English Example of Paper Design

First name P. Last Name1 (first author), *Member (or Student Member)*, *IEEE*,

First name P. Last Name2 (second author)

1First author name of Institution/Department, City, Country

2Second author name of Institution, City, Country

***Abstract* – The paper must be prefaced by abstract. Main results represented in the paper should be briefly pointed out. The type Times New Roman Bold 9pt is used to write the abstract, the word «Abstract» is written by type Times New Roman Bold Italic 9pt. Empty line should follow after the abstract (Times New Roman 9pt). Index Terms should be given in the next line (5 words at most).**

***Index Terms* – Example, execution, paper.**

I. INTRODUCTION

P

APER SHOULD BE STARTED with the header located in the center of the page and typed by the Times New Roman type 24 pt. Every word in the title must be capitalized except short minor words such as “a”, “an”, “and”, “as”, “at”, “by”, “for”, “from”, “if”, “in”, “into”, “on”, “or”, “of”, “the”, “to”, “with”.

After the title the empty line should be typed by the Times New Roman 24 pt. Author’s names are given in the center of the page - First name P. Last Name. Times New Roman type 11pt is used to type authors’ names. If the author (co-author) is a member of IEEE organization, this information is pointed out after last name. Times New Roman Italic type 11pt is used to type IEEE status.

In the next line it is necessary to point out the institute the authors (co-authors) work. If there are several co-authors worked in the different institutes each institute is pointed out starting with new line. The numeric subscripts are used to indicate the author membership of an institute. The font Times New Roman 11pt is used to type the institute name.

II. PROBLEM STATEMENT

The first letter of the paper text is typed by a dropped capital in two line proportion. The first 2-3-4 words of the text are typed by the uppercase letters starting with the second letter of the first word (see section I, paragraph 1).

The paper text is typed in **Microsoft Word (save file in \*.doc format),** paper size А4 (210297) by Times New Roman 10 pt. The top margin should be set to **2.8 cm**, the bottom margin should be set to **3.4 cm.** The left and the right margin should be set to **1.8 cm**. The paper text should be divided into two columns. The space between the columns must equal **0.5 cm**. The single interval is used for typing the paper text. The indentation should equal **3 mm**. The justified alignment should be used in the paper text.

The paper text must be divided into sections. **The standard section titles (“Introduction”, “Problem Statement”, “Theory”, “Experimental Results”, “Discussion of Results”, “Conclusions”) should be used.** It is assumed to use another section titles if it is necessary.

All abbreviations and acronyms the first time they are used in the text should be defined, even after they have already been defined in the abstract. Abbreviations such as IEEE, SI, ac, and dc do not have to be defined. Abbreviations that incorporate periods should not have spaces: write “C.N.R.S.,” not “C. N. R. S.” Do not use abbreviations in the title unless they are unavoidable.

In the “Introduction” section the overview of literature on the paper subject should be given. The problem statement should follow it. The research problem should be formulated explicitly. The technicalities should be used for the research task formulation. Theoretical and experimental investigations should be described in “Theory” and “Experimental Results” section correspondingly. All scientific results obtained or a part of them are proposed for discussion by the authors in the section “Discussion of Results”. By the scientific ethics viewpoint it cannot be allowed to publish another’s results without the reference to the sources cited.

All sections are numbered by the roman numerals. The section title must be located in the middle of the column. The uppercase letter (Times New Roman 10 pt) is used for typing the section titles. Each word of the section title starts with the uppercase letter of Times New Roman 11pt. **The word division (hyphenation) shouldn’t be allowed in titles and in the section**. **The period shouldn’t be used** in the section title. The interval before the section title is 18 pt. The interval after the section title is 6 pt. The subsections should be named by alphabet letters. The interval before subsection should be 12 pt. The interval after the subsection should be 6 pt. Use the font Times New Roman Italic 10pt for the title of subsections.

III. THEORY

1. *Figure Design*

**All illustrations must be clear, high-quality and in greyscale.** It is impossible to publish color illustrations. All color illustrations must be converted to greyscale. **The graphic should be grouped, saved as a picture in \*.jpg or \*.tiff format and then put in the paper text**. The figure should be put in the text directly. **It is not acceptable to put the figure over the text.** If the picture is created by the Microsoft Office tools it is necessary to group it and to convert in \*.pdf document. Then the picture should be copied from this document to paper text like a photo by use of “Print Screen” key.

