

Radioengineering Journal: Exemplary Document (Template) for a Paper

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Abstract. *The purpose of the template is to achieve the uniform layout of all the papers in the Radioengineering Journal minimizing the effort both of the authors and the editors. Authors are strongly recommended to prepare their contributions in accordance with this exemplary document, to use only the predefined styles and not to change any parameters of them. If the format of a sub-mitted paper obviously differs from the Radioengineering Publishing Style the paper may be rejected just for this reason. The following text describes individual components of the paper and tries to stress important details.*

The abstract of the paper brings brief information about the contents of the paper. The abstract should not be shorter than 80 words and should not exceed 200 words. The text of the abstract is imposed using the environment `rengAbstract`.

Keywords

Paper formatting, journal, electronic publishing, templates, styles, Radioengineering Publishing Style (RPS)

1. Headline of a Section

Please, note different headers of odd and even pages. The content of the headers is generated using the command `\vengHeader`. The header of even pages can be abbreviated if necessary for not exceeding one line. The numbers and dates in the header, as well as the footer will be updated by the preprint manager.

1.1 Title, Authors

The title of the paper is typed using the command `\vengTitle`. Each word of the title starts with a capital letter except for articles (a, an, the), prepositions (e. g. to, for, etc.) and conjunctions (e.g. and, but, etc.). In the title, words should be preferred to numbers and symbols, which can be used only extraordinarily if necessary.

Below the title, authors' names are typed using `\vengNames`. Authors are asked to give full names of all of them in the title (middle names can be shortened here), with punctuation, but without any conjunctions (no "and"). The family name is the most important part of the author's name and is always given unabbreviated. It must be written as the last part of each author's name (valid for the title, header, and authors' CV, but not for References). Authors from Asia are kindly asked to comply with European conventions. In the header of even pages, shortened first and middle names and full family names of the authors are given, again with commas, but without any conjunctions. If there are more than 3 authors, the fourth and next authors' names should be substituted with "et al." in the header and in references. If individual parts of the author's name are very short and abbreviated forms are not usually used (Chinese names especially), full names can be used not only in the title and CV, but also in headers and references. Diacritics and special characters are recommended not to be used if possible.

The affiliation and e-mail address of the author(s) are typed using the command `\vengAffil` and `\vengMail`, respectively. The affiliation is required being specified as shown in this example. If all the authors are with the same department or laboratory only one affiliation should be given with no superscripts. For email address, the authors should prefer their office's email address to their private one.

1.2 Keywords

The abstract of the paper is followed by the headline "Keywords", created using the command `\vengKeywords`. Below the headline, three to six terms featuring the area of the technical or scientific orientation of the paper have to be given. Capital letters are used only at the beginning and if abbreviation is introduced here. No period stands at the end of keywords.

1.3 Headlines of Sections

Headlines of sections are typed using the command `\vengSection`. Headlines of subsections are typed using

Variable	Vector, Matrix	Function	Differential	Imaginary unit	Euler number	Descriptive sub(super)script
<i>italics</i>	bold letters	upright letters	upright letter	upright letter	upright letter	upright letter
a, B	A, D	$\sin(\omega t)$	dx	i, j	$e^{j\omega t} = \exp(j\omega t)$	λ_g

Tab. 1. An example of a wide table: appropriate typefaces according to the sense of symbols.

the command `\engSubsection`. If those commands are used, numbering of headlines is performed automatically. Subsections of the third or even higher levels are NOT RECOMMENDED. Please, put capital letters at the beginning of all significant words in the headlines. Sections and subsections are referred to as Sec. 1, Sec. 1.2, etc. Non-breaking spaces are recommended to be put between the abbreviation and the number (similarly when referring to figures or tables, e.g. Fig. 1, Tab. 2, etc.).

1.4 Appendices

Appendix section is typed using the command `\engAppendix`. It is recommended to place Appendix section after “**About the authors ...**”, please, see example at the end of the document (see Appendix 1).

