RULES OF CAMERA-READY MANUSCRIPT PREPARATION FOR THE SICPRO '15 CONFERENCE

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Key words: system identification, control problems, SICPRO '15, paper preparation, conference proceedings, author guideline

Please read carefully the rules of camera-ready manuscript preparation for Proceedings of the international conference of "System Identification and Control Problems" to be CD-ROM published. Exact following the rules is of extreme importance to provide professional quality of the Proceedings. The Organizing Committee is in advance obliged to authors for following the rules. Simultaneously, the Organizing Committee has to point out that manuscripts, which do not meet the rules, will not be included into the Proceedings of SICPRO '15.

1. Introduction

Manuscripts for the Conference SICPRO '15 Proceedings should be submitted as Word (for MS Windows) files whose names are to be the registration number of the manuscript which was given to authors by the Organizing Committee (in case of using LATEX) please refer to the corresponding style file in accordance to the information available at the conference site <u>http://www.sicpro.org</u> (please select a corresponding submenu therein)). In case of a large volume of a source file, it is possible to use ARJ for MS DOS or ZIP for MS Windows, and the name of the file should be the same as the initial one. The dead line for submitting manuscripts is July 01, 2011. The page size should correspond to a format A4 (210 x 297mm). Type the text by tuning: 2,5 cm from above and below as well as 2,5 cm from the left and right margins. When preparing manuscripts, please set any of *Hewlett-Packard* laser printers as used for the manuscript.

For the main text, including formulas and blank lines, use the 12pt True Type Times New Roman, except specially stipulated cases. Use single space. The indent of each first line of a paragraph should be 0,75 cm, except specially stipulated cases.

The title of the manuscript should begin from the upper margin of the text field (22pt, Capitalized, bold, centered). Leave one blank line after the title and then type (bold, 14pt, centered) the first author's initials and surname (just in such sequence) (with a blank between the initials and the surname), then (without a blank line) the complete official name of the author's organization (10pt, centered, Italic type), the official mail address of the organization

(sequentially through a comma: the POSTAL ZIP, city, street, house number) and the author's e-mail address (10pt, centered).

If there are co-authors, after the e-mail address of the first author leave one blank line and type other organizations and addresses in the same order. Please follow these instructions by indicating the second and other authors, their organization and addresses, even if the authors represent the same organization! If the list of the authors (by a large number of co-authors) does not find room on the first page, it proceeds on the second page of the manuscript.

After the e-mail address of the last co-author leave two blank lines and type key words (10pt, aligned to the left and right, without hyphenation) by tuning 3,75 cm from the right and left margins, that corresponds to a 1,25 cm indent from the left and right margins of the main text (an indent from the left and right margins should be installed in mode "Paragraph" in "Format" menu). The list of key words should represent one paragraph without an indent of a new line. Words "Key words:" should be bold type. The author defines the number of key words. If the list of key words (by a large number of co-authors) does not find room on the first page, it proceeds on the second page of the manuscript in the same format.

After the list of key words leave two blank lines and type the abstract (without an indent, one paragraph with about ten lines, 10pt type, aligned to the left and right, without hyphenation) by tuning 3,75 cm from the right and left margins. The word "abstract" should not be written. If the abstract (by a large number of co-authors) does not find room on the first page, it proceeds in the same format on the second page of the manuscript.

2. The main text preparation

2.1. General rules

The paper length should be not less than 7 (SEVEN) pages (mandatory condition).

Volume of the manuscript is not limited, but the organizing Committee asks the authors to be guided by a principle "of reasonable sufficiency". For the text of the manuscript use 12pt type, with automatic hyphenation, aligned to the left and right. (The manuscript title as well as headings of the first and second levels should be printed without hyphenation.) Please, use service possibilities of MS Word for careful grammar check of your text. Take into account some moments connected to hyphens and punctuation marks: do not leave a blank after opening brackets and quotation marks as well as before closing brackets and comma. Leave a blank only after comma.

An indent of a new line in any paragraph should be 0,75 cm (except specially stipulated cases). Don't leave blank lines before and after paragraphs.

2.2. Headings of sections

(Headings of the first and second levels)

The authors may divide the main text of the manuscript into sections. Numbering of the sections should be Arabic, beginning from 1, then put a point and leave a blank. The section heading should be with an initial capital. After the heading no point or any other signs should be put. The section headings (headings of the first level) should be centered, bold and 16pt type. Leave two blank lines before headings of the first level (switching on "1. Introduction") and one blank line after the headings.

