

## IJIFR- IMPORTANT POINTS WHILE WRITING YOUR RESEARCH PAPER

**Format For Original Research Articles:** These may either be a full length research article or a short communication. Depending upon the type of study, there may be some iteration in the presentation of the data and writing of the text. The structure, organisations and content depend heavily on the type of paper, publication outlet, publisher and the creativity of the author. Some examples are given below.

□ **Engineering & Scientific Paper** is meant to convey technical information to the reader. Scientific research must begin with a defined research question, which results in a well-designed research protocol that plans the overall approach. This foundation should lead to a set of data from which the manuscript can be constructed. Therefore, it is generally designed to be a straightforward presentation and discussion. Paragraphs and sentences should be simply constructed. One point of view that supports this concept is that the scientific aspect of the manuscript may be challenging enough for the reader to comprehend, therefore the text itself should support the endeavor to convey the scientific information, rather than acting to further obscure the concepts and results.

□ **Empirical papers**, the paper body describes the material and data used for the study, the methodologies applied to answer the research questions and the results obtained. It is very important that the study is described in a way that makes it possible for peers to repeat or to reproduce it .

□ **Case study papers** describe the application of existing methods, theory or tools. Crucial is the value of the reflections abstracted from the experience and their relevance to other designers or to researchers working on related methods, theories or tools.

□ **Methodology papers** describe a novel method which may be intended for use in research or practical settings (or both), but the paper should be clear about the intended audience.

□ **Theory papers** describe principles, concepts or models on which work in the field (empirical, experience, methodology) is based; authors of theoretical papers are expected to position their ideas within a broad context of related frameworks and theories. Important criteria are the originality or soundness of the analysis provided as well as the relevance of the theoretical content to practice and/or research in the field.

The papers submitted to IJIFR should be arranged into the following sections as per the type of Research

▶ **Authorship of the Paper:** Authorship should be limited to those who have made a significant contribution to the conception, design, execution, or interpretation of the reported study. All those who have made significant contributions should be listed as co-authors. Where there are others who have participated in certain substantive aspects of the research project, they should be acknowledged or listed as contributors. The corresponding author should ensure that all appropriate co-authors and no inappropriate co-authors are included on the paper, and that all co-authors have seen and approved the final version of the paper and have agreed to its submission for publication. Authors are advised to fill their complete information in prescribed Performa given on the website with their final camera ready paper submission online only. It should be made clear which designation & address relates to which author. It should include the title, author's names and affiliations, running title, address for correspondence including e-mail address and also the total number of pages, figures and tables.

▶ **Title** Must be informative, specific, unambiguous and short. It should not exceed 150 characters. The title is the part of a paper that is read the most; it is usually read first and most often, it is the only thing that is read. Electronic indexing services rely heavily on the accuracy of the title to allow users to find papers that are relevant to their research. Thus, effective titles must:

- identify the main issue of the paper;
- begin with the subject of the paper;
- are accurate, unambiguous, specific and complete;
- do not contain abbreviations unless they are well known by the target audience,
- draw attention of readers.

▶ **Abstract:** Basically, an abstract comprises a one-paragraph summary of the whole paper. Abstracts have become increasingly important, as electronic publication databases are the primary means of finding research reports in a certain subject area today. It should not exceed 200-350 words excluding the title and the key words. The abstract must be concise, clear and informative rather than indicative. The abstract must be informative in a structured form and explain briefly what was intended, done, observed and concluded. The conclusions and recommendations not found in the text of the article should not be given in the abstract. Also, there are some things that should not be included in an abstract, i.e. information and conclusions not stated in the paper, references to other literature, the

exact title phrase and illustrative elements such as tables and figures. It is also not beneficial to use the exact phrases that appear later in the introduction. Note that the thematic scope of an abstract progresses in a similar way as the complete paper following the:

- Motivation: Why do we care about the problem and the results?
- Problem: What problem is the paper trying to solve and what is the scope of the work?
- Solution: What was done to solve the problem?
- Results: What is the answer to the problem?
- Implications: What implications does the answer imply?

► **Keywords** Provides 4-7 keywords which will help readers or indexing agencies in cross-indexing the study. The exactly words found in title need not be given as key words.

