Preparation of Papers for PhysCon 2005

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Abstract— This document provides instructions for preparation a paper for Proceedings of the Second International Conference "Physics and Control" (PhysCon 2005).

I. INTRODUCTION

The preprints of conference proceedings on CD-ROM will be published by the beginning of the conference and distributed among the participants at the Registration Desk. The papers that satisfy the IEEE requirements will be recommended for publication in the on-line database IEEE Xplore (http://ieeexplore.ieee.org) containing almost a third of the world's current electrical engineering and computer science literature, including the top-cited journals in the field.

No printed version of the proceedings will be published by the Organizing Committee. Abstracts will be published in a single book with the conference program.

Our guidelines basically follow those adopted for CDC–ECC'05 publications. Certain items were taken from the IEEE documentation.

Please read this document carefully. If you have an experience of participating in PhysCon 2003, note that the standards for IEEE publications have changed dramatically since 2003 due to a new IEEE publication policy.

II. PAPER SUBMISSION

Authors submit papers via their Virtual Offices at the site http://coms.physcon.ru. The papers uploaded before March 15, 2005 are regarded as preliminary versions and will not be considered for publication. Contributions sent by e-mail also will not be considered. The deadline for receipt of contributions is **June 1, 2005**.

Papers must be uploaded in a PDF form. The size of the file must not exceed **1.5 Mb**.

At least one author per paper must register for the conference and pay a registration fee. Otherwise, the paper will be excluded from the final version of conference proceedings presented to IEEE.

III. PAPER SPECIFICATIONS

A. General Information

The maximal size of a paper is **6** pages for regular and poster talks, **8** pages for the talks on invited sessions, and **12** pages for plenary or invited lectures.

The title and authorship of the paper will appear in the final program, in the table of contents, and author index of

the proceedings as they are shown in the final version of the manuscript submitted to the Organizing Committee.

B. Layout and Page Numbers

When producing a PDF file set **A4** (210 mm by 297 mm) paper size and 600 dpi resolution.

The paper must be formatted in two columns. It is highly recommended to use LATEX 2ε in preparing and formatting your manuscript.

The size of the body of the text must be **240 mm by 177 mm**. The width of each column must be **86 mm**. The distance between the two columns of text must be **5 mm**. Left margin should be **19 mm**. The distance from the top edge of the paper to the top of the first line of type should be **25 mm** for the first page and **19 mm** for the other pages. Paragraph indentation should be **3.5 mm**.

Please, do not number pages.

C. Fonts

Use proportional serif typefaces (such as Times Roman). **For uniformity of the appearance, do not employ sans serif fonts** (Helvetica, Arial, etc.) for the body of the text and titles. For the main body of the text a **10 pt** size roman font must be used.

Do not change the font sizes or line spacing to squeeze more text into a limited number of pages.

All the fonts must be embedded as subsets into the document. (See section "IEEE Xplore Compatibility" for details.) Do not generate your PDF file as image (without fonts recognition).

D. Title

The title should be centered across the top of the first page. The **16 pt** size bold font is required.

E. Authors' Names and Addresses

The authors' names must be centered below the title. The **11 pt** size roman font is required. Affiliations and e-mail addresses must be put in the unnumbered footnote on the first page.

F. References

References should be numbered consecutively throughout the paper and be listed at the end of the paper with the main heading "References." When citing references in the text, type the corresponding number in square brackets [1]. References should be complete and in standard IEEE style. See the section "References" for examples of listing different kinds of publications.
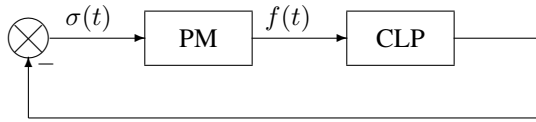
Fig. 1. Single-column sample picture

Do not use for references other character sets than English. **Titles using Cyrillic or Oriental characters must be translated into English, the names of journals and publishers must be transliterated in Latin letters.**

G. Equations

Number equations consecutively with the number in parenthesis, flush to the right margin. E.g., see equation (1)

$$\sigma(t) = \sigma_0(t) - \int_0^t \gamma(t-s)u(s)\,ds. \qquad (1)$$

Use "(1)," not "Eq. (1)," in references to the equations.

H. Theorems, Lemmas, Definitions and so on

The body of a theorem, or a similar statement, can be typed either in roman, or in italic font. When using LaTeX employ the \newtheorem command. E.g.,

Lemma 1: Body of the lemma. Body of the lemma. Body of the lemma. Body of the lemma. Body of the lemma. Body of the lemma. Body of the lemma. Body of the lemma.

For proofs the following style is recommended:

Proof: Body of the proof. Body of the proof. Body of the proof. Body of the proof. Body of the proof. Body of the proof. Body of the proof. Body of the proof. ∎

When using LaTeX, the **proof** environment, defined in the class file **ieeeconf.cls** can be applied.

