

Title should be in Times New Roman font, size 14 pt, and bold; it should be centred across the page

First Author, Second Author, Last Author (in 10pt Times New Roman)

Abstract

This document contains the formatting information for the papers presented at the “2nd International and 17th National Conference on Machines and Mechanisms (iNaCoMM2015)”. The conference would be held at the Indian Institute of Technology Kanpur during December 16-19, 2015. The title of the abstract should be in bold Times New Roman font with size equal to 9 pt. The text of the abstract should be in Times New Roman with size equal to 9 pt. It is recommended that the abstract be in a single paragraph not exceeding 250 words. If, for a valid reason, it should be in two paragraphs, please indent the first line of the second paragraph by 0.635 cm (0.25in) from the left margin. The abstract should contain the summary of the findings reported. It should also highlight the methods used in the paper. Background information should be minimised or completely avoided in the abstract.

Keywords: Margins, Tables, Figures, and Equations (to be formatted in 9pt Times New Roman)

1 Section Heading

All sections should be numbered as shown above in the section heading. The section headings should be in Times New Roman, size 14.0 pt, and bold typeface. Capitalise the first letters of every word in the section heading, except for prepositions such as of, on, for, etc. Do not indent the first line of the first paragraph in a section or a sub-section.

Indent the first line of a new paragraph by 0.635 cm (0.25in) from the left margin.

The text of the body of the paper should be in Times New Roman with size equal to 10 pt.

The first section should provide the background to the subject matter of the paper. It should not occupy more than 25% of the whole paper.

1.1 Subsection heading

Subsection headings should be numbered as above. They should be in Times New Roman, size 12, and bold typeface.

First Author (use Times New Roman 8pt font for this block)

Department/Division, Institute/Organisation, Brief Address, E-mail:name@email.address.

Second Author (Corresponding author)

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Last Author

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1.1.1 Sub-subsection heading

The sub-subsection heading should be Times New Roman, size 10, and bold. The sub-subsections should be numbered as shown.

1.2 Margins and spacing

The paper size is A4, though the final trim size of the proceedings would be 9.5in × 6.25in. The left and the right margins should be 4.47cm (1.76in), the top 4.45cm (1.75in, from the top of the paper to the top of the header), and the bottom 3.3 cm (1.3in, from the bottom of the paper to the bottom of the footer, i.e., page number). The gap between the bottom of the text and footer is 1/3in.

The title and the authors' names and affiliations are formatted in 8pt Times New Roman as shown, with the corresponding author demarcated positively.

The text in the entire paper, including that in the abstract, should be single-spaced. There should be 3 pt (1pt = 1/72 in) space left before each paragraph and headings but zero space below.

1.2.1 Header and footer

Header and footer appear in font size 8 pt. Please retain the format as shown in this template.

2 Equations

The equations are to be typed using the Equation Editor in Word or by using MathType. The size should be set to 10 pt. All vectors, matrices, and tensors should be in bold type. The equations should be centred with the equation number appearing on the right as shown below.

$$\sin^2\theta + \cos^2\theta = 1 \quad (1)$$

$$\mathbf{K}_t \mathbf{u} = \Delta \mathbf{f}_{ext} \quad (2)$$

$$\mathbf{E}_{ij} = \mathbf{e}_i \cdot \mathbf{e}_j \quad (3)$$

The equations are to be referred to as Eq. (#) in the text. For example: "Eq. (1) is a consequence of the Pythagoras theorem".

3 Figures and Tables

The figures and tables should be centred. The figure caption should be placed below the figure as shown in Fig. (1). Figures should be cited in the text as done in the previous sentence. Care should be taken to make the figure captions as clear as possible. Multiple sentences are encouraged in the figure caption, as shown in Fig. (1).

Tables are to be formatted as shown in Table 1. Table captions should be placed at the top. Tables should be cited in the text as shown in the first sentence of this paragraph.

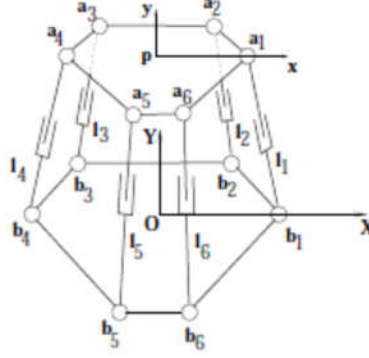


Figure 1: The semi-regular Stewart platform manipulator. It has six prismatic actuators. The positions of the spherical joints are labelled and global and local coordinate systems are marked.

Table 1: Some parameters related to planar revolute joint

<i>S.No.</i>	<i>Parameters</i>	<i>Range</i>
1	α_l, L_1	$0 \leq \alpha_l \leq \pi$
2	β_l, L_2	$0 \leq \beta_l \leq \pi$
3	γ_l, L_3	$0 \leq \gamma_l \leq \pi$

4 Footnotes and References

Sections and sub-sections should be referred to as shown in the next sentence. Section 3 explained how figures and tables should be formatted. In this section, the formatting of footnotes and references is discussed.

4.1 Footnotes

The footnotes should be used sparingly. When multiple footnotes are used, use superscripted numbers to denote them.¹

4.2 References

References should be numbered in the order of their first occurrence. They should be cited with [#] at the end of the sentence or in the middle as the case may be. The citations should be listed at the end of the paper but before the Appendix, if any. The format of the citations is given in the section entitled References at the end of the paper. Different types of references, such as a book [1], a journal article [2], a

¹ Footnote numbers should continue throughout the article

conference paper [3], a Masters thesis [4], a Doctoral thesis [5] are given. The bibliography style is adopted from `ieeetr.bst`, and the file needs to be available at the point of running the `bibtex` command. A copy of the file is included in the zipped folder.

5 Conclusions

The formatting rules for the iNaCoMM 2015 papers are outlined in this document. The cooperation of all the authors is appreciated in producing the conference proceedings of high quality.

Acknowledgement

The acknowledgement should be short and sweet. An example is here: “We thank Prof. Guruprakash for allowing us to use his experimental facilities.

References

- [1] A. Ghosal, *Robotics: Fundamental Concepts and Analysis*. New Delhi: Oxford University Press, 2006.
- [2] J.-P. Merlet, “Singularity configurations of parallel manipulators and Grassmann geometry,” *International Journal of Robotics Research*, vol. 8, pp. 45–56, 1989.
- [3] B. Roth, “Screws, motors and wrenches that cannot be bought in a hardware store,” in *Robotics Research: The First International Symposium*, M. Brady and R. Paul(Eds.), pp. 679–693, 1984.
- [4] D. Sonavane, “Instantaneous kinematics of Stewart platforms using dual numbers,” M. E. thesis, Indian Institute of Science, Bangalore, India, Jan. 2002.
- [5] J. M. McCarthy, *Instantaneous kinematics of point and line trajectories*. PhD thesis, Stanford University, 1979.

Appendix

A.1 Real Linear Maps and Geometry of Range Space

Let us consider the real linear map shown below. It has eigenvalues and eigenvectors.

$$f : \mathbb{R}^n \rightarrow \mathbb{R}^n$$

One of its eigenvalues is zero.

A.2 Singular linear maps

One of its eigenvalues is zero