INSTRUCTIONS FOR TYPESETTING MANUSCRIPT USING LaTeX[*]

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The abstract should summarize the context, content and conclusions of the paper. It should not contain any references or displayed equations. Typeset the abstract in 10 pt Times Roman with baselineskip of 12 pt, making an indentation of 1.6 cm on the left and right margins.

Keywords: A list of 3–5 keywords are to be supplied.

1. The Main Text

Contributions are to be in English. Authors are encouraged to have their contribution checked for grammar. American spelling should be used. Abbreviations are allowed but should be spelt out in full when first used. Integers ten and below are to be spelt out. Italicize foreign language phrases (e.g. Latin, French).

The text is to be typeset in 11 pt Times Roman, single-spaced with baselineskip of 13 pt. Text area is 17.8 cm (7 inches) across and 24.4 cm (9.6 inches) deep (including running title). Final pagination and insertion of running titles will be done by the publisher.

2. Major Headings

Major headings should be typeset in boldface, with the first letter of important words capitalized.

2.1. *Subheadings*

Subheadings should be typeset in bold italics, with the first letter of first word capitalized and the section number in boldface.

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[*]For the title, try not to use more than three lines. Typeset the title in 15 pt Times Roman, uppercase and boldface.

[†]Typeset names in 11 pt Times Roman. Use the footnote to indicate the present or permanent address of the author.

[‡]State completely without abbreviations the affiliation and mailing address, including country. Typeset in 11 pt Times Italic.

2.1.1. *Sub-subheadings*

Typeset in italics (section number to be in roman) and capitalize the first letter of the first word only.

2.2. *Numbering and spacing*

Sections, subsections and sub-subsections are numbered with Arabic numerals. Use double spacing after major and subheadings, and single spacing after sub-subheadings.

3. Lists of Items

Lists are broadly classified into four major categories that can randomly be used as desired by the author:

(a) Numbered list.
(b) Lettered list.
(c) Unnumbered list.
(d) Bulleted list.

3.1. *Numbered and lettered list*

(1) The `\begin{arabiclist}[]` command is used for the arabic number list (arabic numbers appearing within parenthesis), e.g., (1), (2), etc.
(2) The `\begin{romanlist}[]` command is used for the roman number list (roman numbers appearing within parenthesis), e.g., (i), (ii), etc.
(3) The `\begin{Romanlist}[]` command is used for the cap roman number list (cap roman numbers appearing within parenthesis), e.g., (I), (II), etc.
(4) The `\begin{alphlist}[]` command is used for the alphabetic list (alphabets appearing within parenthesis), e.g., (a), (b), etc.
(5) The `\begin{Alphlist}[]` command is used for the cap alphabetic list (cap alphabets appearing within parenthesis), e.g., (A), (B), etc.

Note: For all the above mentioned lists (with the exception of alphabetic list), it is obligatory to enter the last entry's number in the list within the square bracket, to enable unit alignment.

3.2. *Bulleted and unnumbered list*

The `\begin{itemlist}` command is used for the bulleted list.

The `\begin{unnumlist}` command is used for creating the unnumbered list with the turnovers hangindent by 1 pica.

Lists may be laid out with each item marked by a dot:

• item one
• item two
• item three.

Items may also be numbered with lowercase Roman numerals:

 (i) item one
(ii) item two

    (a) lists within lists can be numbered with lowercase Roman letters
    (b) second item.

(iii) item three
(iv) item four.

4. Theorems and Definitions

Input:

```
\begin{theorem}
We have $\# H^2 (M \supset N) < \infty$ for an inclusion ...
\end{theorem}
```

Output:

Theorem 1. *We have $\#H^2(M \supset N) < \infty$ for an inclusion $M \supset N$ of factors of finite index.*

Input:

```
\begin{theorem}[Longo, 1998]
For a given $Q$-system...
\[
N = \{x \in N; T x = \gamma (x) T, T x^* = \gamma (x^*) T\},
\]
and $E_\Xi (\cdot) = T^* \gamma (\cdot) T$ gives ...
\end{theorem}
```

Output:

Theorem 2 [Longo, 1998]. *For a given Q-system...*

$$N = \{x \in N; Tx = \gamma(x)T, Tx^* = \gamma(x^*)T\},$$

and $E_\Xi(\cdot) = T^*\gamma(\cdot)T$ gives a conditional expectation onto N.