2. Basic Text

The basic text settings can be recovered using `\normalfont`. If the basic text is interrupted by an equation or by a figure, then the onward text can be typed without indentation (use `\noindent` at the beginning of the continuing paragraph) as shown at the end of Sec. 1.3.

2.1 Figures and Tables

Figures (the environment `figure`), tables (the environment `table`) and equations (the environment `equation`) are centered and usually put at the top or bottom of pages. Very large objects (figures, tables, or even equations) may cover both text columns as shown in Tab. 1. In such cases, please check carefully formatting and automatic numbering in the following sections of the paper.

In figures, the authors must consider good readability of all lines and texts. The Radioengineering journal encourages the authors to use vector graphics figures in their submissions. If raster graphics is used, resolution of at least 600 dpi is required. In LaTeX projects, .pdf format of graphics is preferred as the final paper is typeset with PdfLaTeX. Optionally, also .eps (will be converted with eps2pdf) or other LaTeX-compatible formats such as .png, .jpg, .tiff, etc. can be used.

Please, keep in mind that figures will be printed in color only if publication fee is paid for color pages; otherwise black and white hard copy and color electronic version are published. For printing in black and white, please, avoid using too dark photos and prefer distinguishing curves in figures with symbols and/or types of lines instead of color.

Captions of figures and tables are created using the command `\ycaption` and `\vcaption`, respectively. Figures and tables are referred to as follows: Fig. 1, Tab. 1, etc. Full words are used in subjects of sentences, e.g. Figure 1 shows..., Table 1 summarizes....

For tables, full borders and table headers typed in bold letters are preferred but not strictly required. Anyway, table formatting in the whole paper must be consistent. Lines in tables are using default (1 pt) thickness. For the text in the table a decreased font size is used (using `\tablefont` command).

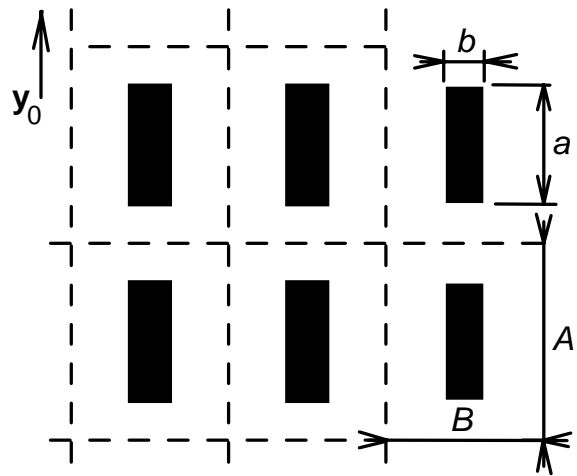


Fig. 1. The description of a figure is created using the command `\ycaption` after the `\includegraphics`.

Height [m]	Result1	Result2
10	20	30
40	50	60

Tab. 2. Captions of figures and tables are typed using `\ycaption` and `\vcaption`, respectively.

2.2 Equations and Formulas

Equations in the paper are automatically centered and numbered by the `equation` environment as shown in the following example:

$$\frac{2B \sin^2 \varphi + A \sin 2\varphi}{10g^2 \kappa T + A \cos^2 \varphi + B \sin \varphi} = 2\gamma\delta. \quad (1)$$

If units are part of the expression, make sure they are written in upright font and that there is a space between the value and the unit, e.g.

$$\lambda_g = \frac{1}{\sqrt{1 - \left(\frac{\lambda}{\lambda_m}\right)^2}} [\text{cm}] \quad (2)$$

where λ_g is the wavelength, etc. This paragraph is not indented, as mentioned above in Sec. 2.

It is important to use appropriate typefaces according to the sense of symbols: variables in italics *A*, vectors and matrices in bold letters **A**, functions (sin, log, etc.) and abbreviations (also in subscripts or superscripts: e.g. λ_g with upright subscript *g* standing for guided) in upright letters. Upright letters must be used for imaginary unit, *j* (produced using the `\imag` command), Euler number, *e* (produced using the `\eul` command), and differentials (e.g. *dx*, which is produced using `\diff`). To ensure better readability, exponential functions are preferred to be written as $\exp(j\omega t)$ instead of $e^{j\omega t}$.

