Title describing your paper

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Abstract: This should be informative and suitable for direct inclusion in abstracting services as a self-contained article. It should not exceed 200 words. It should summarise the general scope and also state the main results obtained, methods used, the value of the work and the conclusions drawn. No figure numbers, table numbers, references or displayed mathematical expressions should be included.

1 Introduction

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Names and affiliations should immediately follow the title. To avoid confusion, the family name must be written as the last part of each author name and the first name should be spelt out rather than abbreviated (e.g., John A.K. Smith). Author details must not show any professional title (e.g., Managing Director), any academic title (e.g., Dr.) or any membership of any professional organisation.

For multiple-authored articles, list the full names of all the authors, using identifiers to link an author with an affiliation where necessary (e.g., John AK Smith[1], Edward Jones[2]).

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If an author's present address is different from the address at which the work was carried out, this should be given as a secondary affiliation (see affiliation [3]).

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An easy way to comply with the requirements stated in the Author Guide [1] is to use this document as a template and simply type your text into it. PDF files are also accepted, so long as they follow the same style.

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The paper should be in double-column format; one column width is 8.6cm. All paragraphs must be justified, i.e. both left-justified and right-justified.

5.2 Text Font of Entire Document

It is recommended that standardised fonts such as Times New Roman and Arial are used with a font size no smaller than 10pt.

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All section headings should be numbered and no more than 3 levels of headings should be used.

5.3.1 First Level Headings: The first level section headings should be in bold font (e.g. "**1 Introduction**"), with the paragraph starting on a new line.

5.3.2 Second Level Headings: The second level section headings should be in italic font (i.e. "*2.3 Section Headings*"). The paragraph should start on a new line.

5.3.3 Third Level Headings: The third level section headings should also be in italic font but should end with a colon (:). The text for that section should run on and not start as a new paragraph.

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Figures will be reproduced exactly as supplied, with no redrawing or relabelling. It is therefore imperative that the supplied figures are of the highest possible quality. The preferred format is encapsulated postscript (.eps) for line figures and .tif for halftone figures with a minimum resolution of 300 dpi (dots per inch). With larger figures, please note that the editorial office may contact you to revise them
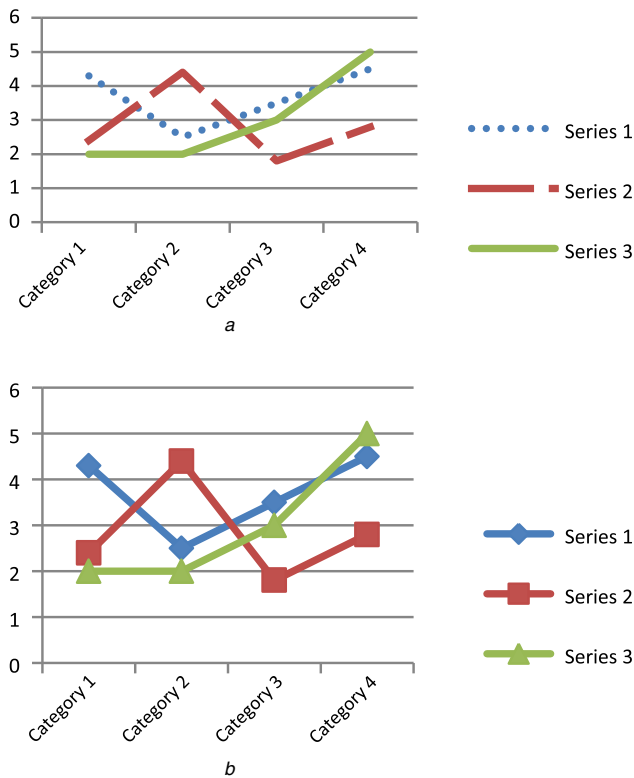
Fig. 1: Sample graph with blue (dotted), green (solid) and red (dashed) lines
a Subfigure 1
b Subfigure 2

to ensure they do not exceed half of a page, or so that they fill the entire page. This is because figures between these two lengths may negatively impact production later.

Graphics may be full colour but please make sure that they are appropriate for print (black and white) and online (colour) publication. For example lines graphs should be colour and use dotted or dashed lines, or shapes to distinguish them apart in print (see Fig.1). Each figure should be explicitly referred to in numerical order. A maximum of four subfigures will be allowed per figure.

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Figures can span two columns but cannot exceed 17.5cm in width (see Fig.2).

6.1   Figure Captions

Figure captions must be below the figure, in 10 pt italic font and should ideally consist of one sentence. If a figure has subfigures, all subfigures should also have a caption and should be identified by letters, e.g. *a*, *b*, *c*, as shown above.

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Tables should be formatted as shown in Table 1 with no column lines unless needed to clarify the content of the table. Row lines can be used to distinguish the column headings from the content of the table. Any tables larger than half a page should be placed in an appendix and the appendix cited within the main body of text e.g. "see Appendix 1 for table of results".

If the table has four or five columns it should span the whole width of the page. These should also float to the top or bottom of the page instead of breaking up the main text.

7.1   Table Captions

Tables must be numbered and cited within the text in strict numerical order. Table captions must be above the table and in 10 pt font

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When writing mathematics, avoid confusion between characters that could be mistaken for one another, e.g. the letter 'l' and the number one.