Try to position figures and tables at the tops and bottoms of columns and avoid placing them in the middle of columns. Large figures may span across both columns. Avoid placing figures before their first mention in the text. The figure should be left aligned in the column (see Fig.1). **It is not acceptable** to put the caption on the figure. The captions are typed in the paper text. Times New Roman type 8 pt is used to type the caption. There is an empty line (6 pt) before the figure and after the caption. **It is acceptable to use only “Fig.#” abbreviation for figure reference.**

1. *Table Design*

The tables are numbered by the roman figures in order of appearing in the text. The word «TABLE» is typed by the uppercase letter. Times New Roman type 10 pt is used for this. The word «TABLE» is placed in the middle of the column. The table title should correspond with table content and is placed in the middle of the next line. Times New Roman type 8 pt is used for typing the table title. The table title is typed by the uppercase letter. The first letter of each word in the title of table should have the font Times New Roman 10 pt.

The number of table columns and rows is determined by the author on the assumption of reasonable consideration. Times New Roman type 8 pt is used for typing the table content, see Table I. The Table is placed in the middle of the column. There is an empty line (8 pt) before the table. The left alignment should be used in the table.

It is possible to use the tables copied from the Microsoft Excel document. In this case it is not acceptable to use table numbering and table title in Microsoft Excel documents. The correct design of the table copied from the Microsoft Excel document is mentioned in Table II.

There is an empty line (6 pt) after the table.

1. *Equation Design*

**The equations** are typed **in MS EQUATION 1 or 2 or MathType 6.0** or later. The preset parameters in the style menu and in the size menu in MS EQUATION 1 or 2 are mentioned in Table I and II. The **right alignment** should be used for the equations. The equation should be placed in the center of the column. For example:

. (1)

The equations are numbered in order of appearing in the text. If there is no reference to some equations these equation aren’t numbered. The equation number is typed in the parenthesis on the right side of the column. If there is a

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| --- |
|  |
| Fig. 1. Example of figure design. |

TABLE I

THE PRESET PARAMETERS IN THE STYLE MENU

IN MICROSOFT EQUATION 1 OR 2

|  |  |  |
| --- | --- | --- |
| Style | Format | Character format |
|  |  | Bold | Italic |
| Text | T.N.R. |  | X |
| Function | T.N.R. |  |  |
| Variable | T.N.R. |  | X |
| L.C.Greek | Symbol |  | X |
| U.C.Greek | Symbol |  | X |
| Symbol | Symbol | x |  |
| Matrix-Vector | T.N.R. | x |  |
| Number | T.N.R. |  |  |

TABLE II

THE PRESET PARAMETERS IN THE SIZE MENU

IN MICROSOFT EQUATION 1 OR 2



reference to the equation (1) in the paper text the equation number is typed in the parenthesis too.

If the equation size exceeds the column size the division of the equation or **the supplementary intervening variables** and functions having another symbolic representation than the variables and functions used in the text are applied. The punctuation marks required to indicate the relationship between the equation and the paper text are typed **outside** the equation.

IV. EXPERIMENTAL RESULTS

To denote the dimension of physical quantities in the paper it is allowed to use SI units. Use of off-system units is allowed only if it is the common standard of notation in some field of science.

Dots are used in numerical intervals of physical quantities instead of hyphen (e.g., 40…50 cm).

The symbol **÷ is never used.** Dash with blanks is used instead of it.

**Dash with blanks** is used for text dash notation. In addition, it is used for the interval «from – to» indication (e.g., January – February 1992, during 3 – 5 s, in issues [1 – 3]).

**Dash without blanks** is used to notation of various compositions, interface, and dependence and so on, as well as to joint two surnames (e.g., system Pb–Sn–Te,
gas–liquid interface, equation Clausius–Clapeyron).

**Hyphen without blanks** is used in the cases: γ-radiation; Professor M.M. Gusev-Lebedev; instrument; U-Pb-method; sample 83-4, section 1-1.

**Hyphen with blanks** **is never used.**

Mathematical operators and relation signs (except solidus) are separated from adjacent symbols or numbers except the cases than such signs are used for notation the positive or negative value, increment and decrement, e.g., the boiling temperature precision is ±1.5°C, during ~20 min, ethanol : water = 1 : 1, multiplication factor 200.

Several words abbreviations are separated by blanks except the abbreviations in general use (e.g., p.m., a.m., i.e.).

The abbreviation used as an adjective is hyphenated (e.g., IR-spectroscopy, LСD-state).

V. DISCUSSION OF RESULTS

**Point is decimal symbol: 5.25**. Celsius degree is noted like 5°C, and not 5°. Angular degrees are never omitted: 5° – 10°, and not 5 – 10°; on the figure on the axes: θ, deg., and not θ°. Variable dimension is separated by comma (e.g. E, kJ/mol).

