■ *Technical paper*

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Instructions for Authors Submitting Papers to Informatica Medica Slovenica (English Version)

Abstract. The paper provides detailed technical instructions and brief substantial guidelines to the prospective authors. The title should be informative but not too long. It can include a rhetorical question, allusion or wordplay, but only if carefully considered. The top title should be typeset in the IMS Paper Title Top style and the bottom one in the IMS Paper Title Bottom style. If the paper itself is not written in English, the top title should be in the language of the paper and the bottom title and abstract should be in English. If the paper is in English, the bottom title and abstract should be in Slovenian. British spelling should be used for the English text. The abstract should not exceed 250 words. It should be typeset in the IMS Abstract style. It should not have subtitles, sections or be divided into paragraphs. For an empirically oriented paper, the structure of the abstract should follow the structure of the paper (background, methods, results, conclusions); a non-empirical paper gives more freedom to the authors regarding the structure of the abstract. The footnote of the title page should list the authors' institutions (in the language of the paper) and provide contact information (name, address and e-mail of the corresponding author).

Navodila avtorjem prispevkov za časopis Informatica Medica Slovenica (angleška oblika)

Povzetek. Prispevek podaja podrobna tehnična navodila in kratka vsebinska priporočila avtorjem. V nadaljevanju povzetka so podana navodila za pisanje naslovov in povzetkov ter oblikovanje naslovne strani. Naslov naj bo sporočilen, a ne predolg. Lahko vsebuje retorično vprašanje, aluzijo ali besedno igro, a le v skrbno pretehtanem primeru. Naslova in povzetka morata biti v dveh jezikih. Zgornji naslov mora biti stavljen v slogu IMS Paper Title Top, spodnji pa v slogu IMS Paper Title Bottom. Če prispevek ni v angleščini, morata biti zgornji naslov in povzetek v jeziku prispevka, spodnji naslov in povzetek pa v angleščini; če je prispevek v angleščini, mora biti angleški del zgoraj in spodnji del v slovenščini. Angleščina naj bo v skladu z britanskim pravopisom. Povzetek naj ne bo daljši od 250 besed. Stavljen naj bo v slogu IMS Abstract. Povzetek ne sme imeti podnaslovov, razdelkov oziroma odstavkov. Če gre za prispevek empirične narave, naj ima povzetek tako strukturo kot prispevek (ozadje, metode, rezultati, sklepi); avtorji prispevkov pregledne narave imajo več svobode glede strukture povzetka. V opombi na naslovni strani naj bodo navedene institucije avtorjev (v jeziku prispevka) ter podatki o kontaktni osebi (korespondenčnem avtorju).

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General Guidelines

Everyone writing scientific or technical texts has certainly encountered general guidelines for technical writing during their study. The literature is plentiful, ranging from the translated and revived classic by Umberto Eco[1] through guides for the general public[2,3] to voluminous handbooks guiding the student or researcher through all the phases of producing a scientific work.[4-6] We, the Editors of the Informatica Medica Slovenica (IMS) journal, are not fostering the illusion that the level of writing amongst potential authors submitting papers to our journal is any higher than it is in general in Slovenia (be it in the media or in the academic world), so we are publishing these guidelines for the purpose of maintaining quality standards regarding the papers and the editorial process in the IMS.

The guidelines are mainly technical, but they also contain some substantial and stylistic advice. The bulk of advice is from the field about which there is the least literature and knowledge in Slovenia – data display, i.e., charts and tables.

The manuscripts should be prepared in Microsoft® Word or a compatible word processor and sent by email to the Editor-in-Chief (the present address is gaj.vidmar@ir-rs.si). The email should include a statement that the paper has not been published, and is not under submission, in another publication.

Types of Papers

IMS publishes the following types of papers:

- Editorial
- Research paper
- Research review paper
- Technical paper
- Other, e.g.
  - SDMI Bulletin note or
  - Letter to the editor.

If necessary, we will publish open discussions on selected papers (i.e., readers' opinions or invited commentaries, together with the authors' reply). On the title page of the submitted paper (top right), the authors suggest the type of their paper themselves; the final decision about the classification is made by the Editor-in-Chief (if the author disagrees, he/she is free to retract the paper before publication).

