

# Template for Preparing a Full Research Paper for Advanced Materials and Structures (AMS)

First Author, Second Author\*, Third Author

Affiliations include Department / Faculty, University, City, and Country Name. In the case of different affiliations, use <sup>1</sup>, <sup>2</sup>, ...

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Received day month year, Revised day month year, Accepted day month year.

## Abstract

Abstract 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.

## Keywords

At least 3 and at most 6 words or phrases should be chosen as keywords. Only the first character of the first keyword should be capitalized. Key word phrases should be separated by “,” and a “.” is needed at the end, e.g., Template, style, authors, manuscript, paper.

## 1. Introduction

This document is a template, an electronic copy of which can be downloaded from Guide for Authors page on the Tabriz Journal of Electrical Engineering (TJEE) website. Before submitting your final paper, check that the format conforms to this template and the Guide for Authors. Specifically, check to make sure that the correct referencing style has been used and the citations are in numerical order throughout the text. If your paper does not meet all of the requirements, your paper will be sent back for resubmit and you will be asked to correct it.

## 2. Length

Original research papers submitted to the Tabriz Journal of Electrical Engineering should not exceed 10 pages in two-column format. If your paper exceed 10 pages, your paper will be sent back for resubmit and you will be asked to correct it.

## 3. Author names and affiliations

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 only the first letter of the first name should be used in capital letters (e.g. A. Akbari). 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 (eg. A. Akbari<sup>1</sup>, M. Adib<sup>2</sup>). The full affiliations of all authors should then be listed. Affiliations should include: the department / faculty name; the name of the university or company; the name of the city; and the name of the country.

Email address of all of the authors are required. The corresponding author should be indicated with a \*. All co-authors must be listed in submission process.

## 4. Page Formatting

An easy way to comply with the requirements stated in the Guide for Authors is to use this document as a template and simply type your text into it.

### 4.1. Page Layout

Our papers are double column format; one column width is 8cm. All paragraphs must be justified, i.e. both left-justified and right-justified. The paper size of TJEE is A4 with the following page margins. Top: 2cm, Bottom: 2cm, Left: 2cm and Right: 2cm.

### 4.2. Text Font of Entire Document

In the main body of our papers, Times New Roman font is used with a font size of 10pt.

### 4.3. Section Headings

All section heading should be numbered and no more than 3 levels of headings should be used. Before each section and subsection, an empty row should be used.

#### 4.3.1 First Level Headings

The first level section headings should be in bold font with font size 10 (e.g. “**1. Introduction**”).

#### 4.3.2 Second and Third Level Headings

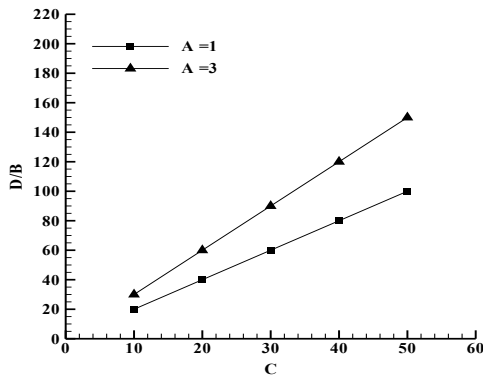
The second and third level section headings should be in italic font with font size 10 (i.e. “*4.3 Section Headings and 4.3.1 First Level Headings*”).

### 5. Figures

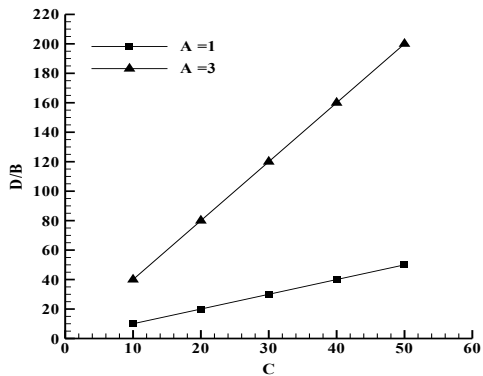
Figures will be reproduced exactly as supplied, with no redrawing or relabelling. It is therefore imperative that the supplied figures are of the highest possible quality. A minimum resolution of 300 dpi (dots per inch) is required. For each figure it is preferred to use a two rows table. A maximum of four subfigures will be allowed per figure. For a figure with two subfigures, a three rows table is needed (see Fig. 1). An empty row should be used before and after each figure.