If a long equation needs to be divided into several lines, mathematical signs are not repeated at the beginning of the next lines. Please, distinguish between signs for multiplication of scalars (no sign or \cdot , also \times in special cases as mentioned below), multiplication of vectors (\otimes), and convolution (*).

Equations are referred to only with their numbers in round brackets (1). If standing as a sentence subject, an appropriate word is to be used (equation, formula). E.g. Equation (2) can be rewritten as follows . . . Please, do not forget to put spaces (preferably non-breaking spaces) before and after mathematical signs and use the right symbol for subtracting, distinguishing between a minus sign (long dash) and a hyphen. For special mathematical typesetting, the benefits of the `amsmath`¹ package are used. Examples are given in Appendix 2.

Correct notation of numbers is $7\,900\text{ kgm}^{-3}$ or $7.9 \times 10^3\text{ kgm}^{-3}$. No central dots and italic characters are allowed either in numbers or units (an example of incorrect typing: $7.9\cdot 10^3\text{ kgm}^{-3}$). Greek prefixes in units must not be in italics (μ for micro-, e.g. μm using `\upmicro`, but in italics: μ for a variable permeability, using `\nu`). Grouping the digits in three-digit groups makes numbers easier to read (e.g. 7 900).

2.3 Submitted Files

The compiled PDF version of the paper should be accompanied by all source files and graphics necessary for compilation. This Exemplary Document may be continuously corrected and modified. The authors are required to use always the up-to-date template available at the website www.radioeng.cz.

Finally, we would like to ask authors for keeping the following rules (the following paragraphs are using the *itemize* environment):

- The Radioengineering journal prefers American English: we prefer color to colour, modeling to modelling, behavior to behaviour, etc.

- Papers are submitted electronically, source codes preferably in a ZIP archive. The submitted archive file must include all source files, figures, and tables together with the pdf version of the paper.

For authors preferring MS Word, a special template is available at the website www.radioeng.cz.

3. Style and Content of References

The authors are strongly asked to pay special attention to the format and content of references in order to keep the uniform appearance of the references in the journal and to ensure right identification of cited items across various databases.

References should be given in the same order as referred to in the paper. Examples of referring to one or more publications are as follows: [1], [2], [3, 4, 6], [1–4] (`LATEX` authors should use the *cite* package). For ranges of pages, the sign – (en dash, --) without any spaces should be used (e.g. p. 1203–1205).

NAMES OF AUTHORS should be typed in capitals, the family names first, followed by a comma, and initial(s) of first name(s), without “and”. If there are more than three authors, the fourth and next authors’ names are recommended to be substituted with . . . , et al.

Titles of Journals, Books or Proceedings are typed in italics with the first capital letter of all significant words. The titles of journals are preferred to be given in full. Abbreviations can be used but uniform appearance and common understanding of them must be kept in mind. Please, note the upright font preposition In. . . before the title of proceedings [3].

The titles of papers are similar to the basic text, i.e. without capital letters at the beginning of all words. If the cited item is not in English, its original language should be indicated in round brackets, e.g. (in Czech), but the title itself should be given in English translation. Note that no quotation marks are used, neither with titles of papers nor with those of journals or books.

Important: If the reference has its own Digital Object Identifier its DOI must be given. Other identifiers (e.g. ISSN for periodical publications, ISBN for books) are also recommended to be given.

For journal papers, the following data should be given in the following form and order [1]: AUTHOR(S) NAMES. Paper’s title. *Journal Title*, 2014 (year, or month + year), vol. 10, no. 1, p. 1201–1210. DOI: obligatory if available.

For books [2]: AUTHOR(S) NAMES. *Book Title*. 1st ed. City (Country): Publisher, year. (Chapter can be specified in parentheses.) ISBN: xxx.