I. Figures

Figures should be inserted near their citation or at the end of the manuscript, after References. Large figures may extend over two columns if necessary. Make sure that you number and include a caption for each figure. See Fig. 1 and Fig. 2 for examples.

Blurry low-resolution figures are not acceptable. If you are unable to produce a high quality figure, it is worth to exclude it at all.

J. Tables

Table heading, including the number, is to be typed above the table. See, e.g., Table I.

TABLE I

CAPTION TEXT

Title 1	Title 2	Title 3
Row 1, Col 1	Row 1, Col 2	Row 1, Col 3
Row 2, Col 1	Row 2, Col 2	Row 2, Col 3
Row 3, Col 1	Row 3, Col 2	Row 3, Col 3

IV. HEADINGS

Main headings are to be column centered in capital roman letters.

A. Subheadings

Subheadings should be in italic font. They should start at the left-hand margin on a separate line.

1) Sub-subheadings: They are to be in italic font, should be indented and run in at the beginning of the paragraph.

V. LANGUAGE

The paper must be written in English. British and American English are equally acceptable. **Do not include texts written in other languages, e.g., in Cyrillic letters.**

VI. HINTS FOR LaTeX AND MS WORD USERS

Use MiKTeX 2.3 or higher for Windows, TeTeX 1.0.7 or higher for Linux and Solaris, and OzTeX 5.1 or higher for Mac.

A class file **ieeeconf.cls** can be downloaded from PhysCon 2005 site. For those authors who use BibTeX database we provide an archive file **ieeetranbst.zip** with official IEEE BibTeX styles.

The LaTeX file **author.tex** containing this instruction can be downloaded from our site and can serve as a template. Those users who prefer Microsoft Word can download a sample file **author.doc**.

VII. IEEE XPLORE COMPATIBILITY

Since 2005 IEEE strictly demands that PDF files sent to IEEE by conference organizers must be IEEE Xplore compatible. The guidelines for this compatibility are briefly summarized in the official IEEE document called "Simplified Requirements for Creating PDF Files for IEEE Xplore." A file **author_pdf_guide_v32_win.pdf** with this document can be downloaded from our conference site. We ask all the authors to learn this document carefully. Those authors who want to get a detailed account on IEEE standards can also download an extended version of the previous document (file **ieee_pdf_specv32.pdf**). Below is our brief comment to these guidelines.

The critical requirement is that **all the fonts employed must be embedded or subset embedded** into the PDF document. Font embedding must have no exception, including 14 base fonts (Courier, Times, Helvetica, etc.), which are note embedded by default by Acrobat Distiller, GSview and other popular programs.

The simplest way to confirm if your fonts are embedded, is to view your PDF file with Adobe Reader. Choose the menu item File/Document Properties/Fonts. After each font name it should show "Embedded Subset."

It is highly desirable that **all the fonts used be scalable fonts of Type 1 or True Type**, not bitmapped fonts (Type 3 or Type 0). Observe that obsolete versions of LaTeX work only with METAFONT and cannot produce scalable fonts in principle.
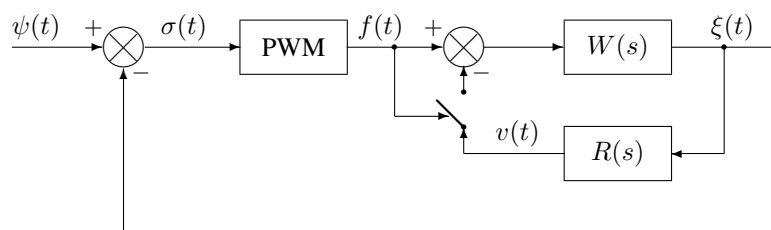
Fig. 2. Two-columns sample picture

PDF version 1.3 (Acrobat 4) is preferred. Set resolution 600 dpi for your text and 300 dpi for images.

Neither links nor bookmarks are allowed. Internet addresses must be included as plain text, not as links.

All security settings must be turned off.

VIII. IEEE COPYRIGHT FORM

Complete the IEEE Copyright form available at our cite. No paper can be published without this completed form. The completed and signed form must be mailed or faxed to the Organizing Committee to arrive before June 1. You can also send a scanned copy by e-mail.

IX. CONCLUSIONS

A conclusion section is optional. Do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest application and extensions.

APPENDIX I
HOW TO PRODUCE A POSTSCRIPT FILE

A straightforward way to obtain a Postscript file from a file of any format is to print it with a Postscript driver. If you use a Postscript printer, you also have such driver installed. Otherwise, you may install a driver for a Postscript printer (e.g., for Apple Laser Writer) from standard distributions. Configure the driver to download all fonts. Then print your file employing "Print to File" option.