The Text

Language

The paper can be written in Slovenian or English. Slovenian papers must include the title and abstract in English. We might occasionally publish papers in German, Italian, Croatian, Bosnian, Serbian or Montenegrin language, provided that they include the title and abstract in English.

Length and Structure

The length of the papers is not formally limited, but they should normally not exceed 10 pages (including figures, tables and references). The structure of research papers and empirical technical papers should follow the IMRAD scheme (Introduction, Methods, Results, Discussion).

It is of utmost importance that the text is balanced in every aspect! The notion of balance is best illustrated by examples. A paper mentioning two key concepts in the title (or two methods, or two target populations etc.), yet mainly focuses on one of them, is not balanced. Similarly, a text with one paragraph spanning half a page and the next paragraph being only one sentence long, is not balanced at all. Balance also refers to the distribution of the citations: citing the references only in the introduction or only in the discussion does not honour balance. Last but not least, there should be balance in terms of substance, which means that rival opinions and theories should be presented impartially.

Headings and Subheadings

The main headings must be typeset using the IMS Heading 1 style; the initial one must be typeset using the IMS Heading 1 First style. Subheadings must be typeset using the IMS Heading 2 style. Do not use other styles for headings or subheadings!

Main Text

Use the IMS Normal style for all the paragraphs with standard text. Bulleted lists should follow the IMS Normal Bulleted L1 style (and the IMS Normal Bulleted L2 style if necessary), as exemplified by the list of paper types on the left. Numbered lists should follow the IMS Normal Numbered style and the IMS Normal Numbered L2 style if necessary.

Abbreviations

Only standard abbreviations should be used. Avoid using abbreviations in the title or the abstract. The word or phrase to be subsequently abbreviated must

be spelled out upon first use, followed by the abbreviation or acronym in parentheses. The only exception are standard measurement units.

Spaces and Punctuation

There should be no space before closing brackets or punctuation marks. Do not type a space between a number and the percentage sign, or type a non-breaking space (CTRL+SHIFT+SPACE in Word). It is also a matter of the author's diligence and respect towards the editorial work that there are no double (or multiple) spaces between words.

Tables and Figures

Tables and figures and indispensable for presenting results, but they can also appear in the introduction or an appendix. The text referring to the tables and/or figures should not repeat the data that they present. After having presented the aim of the tables/figures, the text should only emphasise or summarise the key information that they convey.

Tables

Tables should be typeset as shown by the example (Table 1). The caption should be above the table. The word "Table" and the table number should be typeset in the IMS Table Label style; the short description should be typeset in the IMS Caption style. The table's header (i.e., first row) should have a thin horizontal black border above and below, and should be shaded in light green (RGB 129, 255, 129). The table should end with a thick green (RGB 0, 192, 0) horizontal border. The legend and/or comments should be placed immediately below the table. The table cells should be formatted in the IMS Table Content style, the legend/comments in the IMS Table Comment style. As a rule, the first column should be left adjusted and the header should be typeset in bold.

Table 1 Summary of a linear regression model for predicting the number of references based on the paper type for the papers published in the IMS between 2006 and 2013.

Predictor	*b*	SE	*β*	*p*
Research paper [b]	-6,30	3,54	-0,25	0,080
Technical paper [b]	-13,14	4,39	-0,40	0,004
Year (2006=1..2013=8)	0,42	0,68	0,08	0,536
No. of authors	-2,01	0,94	-0,25	0,037
Foreign (co-)author(s) [b]	-1,48	4,13	-0,04	0,722
(Co-)authored by GV [b]	8,52	4,24	0,25	0,049

Legend: *b* – regression coefficient; SE – standard error of the estimate of *b*; *β* – standardised regression coefficient; [b] – binary predictor, "yes" vs. "no"; GV – Gaj Vidmar.

The authors should pay particular attention to the number of decimal places. If the data are of the same type (like in Table 1), all the numbers in a given column must be reported to the same number of decimals. Descriptive statistics should not be reported with excessive decimals – consider the measurement error and the sampling error! The rules of rounding should be widely known, so there is no need to repeat them here. But we hereby remind the authors that thoughtlessly copying absurdly "precise" values from statistical software or electronic spreadsheet does not increase the scientific validity of the manuscript – au contraire, it greatly reduces the likelihood that the manuscript will be rejected!