4.1. *Proofs*

The WSPC document styles also provide a predefined proof environment for proofs. The proof environment produces the heading 'Proof' with appropriate spacing and punctuation. It also appends a 'Q.E.D.' symbol, ■, at the end of a proof, e.g.

```
\begin{proof}
This is just an example.
\end{proof}
```

to produce

Proof. This is just an example. ■

The proof environment takes an argument in curly braces, which allows you to substitute a different name for the standard 'Proof'. If you want to display, 'Proof of Lemma', then write e.g.

```
\begin{proof}[Proof of Lemma]
This is just an example.
\end{proof}
```

produces

Proof. [Proof of Lemma] This is just an example. ■

5. Equations

Displayed equations should be numbered consecutively in each section, with the number set flush right and enclosed in parentheses:

$$\mu(n,t) = \frac{\displaystyle\sum_{i=1}^{\infty} 1(d_i < t, N(d_i) = n)}{\displaystyle\int_{\sigma=0}^{t} 1(N(\sigma) = n)d\sigma} \ . \tag{1}$$

Equations should be referred to in abbreviated form, e.g. "Eq. (1)" or "(2)". In multiple-line equations, the number should be given on the last line.

Displayed equations are to be centered on the page width. Standard English letters like x are to appear as x (italicized) in the text if they are used as mathematical symbols. Punctuation marks are used at the end of equations as if they appeared directly in the text.[1]

6. Illustrations and Photographs

Figures are to be inserted in the text nearest their first reference. Please send one set of originals with copies. If the publisher is required to reduce the figures, ensure that the figures (including lettering and numbers) are large enough to be clearly seen after reduction.
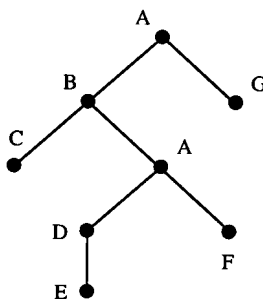
Fig. 1.   Labeled tree T.

Figures are to be sequentially numbered with Arabic numerals. The caption must be placed below the figure. For those figures with multiple parts which appear on different pages, it is best to place the full caption below the first part, and have e.g. "Fig. 1 (*continued*)" below the last part. Typeset in 9 pt Times Roman with baselineskip of 11 pt. Use double spacing between a caption and the text that follows immediately.

Previously published material must be accompanied by written permission from the author and publisher.

Very large figures and tables should be placed on a separate page by themselves. Landscape tables and figures can be typeset with the following environments:

- `sidewaystable` and
- `sidewaysfigure`.