► **Introduction:** The introduction serves the purpose of leading the reader from a general subject area to a particular field of research. Essentially this section must introduce the subject and briefly say how the idea for this research topic originated. Give a concise background of the study. Do not review literature extensively but provide the most recent work that has a direct bearing if any on the subject. Justification for research aims and objectives must be clearly mentioned without any ambiguity. Point out issues that are being addressed in the present work. The purpose of the study should be stated concisely. Before, ending this part of the paper, you must highlight about other next sections of paper. Three phases of an introduction can be identified as:

- **Establish a territory:** bring out the importance of the subject and/or make general statements about the subject and/or present an overview on current research on the subject.
  - **Establish a niche:** oppose an existing assumption or reveal a research gap or formulate a research question or problem or continue a tradition.
  - **Occupy the niche:** sketch the intent of the own work and/or outline important characteristics of the own work; outline important results; and give a brief outlook on the structure of the paper
- In brief, the introduction should guide the reader to current state of the art in the field and should allow the reader to understand the rest of the paper without referring to previous publications on the topic.

► **Background And Problem:** The author should assured on the specific problem his/her paper will address. This should be done as bluntly as possible, i.e.: “This study examines.” or “This paper focuses on.” In the next several paragraphs, the author should discuss this narrowed topic and must include the following:

- **Clear Statement of Hypothesis:** This is the “If-Then” statement that underlies the author’s whole study. If rampart craters on Mars form because of groundwater then we should see a correlation between groundwater and rampart crater distributions. Most authors forget this. The author need not write “We hypothesized that...” The hypothesis can be something as simple as an If-Then statement of what they were looking for.
- **Previous Researches:** The author should summarize the results and findings of other studies in this area. What research has been done on this topic? How will this study differ? What other studies on similar topics might influence this study? The author should provide enough discussion on previous research for the reader to understand the bigger picture, but not too much. This is not a review paper - the author should only discuss those papers that truly are relevant to his/her study. Depending on the topic, the discussion of previous research might run for two paragraphs.
- **Motivation for Research.** The final paragraph of the Introduction should be a summary of “Why should we care?” Why is the research important? Why is this problem important? How will answering this problem advance research in this area, in industry, in policy, or in people’s lives?

► **Materials and Methods:** This section should deal with the materials used and the methodology (how the work was carried out). The procedure adopted should be described in sufficient detail to allow the experiment to be interpreted and repeated by the readers, if desired. The number of subjects, the number of groups, the study design, sources of experiments or instruments used, statistical methods and ethical aspects must be mentioned under the section. The data collection procedure must be described. If a procedure is a commonly used, giving a previously published reference would suffice. If a method is not well known (though previously published) it is better to describe it briefly with due acknowledgement. Give explicit descriptions of modifications or new methods so that the readers can judge their accuracy, reproducibility and reliability. The purpose of the section is to make it possible for interested readers to repeat the author’s experiment and reproduce his/her results. The author must describe, in detail, exactly what he/she did: what experiments were run and how they were run, what

equipment and materials were used and how they were used, how much, how often, what, where, when, and why. Some of the information the section must include is:

- Sample preparation techniques
- Origins of samples and materials & Description of the field site (if applicable) including physical and biological features, and exact location (include a map, if applicable)
- Protocol for collecting data - how were the procedures carried out?
- Statistical analysis techniques used. If used (for example, in ANOVA tests), the author must report the threshold used to determine statistical significance.
- Information on computer programs used or written (for some computer science or physics articles, the author should include the relevant codes in the appendix)
- Descriptions of equipment set-up and function. If parts of the experiment have been described elsewhere, then the author may reference it. For example: "Samples were prepared using the same process as described by Newton et al. (2000)." Otherwise, the author must describe each piece of the experiment.

▶ **Statistical Methods:** The variation of data should be expressed in terms of the standard error of mean (SEM) or the standard deviation (SD), along with the number of observations (n). The details of statistical tests used and the level of significance should be stated. If more than one test is used it is important to indicate which groups and parameters have been subjected to which test and why.

▶ **Results:** The results should be stated concisely without comments. They should be presented in logical sequence in the text with appropriate reference to tables and / or figures. The data given in tables or figures should not be repeated in the text. The same data should not be presented in both tabular and graphic forms. Simple data may be given in the text itself instead of figures or tables. Avoid discussions and conclusions in the results section. The order of figures should follow the discussion themes and not the sequence they were conducted. Discuss how your data compare or contrast with previous results. Include schemes, photographs to enhance the scope of discussion.

