in the text. Most charts, graphs and tables should be one column wide. However, large figures and tables may span across both columns.

A. Figures

Place figures and photographs “in line with text” (“Layout” option from the pop-up menu “Format Picture” or “Format Object”) or use style “RTU - Figures (in)”. Number the figures consecutively with Arabic numerals. Long figure captions should be placed below the figures and justified. One line figure captions may be centered.

If your figure has two parts, incorporate the labels “(a)” and “(b)” in the figure. At the same time, do not incorporate captions in the figures. Do not put captions in “text boxes” linked to the figures. Do not put borders around the outside of your figures. Use the abbreviation “Fig. 1” even at the beginning of a sentence.

Use words rather than symbols. For example, write “Magnetization,” or “Magnetization, M”.

Fig. 1. Magnetization as a function of applied field. Note that “Fig.” is abbreviated. There is a period after the figure number, followed by two spaces. It is good practice to explain the meaning of the figure in the caption.

not just “M.” Put units in parentheses. Do not label axes only with units. In the example write “Magnetization (A/m)” or “Magnetization (A⋅m⁻¹).” Do not label axes with a ratio of quantities and units. For example, write “Temperature (K),” not “Temperature/K”.

Multipliers can be especially confusing. Write “Magnetization (kA/m)” or “Magnetization (10⁻¹ A/m).” Figure labels should be legible, about 10-point type.

B. Tables

Recommended style for the tables is “RTU - Tables (in)”. However, some deviations from this style are possible. For example centered text is often preferable in the tables. Table captions and titles should always be centered and placed above the tables. Please verify that the tables you mention in the text actually exist (this regards your figures as well). Tables are numbered consecutively with Roman numerals and have reference in the main text. Do not abbreviate the “Table.”

IV. EQUATIONS

Use the equation editor to create your equations and select “RTU - Equations” style for them. Place one tab before short equations to center them. Place one or two tabs after the equations to put equation’s number flush with the right margin, as in (1). Number the equations consecutively. Punctuate equations with commas or periods when they are a part of a sentence, as in

$$\Delta V_{\text{C}(0,T)} = \frac{1}{C} \int_0^T I_C(t) dt.$$ \hspace{1cm} (1)

Please confine equations to one column width and break equations at appropriate algebraic symbols. Short, one line equations, for example (1), have to be vertically center aligned with the corresponding numbering text and punctuation signs (as it is defined in “RTU - Equations” style). The punctuation
and numbers of longer equations that occupy two or more lines, like (2), must be vertically centered with the last line of the equation. Use font option “Position” with value “Lowered”+number to provide such alignment (applied to number and punctuation only). The parts of the longer equations must be horizontally left aligned in the equation editor. An exception from this rule is the last line that has to be right aligned with the longest of the previous lines (use spaces to do that). Do not split long equations in order not to have to be defined. Do not use abbreviations in the title unless they are unavoidable.

C. Miscellaneous Recommendations

Avoid dangling participles, such as, “Using (1), the potential was calculated.” Write instead, “The potential was calculated using (1),” or “Using (1), we calculated the potential.” Use a zero before decimal points: “0.25,” not “.25.” Use “cm²,” not “cc.” Do not mix complete spellings and abbreviations of units: “Wb/m²” or “webers per square meter,” not “webers/m².” Spell units when they appear in text: “…a few henries,” not “…a few H.” If your native language is not English, try to get a native English-speaking colleague to proofread your paper.

D. Format of References

Follow IEEE reference requirements when preparing your list of references. Number the citations consecutively in square brackets [1]. The sentence punctuation follows the brackets [2]. Multiple references [2], [3] are each numbered with separate brackets [1] – [3]. When citing a section in a book, please give the relevant page numbers [1]. In sentences, refer simply to the reference number, as in [3]. Do not use “Ref. [3]” or “reference [3]” except at the beginning of a sentence: “Reference [3] shows …” Please do not use automatic endnotes in Word, rather, update your reference list following the samples provided at the end of this document for:

- A book with a single author [1], [2], with more than one author [3] and with three or more authors [4];
- Conference proceedings [5];
- Technical report [6];
- Patent/Standard [7];
- Papers presented at conferences (unpublished) [8];
- Thesis or dissertation [9];
- Chapters or parts of edited works included in collections or textbooks [10] – [11];
- Journal articles [12];
- Internet documents [18] – [20];
- Non-book and other formats [21].

Papers that have been accepted for publication, but not yet specified for an issue should be cited as “to be published”. Papers that have been submitted for publication should be cited as “submitted for publication”. Please use the transliterated version of the names and sources in Cyrillic. For papers published in translation journals, please give the English citation first, followed by the original language citation.

VI. UNITS

Use either SI (MKS) or CGS as primary units. (SI units are encouraged.) English units may be used as secondary units (in parentheses). An exception would be the use of English units as identifiers in trade, such as “3.5-inch disk drive”.

Avoid combining SI and CGS units, such as current in amperes and magnetic field in oersteds. This often leads to

\[
L_{\text{coaxial}} = \frac{\mu_0}{2\pi} \left[ \ln \frac{q}{p} + \frac{\mu}{\mu_0} \left( \frac{r^4}{r^2 - q^2} \ln \frac{r}{q} - \frac{1}{2} \frac{r^2}{r^2 - q^2} \right) \right]
\]

(2)
confusion because equations do not balance dimensionally. If
you must use mixed units, clearly state the units for each
quantity that you use in an equation.

VII. EXTENDED SUMMARY
The authors may be asked to prepare an extended summary
of the publication which should be prepared as a separate file.
The size of the extended summary should be about 1800
characters (no spaces). The summary should not be a
repetition of the abstract from the beginning of the paper.

VIII. SOME COMMON MISTAKES
The word “data” is plural, not singular. The subscript for
the permeability of vacuum \( \mu_0 \) is zero, not a lowercase letter “o.”
In American English, periods and commas are within
quotations marks, like “this period.” A parenthetical
statement at the end of a sentence is punctuated outside of the closing
parenthesis (like this). (A parenthetical sentence is punctuated
within the parentheses.) A graph within a graph is an “insert,”
not an “insert.” The word alternatively is preferred to the word
“alternately” (unless you mean something that alternates).
Do not use the word “essentially” to mean “approximately” or
“effectively.” Be aware of the different meanings of the
homophones “affect” and “effect,” “complement” and
“compliment,” “discreet” and “discrete,” “principal” and
“principle.” Do not confuse “imply” and “infer.” The prefix
“non” is not a word; it should be joined to the word it modifies,
usually without a hyphen. There is no period after
the “et” in the Latin abbreviation “et al.”

IX. MANUSCRIPT REVIEWING
The submitted articles are peer-reviewed by two experts
of the respective field to review manuscripts. The Editorial Team
at the request of the author provides anonymous copies of the
reviews. If the author is asked by the Editor to revise the
manuscript it is reviewed anew.

REFERENCES
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2003.

First A. Author and other authors should provide a short (500…800
characters, no spaces) biography at the end of the paper. The first paragraph
should contain information about the author’s educational background,
scientific degrees and the years they have been earned. The author’s major
field of study should be lower-cased.

The second paragraph should list work experience. The current job
must have a location, while previous may be listed without one. Job titles are
capitalized. Information concerning previous publications may be included
(not more than three). The format of list is similar to that of references.
Current and previous research interests end this part.

The third paragraph lists memberships in professional societies and
awards. If a photograph is provided, the biography will be indented around it.
The photograph (3cm × 4cm) is placed at the top left of the biography (use

Author’s contact data (if necessary) are placed at the end of the biography.
The author is asked to provide his/her photo.