Refer to equations using round brackets, e.g. (1) followed by (2).

$$A = \pi r^2 \tag{1}$$

$$\cos \alpha + \frac{\Delta y}{\Delta x} \cos \beta = 2 \cos \frac{1}{2} \left(\alpha + \beta \right) \cos \frac{1}{2} \sum \left(\alpha \frac{dy}{dx} - \beta \right) \tag{2}$$

Equations should be capable of fitting into a two-column print format. If they do not fit into one column they should be floated to the bottom of the page or top of the next and cited in the text by "(see (3))". All large equations must be numbered in order to avoid confusion between floated equations and they cannot exceed a width of 17.5cm.

Vectors and matrices should be in bold italic and variables in italic.

If your paper contains superscripts or subscripts, take special care to ensure that the positioning of the characters is unambiguous.

Exponential expressions should be written using superscript notation, i.e. 5×10^3 not 5E03. A multiplication sign should be used, not a dot.

Inline equations can be used but if the equation is longer than a line it will need to be broken up in a suitable location to ensure the line spacing is not too large $a^2 + b^2 = c^2$.

9   Page Numbers and Footers

Page numbers should be used on all pages. Footers are not in IET's house style so must not be used. If they are used they will be moved to within the text at the typesetting stage.

10   Conclusion

Submissions should always include the following sections: an abstract; an introduction; a conclusion and a references section. If any of the above sections are not included the paper will be unsubmitted and you will be asked to add the relevant section.

11   Acknowledgments

Acknowledgements should be placed after the conclusion and before the references section. This is where reference to any grant numbers or supporting bodies should be included. The funding information should also be entered into the first submission step on Manuscript Central which collects Fundref information [4].

Please note that the IET does not include author biographies in published papers.

Table 1 Example table

Column heading	Column heading two	Column heading three
Row 1a	Row 1b	Row 1c
Row 2a	Row 2b	Row 2c
Row 3a	Row 3b	Row 3c
Row 4a	Row 4b	Row 4c
Row 5a	Row 5b	Row 5c
Row 6a	Row 6b	Row 6c

12 References

An average research paper should reference between 20 and 30 works, the bulk of which should be recently published (i.e. within the last five years) leading-edge articles in the field, preferably from top journals or conferences. You should compare your own findings to this recent research and demonstrate how your work improves on it in order to demonstrate that your work shows a significant advance over the state of the art – a pre-requisite for publication in IET Research Journals.

Please note that tables, figures and equations should not appear in the middle of the references. If this happens white space will be introduced to avoid items appearing in the references.

12.1 Referencing Style

You should number your references sequentially throughout the text, and each reference should be individually numbered and enclosed in square brackets (e.g. [1]).

Please ensure that all references in the Reference list are cited in the text and vice versa. Failure to do so may cause delays in the production of your article.

Please also ensure that you provide as much information as possible to allow the reader to locate the article concerned. This is particularly important for articles appearing in conferences, workshops and books that may not appear in journal databases.

Do not include references for papers that have been submitted and not accepted for publication. Papers that have been accepted for publication are allowed as long as all information is provided.

Please provide all author name(s) and initials, title of the paper, date published, title of the journal or book, volume number, editors (if any), and finally the page range. For books and conferences, the town of publication and publisher (in parentheses) should also be given.

If the number of authors on a reference is greater than three please list the first three authors followed by *et al.* The reference list should be uninterrupted by figures, tables or equations.

13 Example References

Websites: [1, 3]
Patent: [2, 4]
Journal articles: [6, 10]
Conference Paper: [7]
Book, book chapter and manual: [8, 11, 13]
Report: [5]
Thesis: [9, 12]

Table 2 Example of large table

Column heading 1	Column heading 2
Result 1	123
Result 2	123
Result 3	123
Result 4	123
Result 5	123
Result 6	123
Result 7	123
Result 8	123

14 Appendices

Additional material, e.g. mathematical derivations, tables and figures larger than half a page that may interrupt the flow of your paper's argument should form a separate Appendix section (see Table 2). Do not, however, use appendices to lengthen your article unnecessarily as this section is included in the word count. If the material can be found in another work, cite this work rather than reproduce it. The appendix section should be in double column format, and come after the references.

15 References

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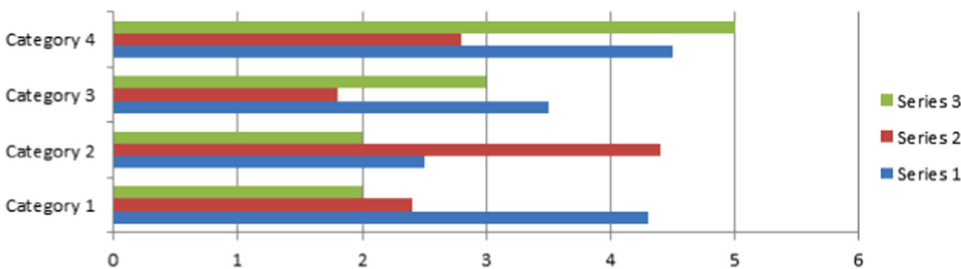
Fig. 2: Sample graph spaning two columns

$$f(x) = a_0 + \sum_{n=1}^{\infty} \left(a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L} \right) + f(x) = a_0 + \sum_{n=1}^{\infty} \left(a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L} \right) \tag{3}$$