▶ **Discussion:** This section should deal with the interpretation, rather than recapitulation of results. It is important to discuss the new and significant observations in the light of previous work. Discuss also the weaknesses or pitfalls in the study. New hypotheses or recommendations can be put forth. Few points to remember while writing this section of the paper:

- Begin the Discussion section with a brief paragraph that again gives an overview to the work. Summarize the most important findings and, if applicable, accept or reject the proposed hypothesis.
- Next, identify the most interesting, significant, remarkable findings that were presented in the Results section, and contrast these findings in light of other studies reported in the literature.
- It is often informative if a discussion of the potential weaknesses of the interpretation is also included. Finally, at the end of the discussion section, consider the other works in the literature that address this topic and how this work contributes to the overall field of study.

▶ **Conclusions** It must be drawn considering the strengths and weaknesses of the study. Again, first introduce the work and then briefly state the major results. Then state the major points of the discussion. Make sure conclusions drawn should agree with the objectives stated under Introduction. Finally, end with a statement of how this work contributes to the overall field of study.

▶ **Acknowledgements** These should be typed on a new page. Acknowledge only those who have contributed to the scientific content or provided technical support. Sources of financial support may be mentioned.

▶ **References** It should begin on a new page. The number of references should normally be restricted to a maximum of 25 for a full paper. Majority of them should preferably be of articles published in the last 5 years. Papers which have been submitted and accepted but not yet published may be included in the list of references with the name of the journal and indicated as "In press". Avoid using abstracts as references. The "unpublished observations" and "personal communications" should not be used as references. References are to be cited in the text by superscripted number and should be in the order in which they appear. References cited only in tables or in legends to figures should be numbered in accordance with a sequence established by the first identification in the text of the particular table or illustration. As far as possible mentioning names of author(s) for reference should be avoided in the text.

▶ **Web references** As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired or can be included in the reference list.

▶ **Tables and Table Captions** Tables should generally be included in a separate section after the References section. The tables should be headed with a caption and title in bold (i.e., Table 1: Material

Properties), followed by a sentence or two that describes the content and impact of the data included in the table. The table itself should be formatted so that the data is clearly presented and easily interpreted by the reviewer, however the table is likely to be reformatted by journal to conform to its standards. Make sure that each table is referred to in the manuscript text; this will most likely occur in the Results section, but may also occur in the Introduction, Methods, or Discussion sections.

▶ **Figures and Figure Captions** As with the tables, figures can also be placed in a separate section after the References section. Again, clarity is the key factor, especially with images and graphs. All images should be as large as possible, and include accurate scale bars. The graphs should be large, with data points and axis labels in a large font. Legends can be included within the graph or in the caption. All figures need a caption. The caption should identify the figure in bold (i.e., Figure 3), state a brief title to the figure, succinctly present the significant result or interpretation that may be made from the figure (this may be modified from the Results or Discussion section text), and finally state the number of repetitions within the experiment (i.e.,  $n=5$ ) as well as what the data point actually represents (i.e., the data are means and the associated error bars represent standard deviations). As with the tables, make sure that each figure is referred to in the manuscript text.

▶ **Acknowledgement of Sources:** Proper acknowledgment of the work of others must always be given. Authors should cite publications that have been influential in determining the nature of the reported work. Read the finalized paper carefully. Check for accuracy of figures and captions. Are the figures correctly referred to in the text?

▶ **Authorship and Originality** Finally, we have assembled some points to consider in regards to authorship and originality of manuscripts submitted for publication

- Plagiarism is unfortunately a major concern among editors and publishers. Therefore, be certain of the sources of all data and text. If the article is based upon prior work, be sure to reference that prior work properly. An original research paper cannot contain previously published data in any form without a proper citation.
- Authorship and the order of authorship must be agreed upon by all of the authors and any other personnel who participated in the work but are not included as an author.
- It is not permissible to submit a work that is a translation of a previously published paper.