¹[ftp://ftp.ams.org/ams/doc/amsmath/amslldoc.pdf](http://ftp.ams.org/ams/doc/amsmath/amslldoc.pdf)

For conference contributions published in the conference proceedings [3]: AUTHOR('S) NAMES. Title of the contribution. In *Proceedings Title incl. the Conference Complete Specification*. Venue (Country), year or month + year, p. 1201–1210. ISBN: if available. DOI: obligatory if available.

For electronically published information (datasheets, programmes, reports, etc.) [4]: AUTHOR('S) NAMES. (or company, or similar) *Title of the Document*. Number of pages. [Online] Cited year-month-date. Available at: URL

Acknowledgments

The headline “Acknowledgments” is typed using the command `\vengAck`.

References

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About the Authors ...

Aname ASURNAME was born in He received his M.Sc. from in 1990. His research interests include The paragraph for each author is typed without indentation (use `\noindent`). The full name of the author is typed in bold letters, the surname is written in capitals. To one author, one paragraph of the biography is devoted. No authors' photos are published.

Bname BSURNAME (corresponding author can be indicated here if necessary) was born in She received her M.Sc. from Her research interests include In this section, the corresponding author can be indicated if necessary, especially if not given as the first author.

Cname CSURNAME The end of text in both columns at the page should be aligned vertically.

Appendix A: Appendix Example

The ellipsoid may be parametrized in several ways, which are simpler to express when the ellipsoid axes coincide with coordinate axes. A common choice is

$$\begin{aligned}x &= a \cos(\theta) \cos(\varphi), \\y &= b \cos(\theta) \sin(\varphi), \\z &= c \sin(\theta)\end{aligned}\tag{A1}$$

where

$$-\frac{\pi}{2} \leq \theta \leq \frac{\pi}{2}, \quad -\pi \leq \varphi \leq \pi.$$

These parameters may be interpreted as spherical coordinates, where $\pi/2 - \theta$ is the polar angle, and φ is the azimuth angle of the point (x, y, z) of the ellipsoid. [Source: wikipedia.org]

Appendix B: Amsmath Examples

- Non-numbered equation example:

$$a = b + c.$$

- Splitted equation example:

$$\begin{aligned}5a &= b + 2c, \\d &= \frac{a + 4e}{3} + 1, \\r^2 &= (x - m)^2 + (y - n)^2.\end{aligned}\tag{B1}$$

- Spread equation example:

$$\begin{aligned}a + b + c + d + e + f + g + h + i + j \\k + l + m + n + o + p + q.\end{aligned}\tag{B2}$$

- Aligned equation example:

$$x_1 = y_1 + z_1,\tag{B3}$$

$$x_2 = y_2 + z_2 - \left(\frac{e_1}{e_2}\right).\tag{B4}$$

Appendix C: Example of Listing with Source Code

Example of code with Matlab style
(https://en.wikibooks.org/wiki/LaTeX/Source_Code_Listings).

Listing 1. Example of listing with code

```
% all submatrices
parfor i=1:length(Y)
    % sliced variables preparation
    Y_fft1=cell(size(Y));

    % every column in current submatrix
    for j=1:N
        Y_fft2{i}(:,j)=fft(Y_fft1{i}(:,j));
    end % fft of current column
end

% releasing data from workers
Y_fft=Y_fft2;
```

Appendix D: Algorithm Example

For basic algorithms use package *algorithmic* according to the following example. In case of more complex algorithms environment *algorithm2e* is recommended (<https://ctan.org/pkg/algorithm2e>).

Algorithm 1. Example using *algorithmic* package

```

<text>
if <condition> then
  <text>
else
  <text>
end if
if <condition> then
  <text>

  for <condition> do
    <text>
  end for
else if <condition> then
  <text>

```

```

end if
for <condition> to <condition> do
  <text>
end for
for all <condition> do
  <text>
end for
while <condition> do
  <text>
end while
repeat
  <text>
until <condition>
loop
  <text>
end loop
Require: <text>
Ensure: <text>
return <text>
print <text> { <text> } and , or , xor , not , to , true, false

```