7. Tables

Tables should be inserted in the text as close to the point of reference as possible. Some space should be left above and below the table. Tables should be numbered sequentially in the text with Arabic numerals.
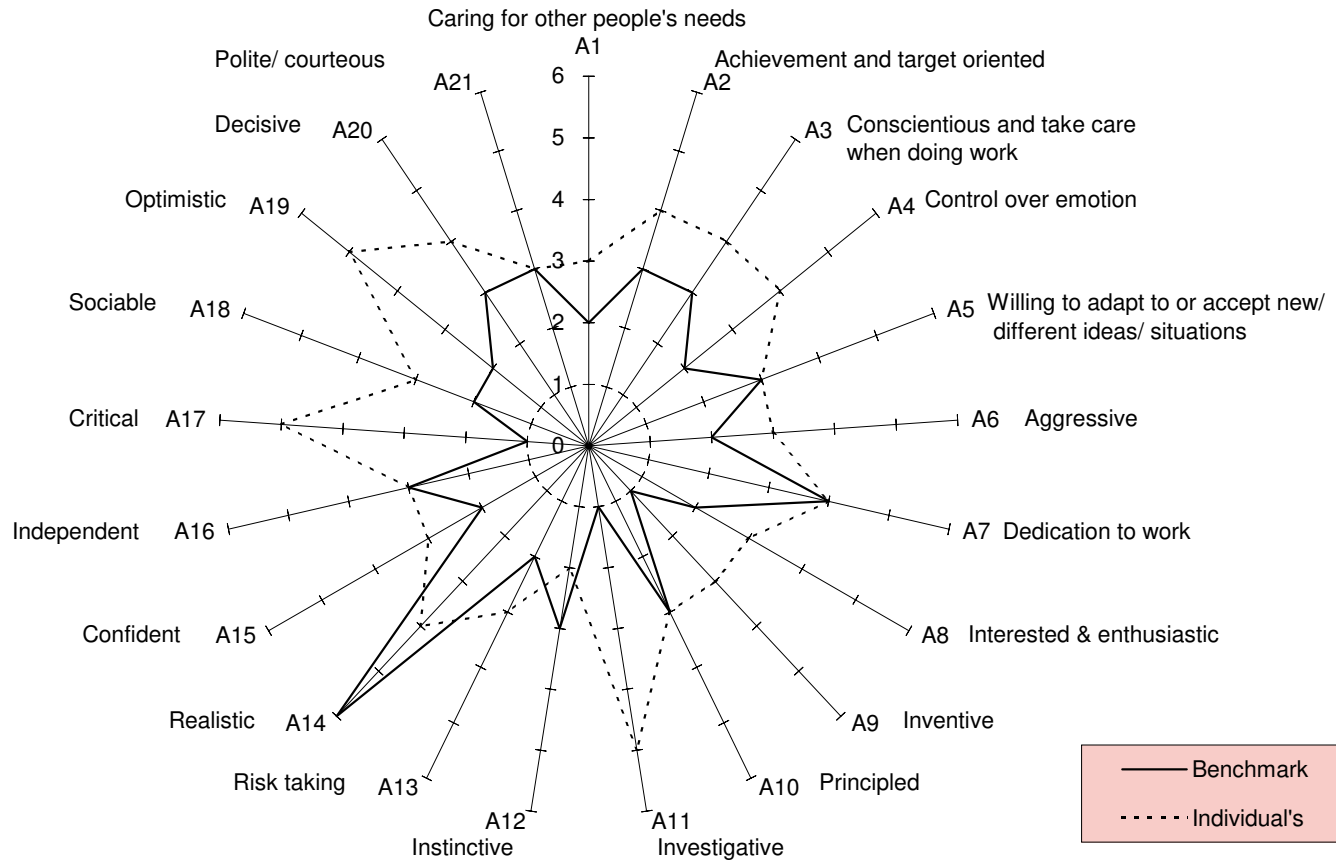
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[1]Sample footnote

Fig. 2.   The bifurcating response curves of system $\alpha = 0.5, \beta = 1.8; \delta = 0.2, \gamma = 0$: (a) $\mu = -1.3$; and (b) $\mu = 0.3$.

Captions are to be centered above the tables. Typeset tables and captions in 9 pt Times Roman with baselineskip of 11 pt.

If tables need to extend over to a second page, the continuation of the table should be preceded by a caption, e.g. "Table 1 (*continued*)".

Table 1.   Number of tests for WFF triple NA = 5, or NA = 8.

		3	4	8	10
	3	1200	2000	2500	3000
NC	5	2000	2200	2700	3400
	8	2500	2700	16000	22000
	10	3000	3400	22000	28000

By using `\tbl` command in table environment, long captions will be justified to the table width while the short or single line captions are centered. `\tbl{table caption}{tabullar environment}`.

For most tables, the horizontal rules are obtained by:

toprule   one rule at the top
colrule   one rule separating column heads from data cells
botrule   one bottom rule
Hline   one thick rule at the top and bottom of the tables with multiple column heads

To avoid the rules sticking out at either end of the table, add `@{}` before the first and after the last descriptors, e.g. @llll@. Please avoid vertical rules in tables. But if you think the vertical rule is a must, you can use the standard LATEX `tabular` environment.

Headings which span for more than one column should be set using `\multicolumn{#1}{#2}{#3}` where `#1` is the number of columns to be spanned, `#2` is the argument for the alignment of the column head which may be either c — for center alignment; l — for left alignment; or r — for right alignment, as desired by the users. Use c for column heads as this is the WS style and `#3` is the heading.

8.   Cross-references

Use `\label` and `\ref` for cross-references to equations, figures, tables, sections, subsections, etc., instead of plain numbers. Every numbered part to which one wants to refer, should be labeled with the instruction `\label`. For example:

```
\begin{equation}
\mu(n, t)=\frac{\sum\limits^\infty_{i=1}1 (d_i < t, N(d_i)=n)}
{\int\limits^t_{\sigma=0}1 (N(\sigma)=n)d\sigma}.\label{aba:eq1}
\end{equation}
```

With the instruction `\ref` one can refer to a numbered part that has been labeled:

```
..., see also Eq. (\ref{aba:eq1})
```

The `\label` instruction should be typed

- immediately after (or one line below), but not inside the argument of a number-generating instruction such as `\section` or `\caption`, e.g.: `\caption{ ... caption ... }\label{aba:fig1}`.
- roughly in the position where the number appears, in environments such as an equation,
- labels should be unique, e.g., equation 1 can be labeled as `\label{aba:eq1}`, where 'aba' is author's initial and 'eq1' the equation number.

