

## **Submissions guidelines**

Vestnik of St. Petersburg State University

**Series 10. Applied Mathematics. Computer Science. Control Processes.**

Address of Editorial Board Vestnik of St. Petersburg University

199004 St. Petersburg, V.O. 6th Line, 11/21, office # 319.

tel./fax: +7 812 328 44 22,

email: vestnik2009@rambler.ru

198504 St. Petersburg, Peterhoff, Universitetskaya pr. 35

Faculty of Applied Mathematics, office # 329

tel.: +7 812 428 45 10

email: vkarelin@apmath.spbu.ru

### 1. Publication Standards

The journal issues work that has been submitted from one of the departments of St. Petersburg University {and especially welcomes submissions from those outside the University}. The journal publishes original, previously unpublished research in the fields of applied mathematics, control or computer science, as well as articles in the fields of digital technology and mechanics with a mathematical character. The size of a submission, including tables, illustrations, etc., comprises between 6 and 15 journal pages; a short communication of between 3 and 5 pages.

All manuscripts which appear in the journal are subject to peer review. Researchers working in the same department or institution in which the research was done are not invited to participate in the peer review of the publication of that research. Reviewers must be aware that the manuscripts sent to them are the personal property of the submitting authors and therefore must not be shared or their contents disclosed. Reviewers are not permitted to copy articles for their own purposes. The peer-review process is confidential. The author of a reviewed article receives a copy of the review. The acceptance (or rejection) of an article is made by the editorial board of a series after its review and discussion. The decisions of the editorial board are recorded in the minutes of its meetings. Graduate students are not required to submit any fees for publication.

### 2. Submissions Guidelines

An article must be submitted to the editorial board in printed (with two copies) and electronic form [no electronic submissions alone?]. Submissions are accepted in the L<sup>A</sup>TEX2 $\epsilon$  format. In the case of the electronic version, it is assumed that it will be in a TeX format (entitled, "MyArticle.tex), with a corresponding file in PS or PDF, TeX files with the abstract, article and prefatory matter and a separate file with illustrations, if necessary. In order to prepare manuscripts in the Windows operating system one may use any version of the MikTeX, which can be downloaded for free from the cite <http://www.miktex.org/>. We strongly request that when composing the file you do not use converters such as Word2TeX and others. For the preparation of PS and PDF files, the free program Ghost

Script (which is available, for example, on the site <http://www.ghostscript.com> may be used). The recommended minimum preamble for a TeX file includes:

```
\documentclass[twoside]{article}
\usepackage[cp1251]{inputenc}
\usepackage[english,russian]{babel}
\usepackage{amsmath}
\setlength\textwidth{14cm}
\setlength\textheight{20,25cm}
\addtolength\hoffset{9,55mm}
\addtolength\voffset{2,25mm}
\oddsidemargin0in \evensidemargin0in
```

For printing it is essential to introduce some alterations to the TeX file: in the header the scale factor `\mag=1250` and change the parameters to the following:

You may print directly from a .dvi file or from a .ps or .pdf (the article [file?] must contain all tables and illustrations).

2. Do not use your own macros, commands and declarations (in your TeX file, do not use `\def`, `\newcommand`, `\renewcommand`, `\numberwithin`).

3. The first page of the article must contain:

a. the UDC (УДК) in the first line (the UDC code may be determined through its website locator: <http://www.udcc.org/udcsummary/php/index.php>). If the title is generated automatically, the UDC may be placed in the title: `\title{\hbox{\normalsize УДК ...}Название}`.

b. initials and surname of the author (or authors).

c. the title of the article as well as identification of grants, if any, which have supported publication. Statements of grants are put in the form of a footnote `\footnote` in the title section.

4. A hyphen is equivalent to a minus [-], and a dash to two minuses [--].

5. For quotes use both open and closed characters «». For quotes within quotes, use „ and “ respectively. For English, use “ and ”, respectively.

6. For decimal fractions, only use commas for the right-handed fraction (e.g., ‘0,5’).

7. Indicate physical quantities with their Russian terms as character combinations, e.g.:

$\sim$  :  $\$f_i=100\$ \sim$  GHz, as well as, 2009  $\sim$  г. .

8. Proper name initials should also not be orphaned: A.  $\sim$  A.  $\sim$  Ivanov.

9. Russian abbreviations i.e., e.g., should also not be orphaned: т. ~ е. ~ т. ~ д.
10. Numerical formulas are set in the ‘equation’ environment. Formulas that consist of many lines should be set in the ‘multline’ environment. References and legends can be ordered manually with the label /label/\ref. Non-numerical formulas should be set in the equation\* environment (thus, multline\* for those with many lines). Please number only those formulas which have one line in the text of the article.
11. While using abbreviations for symbols of quantity, use the command: \text, for example,  $\$S_{\{\text{eff}\}}\$$  or  $\$B_{\{\text{макс}\}}\$$ .
12. The bibliography is placed at the end of the article and is drafted in accordance with GOST p. 7.0.5-2008 (see the examples below). Articles are cited by arabic numerals set in square brackets numbered in the order of their appearance in the text (i.e., [1] p. 25, [2], p. 66). In citations of translated literature, the titles and names of authors are to be placed in brackets in their original language in latin characters.

