

International Journal of Performability Engineering

Typing Instructions Made Easy

Please read these guidelines carefully:

1. **Typing:** The text of the manuscript **must** be typed preferably in **MS Word 2003 or 2007**. **But** the mathematical symbols or equations should be typed using **Equation Editor** of **MS Office 2003**. The paper must be typed with single line spacing.
2. The entire text of a paper is split into two sections. Section 1 comprises only the title page whereas section two comprises all other pages of the paper. Page setups of section 1 (the title page) and section 2 are different. So are the Headers and footers. The footer of section 1 (the title page) is used to provide corresponding author's email address and the footers of section 2 are left blank unless authors want to use them as footnote for explanation of certain points in the manuscript.
3. **Page Setup Margins:** The following margins must be set as a part of page set up:

Title page (Section 1): (first page of the paper) should have the following **margins**:

Top Margin:	3"	Bottom Margin:	1.2"
Left Margin:	1.63"	Right Margin:	1.6"
Header:	2.1"	Footer:	1.1"
Gutter:	0"	Gutter Position:	Left

Other pages (Section 2): (use commands: insert→break→next page and then set the margins for section 2)

Top Margin: 2.5"

Other margins remain the same as specified above for the Title page.

Page Layout (under page setup):

Headers and **Footers** are set at **2.1" and 1.1"** from the edges. **Headers** and **Footers** are set to **Different** for **first page** and **Different** for odd and even pages.

Page alignment is set from the **Top**.

4. **Various line spacing on the title page of the paper should conform to:**

Keep the space between **Title** and **Authors** - 6 pt

Keep the space between **Authors** and **Affiliation** - 6 pt.

Keep the space between **Affiliation** and **Received on** (date) - 6 pt

Keep the space between **Received on** (date) and **Abstract** - 6 pt

Keep the space between end of **Abstract** and **Keywords** - 6 pt

Keep the space between **Keywords** and the **Introduction** (First Section Heading) - 12 pt

5. **Title of the paper** should be as brief as possible and should meaningfully convey the intent and contents of the paper. The **title** of the paper should be typed in **Garamond** font size **14 pt**, in **bold** in Title case. Like this:

Performance Analysis of a Multistage Interconnection Network System based on a Minimum Cut Set Method

Note: Title originally communicated should not be changed at any stage without bringing it to the knowledge of the Editor-in-Chief. However, in case the title needs to be changed; a new copyright agreement should be filled in and submitted prior to the publication of the paper. This is a statutory requirement.

6. **The Authors' names** should be typed in **capital** letters in **Times New Roman** size 10 pt. normal. **Affiliations** of all coauthors must provide full postal address **without** giving the **website** or **email address** or **telephone** or **fax numbers**. However, the **corresponding author** must be identified with an asterisk raised to the name and his email address must be given in the **footer** of the title page (see at § 15.2). The authors' affiliations should all be done in italics in **Times New Roman** size **9 pt**. In case all authors have same affiliation, please follow this style:

6.1 In case of single author:

SUPRASAD V. AMARI*

*Relex Software Corporation,
540 Pellis Road, Greensburg, PA 15601, USA*

6.2 In case of multiple authors but common affiliation:

A. D. TELANG* and V. MARIAPPAN

Faculty, Department of Mechanical Engineering, Government Engineering College, Farmagudi, Ponda-Goa, India: 403 401

6.3 In case of multiple authors with different affiliations, please follow this style:

YOICHI HIGASHIYAMA^{1*} and VENTSI RUMCHEV²

¹*Department of Electrical and Electronic Engineering, Ehime University
Matsuyama, 790-8577 Japan*

²*Department of Mathematics and Statistics, Curtin University of Technology
P.O. Box U1987, Perth, WA 6845 Australia*

Note: Sometimes, communicating authors insist on including or excluding names of coauthors at some stage of publication. This is improper and creates complications. Authors originally included should not be changed at any stage.