If necessary sections of the manuscript can be divided into subsections with appropriate headings of the second level (centered, bold, 14pt type). Numbering of the second level headings should be double, Arabic, divided by a point. The first figure in such numbering should correspond to a number of the section, and the second one – to a serial number of a subsec-

tion. The subsection heading should be typed with an initial capital. Don't put a point or any other signs and do not leave blank lines after the second level headings.

If necessary, headings of the first and second levels can take two and more lines (centered).

2.3. Further partition of the text

2.3.1. Headings of the third level. If necessary it is possible to divide the text. In this case subsection is divided into items with appropriate heading of the third level.

2.3.2. **Preparation of the third level headings.** The third level headings should be printed as the first sentence of the appropriate paragraph (12pt font, bold).

Numbering of the third level headings should be triple, Arabic, divided by points. The first figure in such numbering corresponds to a number of the section, the second one – to a serial number of a subsection and the third one – to a serial number of appropriate item in the given subsection. Then type the heading with an initial capital.

2.3.3. **Prolongation of the text after the third level headings.** After the third level heading the text of the manuscript proceeds on the same line. The further partition of the text on more small-sized parts is extremely undesirable. The organizing Committee strongly asks the authors to take this circumstance into attention by preparing manuscripts.

2.4. Use of Word (for MS Windows) objects

Type formulas and figures using the appropriate editors (formulas and figures editor and so on) of Word (for MS Windows). All similar objects SHOULD NOT have attribute "Atop of the text". Accordingly, all objects should be visible in a mode "Normal" ("View" menu). Don't use objects, which have attribute "Over the text"!

Rules for formulas, figures, photos, diagrams and other elements of the text are given in the following sections.

3. Formulas, their disposition and numbering

3.1. General rules

For formulas use only the Microsoft Equation formula editor. Under "formula" it is understood any sequence of not less than two numerals that are not Russian or any other language words (heading, abbreviation). For example, MATLAB is a word (in our context), f(x(0)) is not a word.

Number formulas strictly sequentially (so as in the manuscript), in parentheses, use Arabic, beginning from 1, left justified. You have to number formulas, on which there are references in the text.

The text of the formula is aligned to the left 2,5 cm from the left margin of the text, irrespective whether the given formula is numbered:

(1)
$$y_M(t) = K_0(t) \mathbf{M} \Big(B^{-1} A C x(s) \Big) + K_1(t) B^{-1} A C x(s), \quad K_1(t) = R_{yy}^{\phi}(t,t) \Big/ R_{xx}^{\phi}(t,t)$$

or not numbered:

$$y_M(t) = K_0(t)A\mathbf{M}Cx(s) + K_1(t)AC\dot{x}(s)$$

Punctuate formulas as an ordinary text as here.

If a formula does not find room on a line, it proceeds on the following line (2,5 cm from the left margin of the manuscript text as here (2)):

(2)

$$\mathbf{M} \left(\begin{array}{c} B \overset{\circ}{y}(t) B \overset{\circ}{y}(s) \end{array} \right)^{\Delta} = R_{yy}^{\phi}(t,s) = R_{y_M y_M}^{\phi}(t,s) \overset{\Delta}{=} \mathbf{M} \left(\begin{array}{c} B \overset{\circ}{y}_M(t) B \overset{\circ}{y}_M(s) \end{array} \right) = \\ = \mathbf{M} \left(B \left\{ K_1(t) B^{-1} \int_T g(t,\tau) C[x(\tau)] d\tau \right\} B \left\{ K_1(s) B^{-1} \int_T g(s,\lambda) C[x(\lambda)] d\lambda \right\} \right).$$

Do not leave blank lines between the text and following formula and vice versa as well as in many-lines formulas.

3.2. Sizes and style of formulas elements

For printing variables (letters), use the 12pt Times font, Italics, not bold (it is installed in tunings of Microsoft Equation): for example, t, V, s, U. For printing figures use the 12pt Times font, not Italic type (!), not bold (it is installed in tunings of Microsoft Equation): for example, 1, 2, 15. The sizes of other elements of the formulas (they are installed in tunings of Microsoft Equation) are as follows:

- Subscript/superscript 8pt; •
- Sub-Subscript/superscript 6pt;
- Symbol (signs of the sum, integral) 18pt;
- Sub-Symbol 12pt.

For vectors, matrixes, you can use other stylistic elements of fonts, for example: not Italic type, bold letters, Arial font etc.