Example Bibliography:

1. *Львовский С. М.* Набор и верстка в системе L<sup>A</sup>TEX. М., 2003. 448 с.
2. *Knuth D. E.* The TEXbook. Reading: Addison–Wesley Publishing Company, 1984. 483 p.
3. *Смит Р.* Полупроводники / Пер. с англ. М., 1982. 558 с.
4. *Янг Ч., Миллс Р.* Сохранение изотопического спина и изотопическая калибровочная инвариантность // Элементарные частицы и компенсирующие поля: Сб. статьи / Под ред. Д. Д. Иваненко. М., 1964. С. 28–38. 5. *Решеткин Н. Ю. Фаддеев Л. Д.* Интегрируемость квантовой модели главного кираль-ного поля // Тр. VII Междунар. совещ. по пробл. квант. теории поля. Алушта, 1984. С. 37–55.
6. *Багаев А. А.* Приложение метода фонового поля к перенормировке нелинейной сигма-модели: Дис. ... канд. физ.-мат. наук. СПб., 2008. 135 с.
7. *Киселев В. А., Новиков Б. В., Убушие в Е. А.* и др. Поверхностные экситоны с дыркой, локализованные в квантовом инверсионном слое // Письма в Журн. эксп. теор. физики. 1986. Т. 43. Вып. 8. С. 371–373.
8. *Новожилев Ю. В., Новожилев В. Ю.* Работы Владимира Александровича Фока по квантовой теории. (К столетию со дня рождения) // Теор. мат. физика. 1999. Т. 120. No 3. С. 400–416.
9. *Daughton W., Scudder J., Karimabadi H.* Fully kinetic simulations of undriven magnetic reconnection with open boundary conditions // Phys. Plasmas. 2006. Vol. 13. P. 072101-(1)–072101-(15).
10. *Antonov N. V.* Renormalization group, operator product expansion and anomalous scaling in models of turbulent advection // J. Phys. (A). 2006. Vol. 39. P. 7825–7865.
11. *Istratov A. A., Vyvenko O. F.* Exponential analysis in physical phenomena // Rev. of Scientific Instruments. 1999. Vol. 70. N 2. P. 1233–1257.
12. *Ван Цзюэ, Сидорова Л. В., Толмачев Ю. А.* О влиянии дифракции волн на временную структуру сигнала на выходе интерферометра // Вестн. С.-Петербур. ун-та. Сер. 4: Физика, химия. 2006. Вып. 3. С. 106–111.

The bibliography may be entered manually, [1], as well as using the thebibliography and the

command `\cite`.

13. Each table must be placed on its own page at the end of the article. Please use the `longtable` environment from the `longtable` packet. Text in tables should be set in columns even at the centre. The font size should be one level lower than the standard (e.g., 9 pt.): `{\small \begin{longtable}{c|c|c|c} ... \end{longtable}}`. All tables must have the name and command `\caption{}`. The link to the table must be табл.~1. Captions cannot be orphaned.

14. The three separate TeX files must include Russian and English abstracts consisting of about of 2-3 sentences (including the surname of the author and the name of the article in English), as well as an author's summary for review (no longer than half a page) with the UDC code. At the end of the review and English abstract there must also be a list of keywords in both Russian and English.

15. The email and postal address with postal codes and the corresponding author's complete name should be put at the end of the article. The corresponding author's contact telephone number should be included as well.

Please also provide the following information for each author:

1. Full name.
2. University title or highest degree earned.
3. Organisation at which the author is employed, title and/or position.
4. Quantity of published work.
5. Research specialisation.
7. Email address.

#### Requirements for Illustrations

16. All illustrations must be printed and included in the printed version of the article.

17. General requirements for all drawings: width: 1) less than 14 cm., 2) black and white, excluding grey-scale images.

18. Illustrations in which text is absent must be submitted in a .jpg or .tiff format. Preferred resolution is 1200 dpi, less than 600 dpi is unacceptable. If illustrations were originally in a coloured format, they should be converted to black and white via a program such as Adobe Photoshop (with the parameters of 1200 dpi input, halftone method, rasterisation 54 lines per inch).

19. Rasterised illustrations including text must be submitted in a vector format .pdf, .eps, .ai or .cdr. The text must also be vectored. It is also preferred that vectors appear with axes and gradations in them (minimum thickness, 0.4 pt.). To set up a drawing with rasterised elements, import the vectors through a graphics editor, Adobe Illustrator or Corel Draw, for example. After this, set the text and the vector's data. MS Word and Excel are, in principle, adequate for this task.

20. Drafted illustrations (drawings, charts, etc.) must also be submitted in a vectored format. Conversion of rasterised images to vectored images is not acceptable. More acceptable are drawings prepared in the Meta Post format (.mp). This application (mp.exe) is included in the standard MikTEX package. Additionally, MikTEX also includes the file mpman.pdf, which serves as a manual for the program.

Meta Post contains a large quantity of pre-prepared examples of illustrations. Any other graphics editors for the preparation of illustrations is suitable: Adobe Illustrator, Corel Draw, one may also use MS Word/Excel. At least the file could be saved in a .doc or .xls format and converted into .pdf. Lines may not be any thinner than 0.5 pt.

21. All texts accompanying illustrations must be in nine point Times New Roman font.

22. A list of drawings and illustrations must be placed at the end of the article. Each must be numbered and titled.

Citation for an illustration: ill. # 1, citation for a portion of an illustration: ill. # 1a, ill. /hbox {3a, -b}. This must correspond with captions in the illustrations: 'a, b', etc.