7. **Date of receipt of the paper** (same as received by you in the **acknowledgement** of your paper) must be typed in italics in **Times New Roman** size **9 pt** after affiliations. **Example:**

(Received on February 15, 2006)

8. **Abstract** should be typed in font size **9 pt (Times New Roman)** and generally be of one paragraph but in rare cases not exceeding two paragraphs (100-200 words). **The style should be:**

Abstract: Noncoherent systems can model a wide range of practical systems. The non-monotonic property of the structure function makes their analysis difficult. Therefore, despite the general nature of noncoherent systems, there are far fewer publications on noncoherent systems than coherent systems.

9. **Keywords** not more than 5 should be typed in font size 9 pt (Times New Roman). These are required to help the abstracting agencies in abstracting and bibliographical databases. **Example:**

Keywords: *noncoherent systems, system failure frequency, number of failures, prime implicants.*

10. Starting with **Introduction**, all sections must be consecutively numbered and should appear in **bold 10 pt** in **Times New Roman**.

11. The entire text of the paper should be done in **10 pt. NORMAL Times New Roman**.
12. The **starting paragraph** of a section **should not be indented** but other paragraphs of any section are indented by **0.25"**.
13. **Headings:** All headings of sections or subsection including should be done in **10 pt. Times New Roman and Bold**.
14. Each Heading should have a separation of 6 pt. from the text above and below.
Once we reach the - **Acknowledgement** (if there is any): the **text** would be **6pt above and 6 pt below** from the **headings**.
References: Text would be **12 pts** above and **6 pts** below from this heading.

15. Headers and Footers

15.1 Title page Header (Section 1) should be typed in **Times New Roman (font size 8 pt.)** as follows:

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Printed in India

The volume, issue number, month and the year are generally communicated to the corresponding author at the time of accepting a revised paper by the Editor-in-Chief.

15.2 Title page Footer is reserved for the corresponding author's email address and the starting page number (which is always odd and is typed in Times New Roman of pt. 8 at the right-hand corner of the footer) should be given as follows:

*Corresponding author's email: jmk@vergina.eng.auth.gr 3

15.3 Even page Headers

The subsequent page numbers on the even pages are given in Times New Roman of pt. 8 size on the left-hand corner of the even page header along with the names of the authors (in the middle of the header) like this:

3 J. M. Kontoleon and K. A. Mehdi

15.4 Odd Page Headers

Also, the subsequent odd page numbers (except the title page which is also an odd numbered page) are given on the right-hand corner of the odd page header along with the title of the paper (in the middle of the header) in **Times New Roman** of **8 pt.** size like this:

A Distributed-bit SEC-DED RAM with a Self-Testing and Repairing Engine 3

Please note that while the page number on the title page (odd page) is typed in the footer, the page numbers of all odd pages are typed in the header. If the title is too long, it can be typed in **Times New Roman** of **8 pt.** in two rows like this:

A Discrete NHPP Model for Software Reliability Growth with Imperfect Fault Debugging and Fault Generation 3

15.5 Setting Headers and Footers in MS word

For setting HEADERS-FOOTERS, on the title page and other pages, the paper is divided into two sections, the first section contains only the Title page and rest of the paper would be in section 2. Please note that it is **NOT** a page-breaking but a section-breaking. To do this bring the **cursor** at the end of the main text of the **Title page**, choose **Insert** tab on MS Word and select **break** option and in the various options available in the break, select under section break types, **next page** option. This operation will divide the paper in two sections (section one, consisting of **Title page** and the other section will have the **rest of the paper**). This may also need to slightly adjust your text to be fitted on section 1. This is primarily done to set top margin on Title page different from the top margin of the rest of the paper. As mentioned earlier, the top margin in Title page is set to 3'' but we need to change it to 2.5'' in the rest of the paper keeping **other margins as the same** as set for the **title page**). To do this, bring cursor to any point on page 2 of the manuscript or paper, select **File** → **Page Setup** → **Margins**, set **Top** margin to 2.5'' (in place of 3''). No change in other margins is required.

Now, we are ready to set Headers and Footers for various pages. Remember that Header and Footer of Title page are different from the Headers and Footers of other pages. Other pages are also categorized as **even pages** and **odd pages** (excluding the title page, which is always is an odd page but we treat it differently than the other odd pages).