For standard functions (trigonometric, logarithmic etc.) as well as for special numerals (sup, inf etc.) use the Times font, not bold type, not an Italic type (that corresponds to standard tunings of Microsoft Equation), for example:

$$By = \sin(y), \ H^{\phi \max} \{Y\} = \max_{B} H^{\phi} \{Y\}.$$

3.3. Formulas templates

For fractions, derivatives etc. it is necessary to adhere to appropriate templates of Microsoft Equation, for example:

$$\frac{f(x)}{g(x)}, \frac{df(x)}{dx}, \frac{d}{dx}f(x), \frac{\partial f(x,y)}{\partial y}$$

Adhere the similar rules by printing expressions of conditional probabilities, averages, etc. (/):

$$P(Y_X) = \frac{P(X,Y)}{P(X)}.$$

For printing "large" expressions in brackets (round, curly, square), use appropriate templates of brackets, for example: N

(3)
$$\sum_{i=1}^{N} (Y_i - f(x_i; a_1, a_2, ..., a_m))^2,$$

(4)
$$\left[\left(\sqrt{1 + 4c^2} - 1 \right) / (2c^2) \right] a_0, \quad E'(S) = \max_A \{-k \log P(A(S))\}$$

Use the similar templates for norms, modules, scalar products (angular or parentheses). The appropriate templates should be used for dots, as it is made, for example, in the formulas (3), (4).

The summary of the above part: for formulas, the authors are offered to use maximum widely templates which are being available in Microsoft Equation, instead of using available "traditional" keys of the keyboard.

4. Lists, tables, figures

4.1. Lists

4.1.1. The marked list (is most preferable). If necessary, the authors can use all types of lists in "Format" menu of the MS Word text editor. The most preferable is the list with a ball mark: • . The sign of marks should be justified to the left. The text of the list should be typed 0,63 cm from the left margin of the printing area (that usually corresponds to standard tunings of MS Word). If the text in the list passes to the following line, it should be aligned both on left and on the right margins, if the text does not pass to the following line, it is aligned on the left margin.

The text in the list should begin with a small (lower case) letter and come to an end with the semicolon (except, certainly, last item in the list which ends by a point).

4.1.2. Indexed list. If for any reasons it is necessary to use the indexed list, the main features of a format of such list (position of a numerator, disposition and alignment of the text) are equivalent to the marked list. As a numerator the alphabetic numbering (lower case English letters with a bracket) is most preferable.

An other acceptable variant is the numbering of Latin figures (with a bracket) with the use of lower case letters: i), ii), iii), iv), v), ..., viii), ix), xiv), xv) etc.

At last, the third variant (on a degree of preference) of numbering the list is the use of Arabic numerals with a bracket (do not use a point by numbering!). Such variant should be used only for enumerating of the following kind: "Stages", "Requirements" etc.

In this case each item of the list begins with a large letter and comes to an end by a point.

4.2. Table

Tables should be numbered as follows: Table 1, Table 2, ... etc. When citing references in the text type with the corresponding number in square brackets. The tables should be numbered sequentially, in the order they were mentioned, 10pt bold type, Arabic, beginning from 1. Leave one blank line (12pt) between a word "Table" and the following paragraph. After the number of the table put a point. Then the heading of the table follows. The printing area of the table number and its heading should be tuned so as for printing area for the abstract -3,75 cm from the right and left margins, that corresponds to an indent of 1,25 cm at the left and right margins of the main text (it is shown in the following example of the table 1).

Table 1. The heading of the table should be 10pt type, not bold, and if necessary, it can continue on the following line with alignment on the left and right margins of printing area of the heading.

	Column 1	Column 2	Column 3
Line 1			
Line 2			
Line 3			
Line 4			

Leave one blank line (12pt) after the table and continue to type the main text The text inside the table, including columns and lines titles, should be printed 10pt Times New Roman, of the columns and lines bold, centered on a width of a column, and the lines headings aligned on the left margin. For formulas in the tables use 10pt type and the sizes of the remaining elements of the formulas remain without modifications (as it is stipulated in paragraph 3.2).

You may use (but only for the purposes of the obviousness!) any color for flood filling, boundaries and the text of the table cells. For the boundaries of the table cells use 0,5pt lines.

The table should be centered and took all the width of the printing area (as it is shown in an example of the table 1). At the same time, by "small width" of the columns, you may dispose the left and right boundaries of the table in one and the same distance from the left and right margins of printing area accordingly, as it is shown in an example of the table 2.