The most common way is to produce a Postscript file from TEX is using the dvips.exe utility. To obtain scalable PDF fonts, users should apply this utility with the Ppdf option, e.g.:

```
dvips -Ppdf -ta4 filename.dvi
```

APPENDIX II
HOW TO PRODUCE A PDF FILE FROM POSTSCRIPT

To convert a Postscript file to a PDF file you need a program called Acrobat Distiller, which is a part of Adobe Acrobat package. A Postscript file can serve as an input for this program.

To produce a PDF file suitable for IEEE Xplore Acrobat Distiller needs to be properly configured. An easiest way to configure this program is to download a file with Acrobat job options from our site (there are three different files for Adobe Acrobat of versions 4, 5 and 6). To install these options you can follow IEEE instructions given in the file **installingjoboptions_guide_v32_win.pdf**.

If you prefer to set these options manually, you have to follow IEEE specifications described in the file **ieee_pdf_specv32.pdf**. E.g., for Acrobat Distiller 6.0 the main steps are the following.

Within Distiller's "Settings/Edit Adobe PDF Settings" dialog configure:

On the "General" tab set the following.

Compatibility: Acrobat 4.0 (PDF 1.3),

Resolution: 600 dots per inch.

On the "Fonts" tab check the boxes "Embed all fonts" and "Subset embedded fonts when percent of characters used is less than 100 %".

Clear the list boxes with labels "Never embed" and "Always embed."

On the "Images" tab do the following. Set Bicubic Downsampling to 300 dpi and Compression to JPEG for Color and Grayscale Images. Set Bicubic Downsampling to 600 dpi and Compression to CCITT Group 4 for Monochrome Images.

On the "Color" tab choose "Leave color unchanged."

On the "Advanced" tab check the boxes: "Convert gradients to smooth shades," "Preserve level 2 copypage semantics," "Preserve overprint settings," "Save Adobe PDF settings inside PDF file," "Save original JPEG images in PDF if possible."

Do not produce a PDF file with the help of Ghostscript based utilities (ps2pdf, GSview). It is very difficult to configure Ghostscript to embed basic Postscript fonts.

APPENDIX III
HOW TO PRODUCE A PDF FILE FROM TEX

There are several ways to produce a PDF document immediately from TEX. Here we describe two of them.

You may use the dvipdfm.exe utility. (Its Windows version is included in the latest MiKTEX distributions.) This utility produces excellent quality documents immediately from a DVI file. Some efforts are required when including images: only the images of JPG, PNG, and PDF formats are admissible, some special commands should be used for their inclusion. Notice that dvipdfm uses Letter paper format by default, so A4 format should be shown explicitly in the command line, e.g.:

```
dvipdfm -p a4 filename.dvi.
```

The second way is to use PDFTEX package (it is also contained in the last distributions of MiKTEX). The PDFTEX programs produce PDF files instead of DVI files. To obtain a PDF file you have to input

```
pdflatex filename.tex
```

in the command line.

APPENDIX IV
HOW TO PRODUCE A PDF FILE FROM MS WORD

The most convenient way to produce an IEEE compliant file from MS Word is to use Adobe Acrobat of version 5 or higher. Firstly, configure your Adobe Distiller as described above. Then just print your Word document in a PDF file, using File/Print menu item. In the Print dialog choose "Adobe PDF" as a printer for Acrobat 6 and "Acrobat Distiller" as a printer for Acrobat 5. Click the command button "Properties" and choose "IEEE-PDF-Acrobatxx" in the "Default Settings" control.

Users of Acrobat 5 and 6 can also apply Adobe PDF Maker. Firstly, install IEEE job options as described above. In MS Word menu bar click the item "Adobe PDF/Change Conversion Settings." Then Adobe PDF Maker dialog window appears. Choose conversion settings "IEEE-PDF-Acrobatxx." Close the dialog by clicking "OK" and select the menu item or the tool button named "Convert to Adobe PDF."

Do not use PDF Writer. It does not properly embed fonts and graphics into a PDF document.

Remark. Adobe Acrobat sometimes distorts graphics when processing a MS Word file. If it happened with your file, try to change a graphical format of your figures.

REFERENCES

[1] A. L. Fradkov, "How to publish a good paper and to reject a bad one. Notes of reviewer," *Autom. Remote Control*, no. 10, pp. 1643–1650, 2003. (Transl. from *Avtomatika i Telemekhanika*, no. 10, pp. 149–157, 2003.)

[2] H. Nijmeijer, I. I. Blekhman, A. L. Fradkov, and A. Yu. Pogromsky, "Self-synchronization and controlled synchronization," in *Proc. 1st Int. Conf. Control of Oscillations and Chaos COC'97*, St. Petersburg, Russia, 1997, vol. 1, pp. 36–41.

[3] A. N. Churilov and A. V. Gessen, *Study of Linear Matrix Inequalities. A Software Companion*. St. Petersburg: Izdatel'stvo St. Petersburg. Univ., 2004. (In Russian.)