1. In an open word file, select **View** → **Header and Footer**. About 11 **icons** escorted by **insert auto text** and **close** on either sides of these **icons** appear in a **tool box** of Header and Footer that appears on your open word file. These icons correspond to, **insert pager number, insert number of pages, format page number...etc.**
2. Select the icon corresponding to → **page setup** (which looks like an open book icon and is 6th icon on my computer) among these. A Window pops up. Check the boxes: (i) Different odd and even pages (ii) Different First page.
Place cursor at the Header of Title page (Section 1) and insert the Header as defined in **15.1**.
3. Bring cursor at the Footer of Title Page, Select **Insert** → **Page numbers** from the main menu. Again a window of **Page Numbers** pops up. In this window, set, **position** → **Bottom of page (Footer)**, set **Alignment** → **Outside**, check the box **Show number on first page**. Also, select **Format**. Again a new window of **Page Number Format** pops up. In this window, which helps you choose the starting page number, select **Start at:** and set starting page to the starting page number allotted to you using Times New Roman 8 pt ? Close the windows by pressing **OK** buttons. The Footer on Title page should appear as given in **15.2**.
4. Bring cursor to the **Header** of second page of your paper. Now you will see that you are in Section 2, You may see Int. J of Per. etc... also written in this Header. Follow this:
 - Please Check the 9th icon (One square between two rectangles on the top and bottom) out of 11 icons stated above. Bringing the cursor over it, it shows **-same as above icon pressed**. If it is already pressed, unpress it by clicking the mouse over it.
 - Delete the contents of the Header (if you forget to unpress then Section-1 Header will also be deleted) and copy/ paste the authors' name by setting its size 8 pt. **Insert** → **page number** → **outside** from main menu. Check on the **format** → **continues from previous section**.
 - This will insert the page number continued from last section. In other words, if first page was 305, the next insertions would be 306 automatically. Please note that all page numbers on even pages should appear of even pages and all page

numbers on odd pages (except title page which is also an odd page) appear of the odd page.

- Bring the cursor to third page Header. Copy and paste or type (please check very carefully what is typed by you. Otherwise same mistake would be carried over to all odd pages) the title of your paper. **Insert page number, press OK.** The next page number will be inserted at appropriate place.
- This will fill all the alternate odd pages with the title and page numbers.
- Now select the close button of 11 icons to end this process.
- You must observe that all even page Headers contain the page number (on the left-hand top corner of the Header) and the authors' name (in the middle of the Header). Like the one given in **15.3**.
- Also all odd page Headers contain the Title of the paper (in the middle of the Header, if necessary in two rows if the title is too long) and page number (on the right-hand top corner of the Header). Like the one given in **15.4**.
- Once this is done, please check for accuracy of Headers and Footers.

- 16. Introduction** must be necessarily the **first** section of the paper. But in case **Notation** and/or **Assumptions** are required in the paper, **these** must be provided at the end of the **Introduction** where all symbols used in the paper must be defined. One can employ two-column table to have consistent separation between the symbol and its meaning by choosing **table properties** → **border and shading** → **none**. Please note that while the **Introduction** is typed in **font size 10**, the **Notation** is done in **font size 9 (Times New Roman)**. Example of **Notation** is given below:

Notation

n	number of components in the system
m	number of product terms in the expression for U
p	number of prime implicants (PI) of the system
d_i	event that PI- i exists at time t
θ_i	event that PI- i occurs in $[t, t + \Delta t]$
λ_i, μ_i	[failure, repair] rate of component i
p_i, q_i	[availability, unavailability] of component i ; $p_i = 1 - q_i$
ω_i, ν_i	[failure, repair] frequency of component i ; $\omega_i = p_i \lambda_i$ and $\nu_i = q_i \mu_i$

17 Sections and Sub-sections

17.1 All sections and subsections must all be numbered sequentially as given below:

- 1. Introduction**
- 2. Accident Sequence Analysis (First Level)**
 - 2.1 System Accident Model (Second Level)**
 - 2.2 System Analysis**
 - 2.3 Global System Model**
 - 2.3.1 Physical Behaviour Model (Third Level)**
 - 2.3.2 Safety Control Actions**

2.4 Derivation of Disturbance Path

Please **avoid** going to **more than three** levels of numbering of sections. One can use italic sub-section headings after third level heading.