Number of a series	1	2	3	4	5
Amount of problems		5	7	8	4
Amount of realizations	35	19	28	19	24
Amount of the participants	4	4	6	3	8
Amount of objects	98	98	112	232	110
Total amount of the circulations	2171	1424	2895	1373	1031
Average operating time	1018	1075	1019	1021	1045

Table 2. An example of a disposition of the "narrow" table.

4.3. Figures

Figures should be numbered as follows: Fig. 1, Fig. 2, ...etc (10pt type, bold, Capitalised, centered). When citing references in the text type with the corresponding number in square brackets. Leave one 12pt blank line between the paragraph and figures. By reference to the figure you should always use the reduction "fig.". The figures are numbered sequentially, Arabic, beginning from 1. The figure signatures should be printed under the figure. Leave one blank line (12pt) between the word "**Fig.**" in the caption signature and the figure. Then the title of the figure follows. The figure number and its heading area should be similar to the abstract or the table heading area (it is shown in the following example in the fig. 1).

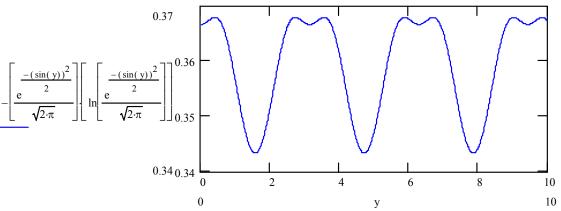


Fig. 1. The figure signature should be 10pt type, not bold, and if necessary, it can continue on the following line aligned on the left and right margins of the signature area.

Leave one 12pt blank line after the caption signature and continue the text of the manuscript.

Attention! Figures should be executed extremely as Word object (for MS Windows) and SHOULD NOT HAVE attribute "Atop of the text"!

The color figures, photos etc. are supposed to be used, if they have high quality of the screen monitor reflection. For figures use Arial font. In figures, such as the block diagrams,

you should accurately ("symmetric") image blocks and arrows, as well as signatures. For high quality of such type of figures recommend to use large magnification of a working area on a screen of your monitor.

5. References

The heading of "References" should be made as a first level heading. The general rules of the literary references in the text of the manuscript and the list of the literature are as follows:

- for the list of the literature, use 10pt Time New Roman font;
- the list of the literature should be indexed, beginning from 1, according to the references;
- use square brackets for the reference, leave no blank after an opening and before a closing bracket;
- once again we stress: don't put a blank before punctuation signs (point, comma). Use a blank after the punctuation sign (except only comma after a point in the initials of the author);
- by multiple references in the list of the literature, for example [1-5], the given sources are to be ordered, first in the alphabetic order in the correspondence with surnames, secondly (by references to the same author (authors) in the chronological order of the publication of the given references;
- the references are allowed only on the printed works (the references on the scientific and technical reports, thesis, abstracts etc. are not supposed);
- the references to WEB-cites are allowed;
- you must follow labels of volumes and numbers of the journals, as well as pages in the correspondence with the following table.

Table 3. Rules for labeling volumes and numbers of the journals and pages in the list of the literature

	Reduction
Volume	Vol.
Number	No
Page	P. (Capital!)

When referring to an article in a journal, specify sequentially: surnames and initials of all authors; a title of the manuscript (without quotation marks). After a title of the manuscript a point should not be set. Then a blank and two forward slashes // follow, after which a blank and the title of the journal (without quotation marks) should be printed. After a title of the journal the point should be set and a year of issuing (a point – after it) specified; then the volume number (a comma – after it); the number of the journal (a point – after it); pages (the first and last one, through a worm) (after them a point should be put). Examples of the references to papers are [1-5].

When referring to a book, the surnames and initials of the authors, the title of the book (without quotation marks) should be sequentially specified; after the title of the book the point is to be put and the city of issuing specified; the colon should be further put and the title of the publishing house (without quotation marks) specified, after it a comma is to be put and the year of issuing (a point – after it) specified; further – the amount of pages in the book. An example of references on books is [6]. If there are more than three authors of the book, the title of the book is to be first specified, then a blank and one forward slash / are to be put, after it a

blank and words "Ed. By" should be, then the initials and surname of the editor (editors) follow. Then put a point and specify the city of issuing etc.

When referring to an article in proceedings or any chapter in the book, the surnames and initials of the authors, the title of the article (chapter) without quotation marks are to be specified. Then a blank and two forward slashes //, after them a blank and the title of the proceedings (book) without quotation marks follow. After a title of the book a point should be set and the city of the issue specified; the colon should be further put and the title of the publishing house (without quotation marks) specified, after it a comma is to be put and the year of issuing (a point – after it), the pages are to be specified, on which the given manuscript (chapter) is located. Examples of such references are [7, 8].