Large figures may span across both columns. For these figures, a new section is needed in the top or bottom of the page with one column.

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. Each figure should be explicitly referred to in numerical order.



(a)



(b)

Fig. 1. Sample graph. (a) Subfigure 1, (b) Subfigure 2.

#### 5.1. Figure Captions

Figure captions must be below the figure, in 10 pt 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 in Fig. 1.

$$f(x) = a_0 + \sum_{n=1}^{\infty} \left( a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L} \right) + f(x) = a_0 + \sum_{n=1}^{\infty} \left( a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L} \right) \tag{2}$$

### 6. Tables

Tables should be formatted as shown in Table I 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. An empty row should be used before and after each table.

Large tables may span across both columns. In this case, a new section is needed in the top or bottom of the page with one column.

Table I. 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

#### 6.1. Table Captions

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

### 7. Mathematics and equations

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). Copy the following table and then update the equation and its number.

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

For these tables, no border should be used. Equations should be capable of fitting into a two-column print format. If they do not fit into two column they should be floated to the bottom of the page or top of the next in one column and cited in the text by “(see (2))”. All large equations must be numbered in order to avoid confusion between floated equations.

Vectors should be in bold italic, matrices should be in bold 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.  $5 \times 10^3$  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  $a^2 + b^2 = c^2$ .

This template is prepared in “.docx” format. If you changed it to “.doc” format, be sure about using Mathtype software to write equations.

## 8. Page Numbers and Headers

Headers should be used on all pages. Please do not make any changes in the heading. No page number should be used in the submitted paper.

## 9. 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 sent back for resubmit and you will be asked to add the relevant section.

## 10. Acknowledgments (optional)

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.

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

## 11. References

An average research paper should reference between 10 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 TJEE.

Please note that tables, figures and equations should not appear in the middle of the references.

### 11.1. 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. Do not use any website address in references.

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. Also, use the full title of the journal.

### Example References

Journal Articles:

[1] S. Zhao, Q. Li, F.C. Lee, B. Li, “High-frequency transformer design for modular power conversion from

medium-voltage ac to 400 Vdc, *IEEE Transactions on Power Electronics*, vol. 33, no. 9, pp. 7545-7557, 2017.

[2] L. Ding, Q.L. Han, X. Ge, X.M. Zhang, “An overview of recent advances in event-triggered consensus of multiagent systems”, *IEEE Transactions on Cybernetics*, vol. 48, no. 4, pp. 1110-1123, 2017.

[3] Y. Yu, T. Wang, S.C. Liew, “Deep-reinforcement learning multiple access for heterogeneous wireless networks”, *IEEE Journal on Selected Areas in Communications*, vol. 37, no. 6, pp. 1277-1290, 2019.

[4] V. Asadzadeh, A. Dastfan, A. Darabi, “Direct Torque-Control of PMSM Drive by Delayed Sliding Mode and Feedback Linearization Control Approach”, *Tabriz Journal of Electrical Engineering*, vol. 49, no. 2, pp. 463-473, 2019 (in persian).

Conference Papers:

[5] L. Xie, Z. Wang, J. Xiong, Y. Rao, “Distributed acoustic sensing based on correlation analysis of fast and linear sweep OFDR”, In 16th International Conference on Optical Communications and Networks (ICOON), August 2017, Wuzhen, China, pp. 1-3.

Book, book chapter and manual:

[6] S. Boyd, L. Vandenberghe, “Convex optimization”, Cambridge university press, 2004.

Thesis:

[7] A. Last name, “The title of the thesis”, PhD thesis, name of University, year.

## 12. Appendix (optional)

Additional material, e.g. mathematical derivations that may interrupt the flow of your paper's argument should form a separate Appendix section. Do not, however, use appendix 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.