18 Equations

All equations must be sequentially numbered and must be typed using an Equation Editor. The style of giving equation is as follows:

$$\alpha_A(x) = e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2} \quad (4)$$

Please note that (4) (is inserted using insert equation number command in MS word) has been typed at the edge of the text and the equation is usually centred. Further no dots (...) are required before the bracket of equation number or between the equation and equation number (usually resorted to by many authors). Also if an equation is quoted in the text, it is done simply writing as “The membership is calculated using (4),” It may be noted that it is not essential to write the word **equation** before (4), unless we have a situation where we begin the sentence with the word equation like:

“Equation (4) provides the membership function ...”

The above referencing of equation in flowing-text can also be done using insert equation reference command in MS word.

19 Tables

All Tables must be done in font size 9 (Times New Roman) including their captions. Please note the style of writing a caption and placement of a table (centred) as given below:

Table 1: Inputs to Parameter Estimation

Parameter definition	Parameter	Value
Length of rail	L	365 km = 365 000 m
Number of tests/inspections 1989-2002	n_{TF}	9.4
Number of tests/inspections 1991-2002	n_{TD}	8
Number of days, 1989-2002	N_1	5027
Number of days, 1991-2002	N_2	4299
Length of test/inspection interval	T	537 days
Number of observations in state D_1 , (i.e. transitions from D_{1u} to D_{1d})	N_{D1}	331
Number of observations in D_2 when it was not known that state was degraded, (i.e. transitions from D_{2u})	N_{D2a}	449

20 Figures

Captions of the figures must be placed below the figures and it should be typed in font size 9 (Times New Roman) as shown below.

Please check the quality of figures of your paper. Please choose an appropriate size of letters so that the readability and clarity of legends is good and not hazy. Oversize letters must also be avoided. Lines should not be too thin or too thick. Here are the examples of good and bad figures.

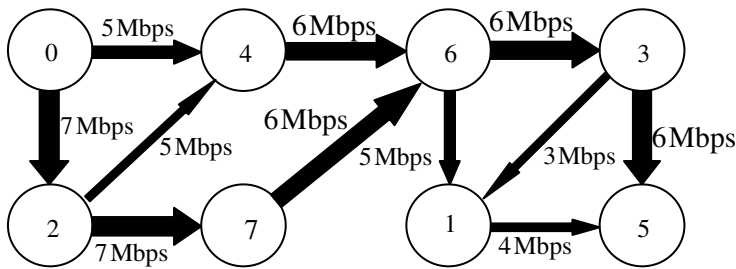


Figure 1: Example of a good Figure

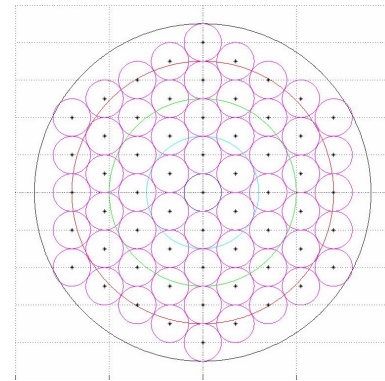


Figure 2: Example of a bad Figure

If necessary multiple Figures can be put side-by-side in the boxes with suppressed borders as has been done in case of the two figures shown above.

21 Conclusion

All papers must have a numbered section on conclusion. Many a times it is found that the conclusion and Abstract seem to look alike. It should not repeat what has been said in **Abstract**. On the contrary, it should conclude the outcome of the research described in the paper. Avoid using headings like **Concluding Remarks** or **Summary** etc.

