# **REQUIREMENTS**

to the design of an article for publication in the journal "The world of transport and technological machines"

## **GENERAL REQUIREMENTS**

- Material submitted must be original and not previously published in other journals;
- volume of the submitted material is from 4 to 9 pages of A4 format; all pages of the manuscript should be sequentially numbered;
  - the article should be submitted in digital form (e.g. via e-mail);
- in one journal there may be published only one article of one author, including coauthorship;
- if the article is returned to the author for revision, a revised version should be sent to the editor again, with attached letter with answers to reviewer's comments. Corrected version of the article is reviewed by the editorial board again. The date of submission of the material is considered to be the date of reception of the final version of the revised article;
- abstracts of all published materials, keywords, author information, reference lists will be available on the website of the journal and on the website of the Russian Scientific Electronic Library RUNEB (Russian Science Citation Index).

# REQUIREMENTS TO THE CONTENT OF ASCIENTIFIC ARTICLE

The scientific article submitted for publication should have the following elements:

#### Introduction

Indicate the objectives of the work and provide sufficient accumulated experience, avoiding a detailed review of the literature or summarized results.

#### Material and methods

Provide sufficient details so that the work can be replicated by an independent researcher. Methods that have already been published should be summarized and indicated by reference. If you quote directly from a previously published method, use quotes and also refer to the source. Any changes to existing methods should also be described.

# Theory / calculation

The «Theory» section should extend, rather than repeat the background to the article already considered in the introduction, and lay the foundation for further work. On the contrary, the «Calculation» section is a practical development from a theoretical basis.

## Results

Results should be clear and concise.

### **Discussion**

Here it is necessary to consider the significance of the work, and not repeat them. Often advisable to the combined section «Results and discussion». Avoid detailed quotes and discussions of published literature.

# **Findings**

The main findings of the study can be presented in a short section «Conclusions», which can stand alone or form a subsection of the «Discussion» section or the «Results and Discussion» section.

In a text it is not recommended to use:

- colloquial language, technicisms, professionalism;
- different scientific and technical terms of similar meaning (synonyms) for description of the same thing;
  - random word formation;
  - inappropriate or incorrectly formed abreviations;

Acronyms and abbreviations must be decrypted right after the first mention in the text.

# REQUIREMENTS TO THE FORMATTING OF A SCIENTIFIC ARTICLE

The article should be typed in font Times New Roman, 12 pt, single spacing, text aligned to the width; indention - 1.25 cm, right margin - 2 cm, left margin - 2 cm, top and bottom - 2 cm.

# **Required elements**:

- title (in Russian and English) of a published material must be precise yet interpretative; words included in the title should be clear on their own, and not only in the context; recommended to avoid complex syntactic constructions, the new word-formations and terminology, as well as the words of narrow professional and local importance;
- abstract (in Russian and English) describes goals and objectives of a research and its practical application, novelty of a presented material; recommended average volume 500 characters;
- keywords (in Russian and English) text labels using which you can find an article and to determine the subject area of a text; usually they are chosen from text of a published material, 5-10 keywords suffice;
- list of references should contain not less than 20 sources, designed according to GOST 7.1-2003. The bibliography should exceed 30% of the total.

### STRUCTURE OF AN ARTICLE

- The index of the Universal Decimal Classification (UDC) top left with indention.
- Skipping one line aligned, centered, no indention and typed in uppercase light regular font 12 pt, initials and names of authors (IVANOV I.I.).
- Skipping one line title of the article, typed without indention in capital letters in bold 14 pt, and center aligned.
- Skipping one line brief (no more than 10 lines) abstract, typed with indentation, 10 pt italics in Russian. After with indentation -keyword in Russian.
  - Text of an article, typed in normal font 12 pt, width aligned.
- References, typed in normal 10 pt, placed at the end of an article. Title "**REFERENCES**" is typed in bold 12 pt, capital letters aligned to the center.
- After the list of references, with indention, an information about the authors is located in the following sequence, typed in normal font 10 pt:

Last name, first name (in bold)

Institution or organization

Address

Degree, academic rank, position

E-mail (normal text)

- Skipping one line aligned, centered, with no indention, authors' initials and surname (in English) are typed in uppercase light regular font 12 pt,
- Skipping one line title of the article, typed without indention in capital letters in bold 14 pt, center aligned (in English).
- A brief (no more than 10 lines) abstract, typed with indention italic 10 pt, then, with indention keywords (in English). The bibliography should exceed 30% of the total.