If the authors want to compare their theoretical and experimental results with the results obtained earlier it is necessary to make reference to the paper, where these results are described [1-7]. The literary source is numbered in the order of citing and the source number is given in square brackets.

VI. CONCLUSION

The bibliographic list is given like a special unnumbered section. The type of the bibliographic list is Times New Roman type 8 pt.

References should be indicated by Arabic numerals in square brackets, the interval between bracket and the following text is set to be **5 mm**. Reference list should consist of 10 sources at least.

Formats of references are as follows.

* books:

J. K. Author, “Title of chapter in the book,” in Title of His Published Book, xth ed. City of Publisher, Country: Abbrev. of Publisher, year, ch. x, sec. x, pp. xxx–xxx. See [1].

NOTE: Use et al. when three or more names are given.

* handbooks:

Name of Manual/Handbook, x ed., Abbrev. Name of Co., City of Co., Abbrev. State, year, pp. xx-xx. [2].

* conference articles:

J. K. Author, “Title of paper,” in Unabbreviated Name of Conf., City of Conf., Abbrev. State (if given), year, pp. xxx-xxx.

* electronic conference articles:

J. K. Author [two authors: J. K. Author and A. N. Writer ] [three or more authors: J. K. Author et al.], “Title of Article,” in [Title of Conf. Record as it appears on the copyright page ], [copyright year] © [IEEE or applicable copyright holder of the Conference Record]. doi: [DOI number] [3].

* online sources:

J. K. Author. (year, month day). Title (edition) [Type of medium]. Available: http://www.(URL) [3]

* for patents:

J. K. Author, “Title of patent,” U.S. Patent x xxx xxx, Abbrev. Month, day, year. [4].

* standards:

*Title of Standard*, Standard number, date. [5]

* dissertations:

J. K. Author, “Title of dissertation,” Ph.D. dissertation, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, year. [6]

* periodicals:

J. K. Author, “Name of paper,” Abbrev. Title of Periodical, vol. x, no. x, pp. xxx-xxx, Abbrev. Month, year.[7]

ACKNOWLEDGMENT

In this section authors can thank all those who have helped in carrying out the research or provide information about funding including grant numbers and titles.

REFERENCES

1. M. Gorkii, “Optimal design,” Dokl. Akad. Nauk SSSR, vol. 12, pp. 111-122, 1961 (Transl.: in L. Pontryagin, Ed., The Mathematical Theory of Optimal Processes. New York: Interscience, 1962, ch. 2, sec. 3, pp. 127-135).
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7. W. Rafferty, “Ground antennas in NASA’s deep space telecommunications,” Proc. IEEE vol. 82, pp. 636-640, May 1994.

**At the end of the paper biographies and photos of the authors should be given. Times New Roman type 8pt is used. Photos must be high-quality black and white images in jpg format (2.5cm×3.2cm) and top left of the biographies.**

**Name M. Surname** was born in (place) in (year). He/she received B.S./M.S./ Ph.D. degrees in (specialty) from (name of the University), City, Country, in (year).

The second paragraph uses the pronoun of the person (he or she). It lists military and work experience, including summer and fellowship jobs. Job titles are capitalized. The current job must have a location; previous positions may be listed without one. Information concerning previous publications may be included. Current and previous research interests end the paragraph.

The third paragraph lists any memberships in professional societies other than the IEEE. Finally, list any awards and work for IEEE committees and publications.

**Ivan I. Ivanov** was born in New York City, in 1977. He received the B.S. and M.S. degrees in aerospace engineering from the University of Virginia, Charlottesville, in 2001 and the Ph.D. degree in mechanical engineering from Drexel University, Philadelphia, PA, in 2008.

From 2001 to 2004, he was a Research Assistant with the Princeton Plasma Physics Laboratory. Since 2009, he has been an Assistant Professor with the Mechanical Engineering Department, Texas A&M University, College Station. He is the author of three books, more than 150 articles, and more than 70 inventions. His research interests include high-pressure and high-density nonthermal plasma discharge processes and applications, microscale plasma discharges, discharges in liquids, spectroscopic diagnostics, plasma propulsion, and innovation plasma applications. He is an Associate Editor of the journal Earth, Moon, Planets, and holds two patents.

Mr. Ivanov was a recipient of the International Association of Geomagnetism and Aeronomy Young Scientist Award for Excellence in 2008, the IEEE Electromagnetic Compatibility Society Best Symposium Paper Award in 2011, and the American Geophysical Union Outstanding Student Paper Award in Fall 2005.