22 References

All references must be **thoroughly** and **carefully** checked for complete details and should be sequentially numbered as they appear in the text. Please follow the Vancouver style of listing of references. The sequence of information in a reference should be author(s), title of the paper (in **italics**), Journal's name, year of publication; Vol. ?, No. ?, pp. (pages from X to Y) and finally month. All this information makes a reference complete. Otherwise it is incomplete. The style is as follows:

- [1]. Moteff , John, Claudia Copeland and John Fischer. *Critical Infrastructures: What Makes an Infrastructure Critical?* United States Congressional Research Service 2003; The Library of Congress.
- [2]. Prezant, D., J. Clair, S. Belyaev, D. Alleyne, G. Banauch, M. Davitt, K. Vandervoorts, K. Kelly, B. Currie and G. Kalkut. *Effects of the August 2003 blackout on the New York City healthcare delivery system: A lesson for disaster preparedness*. Critical Care Medicine 2005; 33(1): S96-S101 (Supplement).
- [3]. Chen, J., J. S. Thorp, and I. Dobson. *Cascading dynamics and mitigation assessment in power system disturbances via a hidden failure model*. Electrical Power & Energy Systems May 2005; 27(4): 318–326.
- [4]. Apostolakis, G.E. and D. M. Lemon. *A Screening Methodology for the Identification and Ranking of Infrastructures Vulnerability Due to Terrorism*. Risk Analysis 2005; 25(1): 361-376.
- [5]. Wood, A. and B. Wollenberg. *Power Generation Operation and Control*. John Wiley, New York; 1996.
- [6]. Billinton, R. and W. Zhang. *State extension for adequacy evaluation of composite power systems-applications*. IEEE Transactions on Power Systems 2000; 15(1): 427-432.
- [7]. Levitin, G. and A. Lisnianski. *Importance and Sensitivity Analysis of Multi-State Systems Using the Universal Generating Function*. Reliability Engineering & System Safety 1999; 65(3): 271-282.
- [8]. Ramirez-Marquez, J. E., C. Rocco, B. Assefa, D. Coit and M. Tortorella. *New Insights on Multi-state Component Criticality and Importance*. Reliability Engineering & System Safety 2006; 91(8): 894- 904.
- [9]. Zio, E., M. Marella and L. Podofillini. *Importance measures-based prioritization for improving the performance of multi-state systems: application to the railway industry*. Reliability Engineering & System Safety 2007; 92(10):1303-1314.

Quoting a Reference

Also please note that while referring to a reference in the body of the paper, you need to just give its number within square brackets, like “In [5], it is assumed that...” If you do require quoting the name of the author (which is not necessary), then you must quote the author’s surname without initials or titles like Prof. Taylor etc., like, “In [5], Taylor has assumed that...”

23 **Appendix**

The purpose of an Appendix is to provide supporting proofs, corollaries or important mathematical derivations which cannot be easily found for published papers or books and are relevant for the understanding a paper. The appendix generally serves as a supplementary information to the paper. The entire appendix must be typed in font size 9 (Times New Roman). Appendix, if any, (like Appendix A, Appendix B etc.) are all given after references but before biographical sketch of authors. If they have their own equation numbers and should be distinct from the main text, like (A1), (A2),..., (B1), (B2) etc.

24 **Biographical Sketch**

Each coauthor can provide a very brief biographical sketch but all such bio-sketches put together should not exceed half a printed page of the journal. Photographs, if provided shall be printed in black and white. The style generally is as follows:

Sarintip Satitsatian received the B. Eng. degree in Mechanical Engineering from King Mongkut Institute of Technology at Ladkrabang (KMITL), Thailand and the M.S. degree in Industrial Engineering from University of Washington, Washington. She is currently doing her Ph.D. in Industrial Engineering at the University of Washington.

Kailash C. Kapur is a professor of Industrial Engineering at the University of Washington, where he was also the Director from 1993 to 1999. He completed his Ph.D. degree (1969) in Industrial Engineering from the University of California, Berkeley. He has co-authored the book *Reliability in Engineering Design*, John Wiley & Sons. He has written chapters on reliability and quality engineering for several handbooks.

25 **The number of pages of your paper** must be kept as far as possible **even** since all papers are printed starting with an **odd page number**, and if the page length is not even, one page will be wasted while printing the paper as the next paper can only start from an odd page. Therefore, it is advisable to keep the length of a paper to an even number.

Finally, in order help follow these instructions properly; a template can be obtained from the Editor-in-Chief.