9. References

References cited in the text should be placed within square brackets and stated as [surname of author(s), year of publication], e.g., [Golub & Van Loan, 1989] and, with three or more authors, [Haller *et al.*, 1997]. If the reference reads as part of the sentence, the square brackets enclose only the year of publication, e.g., "According to Golub and Van Loan [1989], ..."

Note Added

A note can be added before Acknowledgments.

Acknowledgments

This part should come before References. Funding information may also be included here.

Appendices

Appendices should be used only when absolutely necessary. They should come immediately before References.

Appendix   A

If there is more than one appendix, number them alphabetically.

$$\mu(n,t) = \frac{\sum_{i=1}^{\infty} 1(d_i < t, N(d_i) = n)}{\int_{\sigma=0}^{t} 1(N(\sigma) = n)d\sigma} \ . \tag{A.1}$$

Number displayed equations occurring in the appendix as (A.1), (A.2), etc.

References

A complete list of references cited, arranged in alphabetical order according to the surname of the first author, should be provided. References by the same author will follow a chronological sequence, i.e., [Lie & Wang, 2000] precedes [Lie & Wang, 2001]. Article titles should be stated in full but standard abbreviations should be used for journal names. Typeset reference in 10 pt Times Roman, single spaced with baselineskip of 12 pt.

Examples

Journal reference:

Pärssinen, A., Jussila, J., Ryynänen, J., Sumanen, L. & Halonen, K. A. I. [1999] "A 2-GHz wide-band direct conversion receiver for WCDMA applications," *IEEE J. Solid-State Circuits* **34**, p. 1893.

Zhu, Z. & Leung, H. [1999] "Optimal synchronization of chaotic systems in noise," *IEEE Trans. Circ. Syst.-I: Fund. Th. Appl.* **46**, 1320–1329.

Book reference:

Golub, G. H. & Van Loan, C. F. [1989] *Matrix Comptations*, 2nd Ed. (Johns Hopkins University Press, USA).

Lie, D. Y. C. & Wang, K. L. [2001] "Si/SiGe processing," *Semiconductors and Semimetals* **73**, eds. Willardson, R. & Weber, E., (Academic Press, San Diego), Chapter 4, pp. 151–197.

Proceedings reference:

Haller, B., Streiff, M., Fleisch, U. & Zimmermann, R. [1997] "Hardware implementation of a systolic antenna array signal processor based on CORDIC arithmetic," *Proc. Int. Conf. Acoust. Speech Signal Proc.* **5**, pp. 4141–4144.

References

Golub, G. H. & Van Loan, C. F. [1989] *Matrix Comptations*, 2nd Ed. (Johns Hopkins University Press, USA).

Haller, B., Streiff, M., Fleisch, U. & Zimmermann, R. [1997] "Hardware implementation of a systolic antenna array signal processor based on CORDIC arithmetic," *Proc. Int. Conf. Acoust. Speech Signal Proc.* **5**, pp. 4141–4144.

Lie, D. Y. C. & Wang, K. L. [2000] "Si/SiGe heterostructures for Si-based nanoelectronics," *Handbook of Advanced Electronic and Photonic Devices and Materials*, ed. Nalwa, H. S. (Academic Press, San Diego), Chapter 1, pp. 1–69.

Lie, D. Y. C. & Wang, K. L. [2001] "Si/SiGe processing," *Semiconductors and Semimetals* **73**, eds. Willardson, R. & Weber, E. (Academic Press, San Diego), Chapter 4, pp. 151–197.

Pärssinen, A., Jussila, J., Ryynänen, J., Sumanen, L. & Halonen, K. A. I. [1999] "A 2-GHz wide-band direct conversion receiver for WCDMA applications," *IEEE J. Solid-State Circuits* **34**, p. 1893.

Zhu, Z. & Leung, H. [1999] "Optimal synchronization of chaotic systems in noise," *IEEE Trans. Circ. Syst.-I*: *Fund. Th. Appl.* **46**, 1320–1329.