# TABLES, FIGURES, FORMULAS

All tables, figures and formulas in a text, should be numbered.

**Formulas**should be typed in the editor Microsoft Equation 3.0 Formulas in the following sizes: regular font - 12 pt, large index - 10 pt, small index - 8 pt.

Formulas put as a picture are not allowed!

Russian and Greek letters, as well as designations of the trigonometric functions – normal font, letters - italics.

Formulas are located in the middle of the page and numbered (only those to which there exist a reference); the number of the formula is indicated by Arabic numerals in parentheses near the right margin.

In the formulas should be used symbols established by appropriate standards. Description starts with the word "where", no colon, no indentation; explanation of each symbol is given in a new line in the sequence, wherein the symbols in the formula are shown. Units are given in accordance with the International System of Units SI.

Continuation of a formula to the next line is permitted only on the signs of the operations, and the sign at the beginning of the next line is repeated.

# Example of a formula in a text

$$q_1 = (\alpha - 1)^2 (1 + \frac{1}{2\alpha})/d,$$
 (1)

where  $\alpha = 1 + 2\alpha/b$ - a stress concentration factor;

 $d = 2\alpha$  - the size of the elliptical hole along the dangerous section.

**Drawings**and other illustrations (graphs, charts, diagrams, photographs) should be placed directly after the text in which they are mentioned first. Figures, the number of which should be logically justified, submitted as separate files in format \* .eps (Encapsulated PostScript) or in TIF with a size of at least 300 dpi.

If the picture is small, it is desirable that it is wrapped by text.

Captions (bold italic 10 pt) are centered, with no period at the end:

## Figure 1 - Caption

Explanatory information is typed in light italic font 10 pt and put after drawing.

**Tables** must be cross-referenced in the text. To reference, in text should be written "table" and its respective number.

Headings of graphs and tables are written with upper case letters, and sub-headings - with a lower case if they constitute one sentence with heading, or with a capital letter, if they have independent meaning. Period is not put at the end of headings and sub-headings. The text within the table depending on the amount of material being placed can be dialed in a smaller font size, but not less than 10 pt. Text in columns left aligned or centered.

The word "Table" is placed to the left, after a dash is the table name, eg:

Table 1 - Caption Text

If at the end of the page table is ruptured and continued on the next page, the lower horizontal line in the first part of the table is not drawn. When transferring the table to another page, above it is written the word "Continuation" and indicate the number of the table: Example: Continuation of Table 1

The numbering of the count tables with Arabic numerals is only necessary in cases where the text contains references to them, or when dividing the table into pieces, as well as when transferring a table on the next page.

#### **EXAMPLE OF FORMATTING**

UDC 004.023

E.G. ZHILYAKOV, V.I. LOMAZOVA, V.A. LOMAZOV

# SELECTION OF ADDITIVE FUNCTIONAL MODELS OF COMPLEX SYSTEMS

Model representation of complex systems with the account of subsystem interaction is considered. Modeling methodic is suggested. It involves construction and study of a class of mathematical models, distinguished by the degree of subsystem relations, and genetic selection of models, most convenient for further exploitation.

Keywords: complex system; mathematical model; genetic algorithm; selection.

Text

### **BIBLIOGRAPHY**

- 1. Buslenko, N.P. On the theory of complex systems [Text] / N.P.Buslenko. Proceedings of the USSR Academy of Sciences. Technical Cybernetics, 1963. №5.
- 2. System Analysis and Decision Making [Text]: the dictionary catalog / Ed. V.N.Volkova, V.N. Kozlov. M.: Vyssh.shk., 2004. 616 p.
- 3. Novikov, F.A. Discrete mathematics for computer programmers [Text]: a textbook for high schools / F.A. Novikov. 3rd ed. SPb.: Piter, 2008. 384 p.
- 4. Samarskii, A.A. Math modeling. Ideas. Methods. Examples [Text] / A.A. Samarskii, A.P.Mikhailov. 2nd ed. M.: Fizmatlit, 2005. 320 p.
- 5. Bioinspired methods in optimization [Text] / L.A.Gladkov, V.V.Kureichik, V.M.Kureichik, V.P.Sorokoletov. M.: Fizmatlit, 2009. 384 p.

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