★ All submitted articles will be submitted to the concerned Chief Editor who inspects the manuscript, if he determines that the manuscript is not of sufficient quality to be submitted for review or if the submitted manuscript is out of scope of the journal he reject the submission without any further processing. An email will be sent to the concerned author informing about the rejection of manuscript.

★ If the recommendation is to submit after minor changes, the article will be send to the corresponding author of the article for submitting after making the recommended corrections. Corresponding author is the responsible person to resubmit the article after making recommended corrections within stipulated time. If the recommendation is to submit after major change, the Chief Editor determines whether to accept the paper or not, if he rejects the author will be informed about the decision, if he accepts the above-mentioned procedure will be adopted.

★ To ensure anonymity in reviewing the papers, name of the author, co-author, designation, address, contact number, e-mail, and title of the paper should appear only on the first page of the paper. Authors have to read through the author guidelines carefully before beginning the submission process. Before submission please make sure that your camera ready paper is prepared using the journal paper template. The contents of the paper must justify the title and abstract. Authors are informed to strictly follow ethical publishing policies and submit articles which are free from plagiarism.

***Note: Accepting submissions that have scope for further development is completely consistent with the journal's mission of mentoring. Only submissions that are properly referenced and well supported from an empirical, mathematical or conceptual/logical standpoint will be considered. Although we gladly consider novel ideas and research approaches, which can only be taken seriously if the author has presented a strong case & found to be accurate as per journal standard based on experimental/Conceptual grounds.***

The complete manuscript / camera ready paper should follow the given format as shown in table below. Authors must go through complete paper format of IJIFR before submitting their original and final work. The details of each of the paper format are described here, with a summary provided in table 1.

**Table 1: Font and Paragraph formatting styles for various text elements**

| Content                                    | Apply To   | Font            | Size         | Alignment  | Spacing / Other   |
|--|--|-----------------|--------------|--|---|
| <b>Title</b>                               | Paper Title<br>(UPPER CASE)  | Times New Roman | 24bold       | Centred  | Add space Before Paragraph<br>Add Space After Paragraph<br>1.15   |
| <b>Authors</b>                             | Author Block<br>Author's Name<br>(Capitalize Each Word)<br>Email: As Per The Email Address | Times New Roman | 12<br><br>11 | Centred<br><br>Centred                           | 1.0 Spacing<br>Between authors' details & emails. Remove space after paragraph.   |
| <b>Abstract Header</b>                     | Abstract Heading   | Times New Roman | 12 bold      | Left   | Add space Before Paragraph<br>Remove Space After Paragraph<br>(1.15)  |
| <b>Keywords (plus Times new 12pt bold)</b> | Keywords Heading   | Times New Roman | 12 bold      | Left, flowing straight into keywords             | Add space Before Paragraph<br>Remove Space After Paragraph<br>(1.15)  |
| <b>Keywords</b>                            | Keywords<br>(Capitalize Each Word)   | Times New Roman | 10           | Left   |   |
| <b>Heading 1</b>                           | Level 1 Headings, Incl. Acknowledgements And References                                    | Times New Roman | 12 bold      | Left   | Add space Before Paragraph<br>Remove Space After Paragraph<br>(1.15)  |
| <b>Heading 2</b>                           | Level 2 Headings   | Times New Roman | 12bold       | Left   | Add space Before Paragraph<br>Remove Space After Paragraph<br>(1.15)  |
| <b>Heading 3</b>                           | Level 3 Headings   | Times New Roman | 12bold       | Left aligned                                     | (1.15)  |
| <b>Body</b>                                | Abstract Text;<br>Main Body Text   | Times New Roman | 12           | Justified  |   |
| <b>Caption</b>                             | Table And Figure Captions  | Times New Roman | 11 Bold      | Centred  | Add space Before Paragraph<br>Remove Space After Paragraph<br>Table caption above the table.<br>Figure Caption Below the figure |
| <b>Table Text</b>                          | Text Within Tables   | Times New Roman | 11           | Left/ Centred                                    |   |
| <b>Equation</b>                            | Equations  | Times New Roman | 12           | Left, with number on right in parentheses        |   |
| <b>Reference</b>                           | References/ Literature Cited   | Times New Roman | 11           | Justified;<br>Numbering In[ ] Square Parenthesis | 1.0 Remove Space After Paragraph  |