The references on the manuscript in the proceedings of a conference are similar to the reference on the manuscript in the proceedings. In case of many-volume issues (as it usually has a place) number of volume should be specified before pages (similarly as it should be made in case of the journal manuscript).

The reference to a WEB-cite is to be made in accordance with [9].

6. Conclusion

In conclusion we describe rules for some other elements of the manuscript text.

There can arouse the necessity of submitting the program listings. For the program listing, use 10pt Courier font and leave one 12pt blank line before and after the program listing. An example:

```
Procedure StringXYattr (x, y:integer; s:string; f, b:integer);
Var t:textsettingstype;
    c:integer;
begin
    gettextsettings(t);
    c:=getcolor;
    settextjustify(lefttext,toptext);
    setfillstyle(1,b);
    bar(x,y, x+textwidth(s),y+textheight(s));
    setcolor(f);
    outtextxy(x,y,s);
    settextjustify(t.horiz,t.vert);
    setcolor(c);
End:
```

End;

If the author wants to express gratitude for the help in deriving represented results, the appropriate text should finish the conclusion of the manuscript.

For theorems and lemmas, words "theorem", "lemma" and their numbers use an Italic type (but not for the statement!), for example:

Theorem 1. There are no dividers of zero in a field.

If proofs of the corresponding propositions follow immediately after the statement, the text of the proof should be proceeded by words "*Proof of Theorem (Lemma, etc.)* ..." (Italic type), for example:

Proof of Theorem 1. Let *K* be a field...

The proofs of the propositions can also be made as a separate section (in this case words "Proof…" simply are the title of the given unit), or as an appendix. The appendix should be made as a separate section of the manuscript and located after the conclusion of the manuscript, before the list of the literature.

Appendix. The proof of the theorem 1

Let *K* be a field, $a \in K$, $b \in K$ and

(A1) $a \neq 0, b \neq 0.$

Let *a* and *b* are the dividers of zero in *K*. Then

(A2) $a \cdot b = 0$.

By virtue of (A1) there will be $a^{-1} \neq 0$ and $b^{-1} \neq 0$ such, that $a^{-1} \cdot a = 1$ and $b^{-1} \cdot b = 1$. Let us multiply both parts of (A2) by $a^{-1} \cdot b^{-1}$. We have

$$(a^{-1} \cdot b^{-1}) \cdot (a \cdot b) = (a^{-1} \cdot b^{-1}) \cdot 0.$$

On the other hand,

$$a^{-1} \cdot a \cdot b^{-1} \cdot b = a \cdot a^{-1} \cdot b \cdot b^{-1} = 1 \Longrightarrow$$

1 \cdot 1 = 0 \ightarrow 1 = 0.

The contradiction obtained proves the theorem.

References

- Abelson H., Eisenberg M., Halfant M., Katznelson J., Sackes E., Sussman G., Wislom J., Yip K. Intelligence in scientific computing // Commun. ACM. 1989. Vol. 32. No 5. P. 546-561.
- Billings S.A., Fadzil M.B., Sulley J., Johnson P.M. Identification of a non-linear difference equation model of an industrial diesel generator // Mechanical Systems and Signal Processing. 1988. Vol. 2, No 1. P. 59-76.
- 3. Booton R.C. Nonlinear control systems with random inputs // Trans. IRE Profes. Group on Circuit Theory. 1954. Vol. CT1, No 1. P. 9-18.
- 4. Boyd S., Chua L.O. Fading memory and the problem of approximating nonlinear operators with Voltterra series // IEEE Trans. Circuits Syst. 1985. Vol. CAS-32, No 11. P. 1150-1161.
- Freedman R.S., Tuzin G.J. A knowledge-based methodology for tuning analytical models // IEEE Trans. Syst. Man Cybern. 1991. Vol. SMC-21. No 3. P. 347-358.
- 6. Blackwell D., Girshick M. Theory of Games and Statistical Decision. New York: Wiley, 1954.
- Beaman J.J. Accuracy of statistical linearization // New approaches to nonlinear problems in dynamics / Ed. by P.J. Holmes. Philadelphia, Pa: Society for Industrial and Applied Mathematics, 1980. P. 195-207.
- Sawchuk A.A., Strand T.C. Fourier optics in nonlinear image processing // Applications of Optical Fourier Transforms / Ed. by H. Stark. New York: Academic, 1982. P. 371-429.
- 9. LAM/MPI Parallel Computing. http://www.osc.edu/lam.html.