If a table is large and exceeds the column width, it must be typeset in a separate section of the document with a single column (in Word: Page Setup → Breaks → Continuous; repeat the insertion sequence, then place the cursor between the two section breaks and click Page Setup → Columns → One). Table 2 provides an example of this technique. In addition, Table 2 includes sparklines and employs a dashed horizontal border to separate substantially distinct parts. Very large or graphically complex tables can be placed in a separate (appropriately named) file, in which case the table's label, caption and legend should be placed in the main document, followed by a suitable reference (e.g., "Table from *filename*").

Figures

Similar guidelines apply as for the tables apply to figures, except that the label and the caption must be placed below the figure. The label "Figure" and the figure number should be typeset in the IMS Figure Label style; the caption should be typeset in the IMS Caption style. The figures should be either vector drawings or bitmap pictures with the resolution of at least 600 dpi. If a figure is wider than the column, the same procedure applies as for wide tables. In exceptional cases, the figures can be sent in separate files (appropriately named, in one of the widely used formats).

These guidelines cannot list, let alone properly present, all the principles of good data visualisation, so we refer the authors to the fundamental literature from this feld[7-13] and recommend them to avoid chartjunk[7] and pay attention to the data-ink ratio.[9]

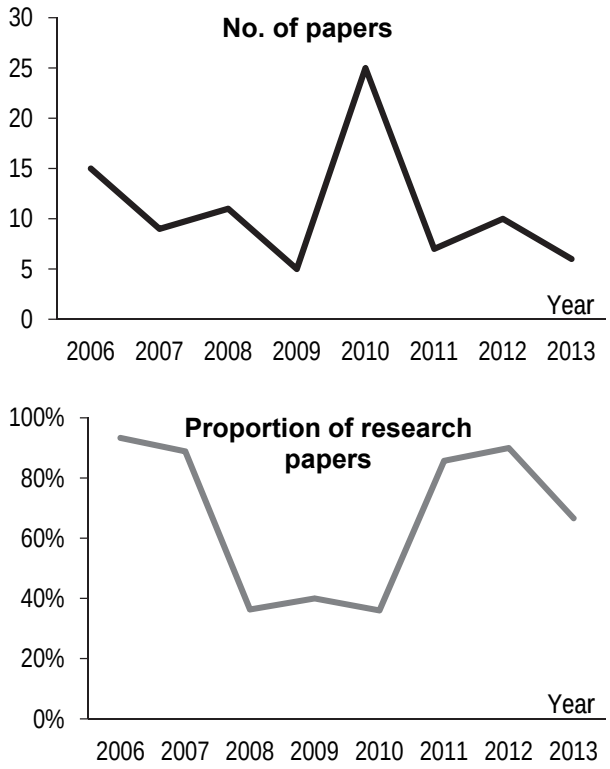

Figure 1 Number of published papers and proportion of scientific papers (type 1.01, 1.02 or 1.03 according to COBISS[14]) in the IMS journal between 2006 and 2013.

The figures can be designed either in black and white or in two colours (shades of grey + green of varying brightness). An example of an adequate figure is provided in Figure 1. There are no gridlines (which are nearly always redundant, because nowadays virtually nobody reads data values off the charts; if precise data values are important, they can be shown as data labels next to the lines, bars or point markers on a line-, bar- or scatter-plot, respectively), axis labels have got no excessive decimals, panelling is applied (the graphics consists of several smaller ones – *small multiples*), and the size of the graphical elements (axis titles and axis labels, as compared to the plot area) is balanced.

Colour figures will be published only if they are indispensable from the substantial point of view and the author(s) covers the additional costs arising from colour printing. In such a case, the author(s) must include a statement of intent to cover the additional costs into the email accompanying the manuscript submission.

Discussion

Table 2 shows that the prevailing type of paper in the IMS is research paper, followed by review paper and technical paper (called Professional Article by COBISS[14]). For all those types of papers, the discussion is the most important part apart from the results. It should focus on the aim of the paper, which should be presented at the end of the introduction. Hence, the discussion should answer the main research (or technical) question and/or address the main research hypothesis of the paper. In this context, it is worth reminding the authors of a something that should be clear to every undergraduate student, namely the distinction between a research hypothesis (to which the previous sentence refers) and a statistical hypothesis (which is used within the null hypothesis testing paradigm as a device for indirect inference about the research hypothesis).

Table 2 Combination of a table and a chart – types of papers published by the IMS journal during the period from 1994 to 2013 as classified in the COBISS.[14]

Document type	Number	Proportion (%)
1.01 Original Scientific Article	57	24.2
1.02 Review Article	53	22.5
1.03 Short Scientific Article	1	0.4
1.04 Professional Article	50	21.2
1.05 Popular Article	11	4.7
1.08 Published Scientific Conference Contribution	18	7.6
1.09 Published Professional Conference Contribution	12	5.1
1.12 Published Scientific Conference Contribution Abstract	2	0.8
1.13 Published Professional Conference Contribution Abstract	11	4.7
1.20 Preface, Afterword	7	3.0
1.22 Interview	1	0.4
1.25 Other Component Parts	13	5.5
Total	236	100.0

In a research paper, the discussion must be grounded in the results, but it should not repeat the textual description of the results (which belongs to the results section). It should bring explanations, comparison of the new findings with the previously known ones, connections to the existing knowledge and opinions about hypotheses. The authors must not forget to state the weaknesses and limitations of their work, thus following the principle that there is never too much of self-criticism! It is advisable to devote the concluding part of the discussion to a brief evaluation of the practical consequences of the findings presented in the paper, and to sketch the options for further research on the studied topic (or, in the case of a technical paper, further development).

References

Claims, opinions or thoughts of other authors should be backed by references. The references must be numbered in the order in which they appear in the manuscript, using Arabic numerals formatted as superscripts.

If a word that is meant to be followed by a reference number is followed by a punctuation mark, the reference number must be placed after the punctuation mark. References in a series should be separated by commas; if the numbers are consecutive, only the first and the last one must be listed and a hyphen placed between them.

Each cited work must be listed in the list of references at the end of the manuscript. The list must follow the "References" heading (typeset in the IMS Heading 2 style) and must be typeset in the IMS References style. Only publicly available works (published in printed or electronic form) can be referenced. Personal communication, unpublished lectures and similar sources are not valid reverences.

An exemplary list of references is provided at the end of these guidelines. Journal titles must be abbreviated according to the PubMed bibliographic database (http://www.ncbi.nlm.nih.gov/pubmed/). Its web address is also an example of typesetting hyperlinks either within the text or in the reference list by using the Hypertext style. If a journal is not indexed by PubMed, its title must be abbreviated according to the ISO 4 without the full stops.

If a publication was authored by 6 or fewer authors, list all the authors; in the case of 7 or more authors, list only the first three followed by *et al.* For a journal article or book chapter in press, list all the standard data and replace the page numbers by *in press*. Use the language of the publication when listing the publication data (title, editors, publisher etc.)

Review Procedure

The manuscript will be reviewed and copy-edited. In general, two anonymous reviews will be solicited; the review procedure is decided upon by the Editor-in-Chief. If a manuscript is accepted for publication, the corresponding author receives the proofs, so that corrections can be sent before the deadline set by the Production Editor. The final decision whether to take the correction into account remains with the Editor-in-Chief.

Conclusion

We have provided technical guidelines and some general advice for preparing manuscripts for the IMS journal. We are planning to publish more detailed guidelines for research design and statistical data analysis in the forthcoming issues.

The technical guidelines must be meticulously followed when preparing the manuscripts. In addition, the authors are urged to refresh or supplement their knowledge and skills by studying the recommended literature – the aforementioned one on scientific and technical writing[1-6] and data visualisation,[7-13] as well as general textbooks on research methodology (applying the quantitative,[15-17] qualitative[18,19] or mixed[20] approach). It is essential to study, understand and apply the fundamentals of statistics.[21-26] Only high-quality component parts and high-quality production processes can, namely, lead to a high-quality research or technical publication!

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