GUIDELINES ON WRITING A GOOD PAPER FOR THE PROCEEDINGS OF THE NTU URECA

Adopted by Office of URECA From an IEEE Guideline Proposed by
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The Proceedings of the NTU URECA is the permanent record of the papers arising from URECA research. As an aid to PRS’s and URECA scholars who seek to improve the readability of their URECA papers in the Proceedings, this note summarizes some useful guidelines on technical writing,

I. Organizing the paper (what to do before beginning to write)

A. Analyze the situation—that is, the problem, the solution, and the target audience.
   1. Formulate the objectives of the paper.
   2. Specify the scope of the paper’s coverage of the subject and the results to be discussed. Orient the paper toward the theme of your session as indicated either by the title of your project or by the instructions of your professor. Also take into account the type of research, methodology, application, etc.
   3. Identify the target audience and determine the background knowledge that you can assume for this particular group of people.
   4. Formulate the most logical sequence for presenting the information specified in item 2 to the readers identified in item 3.

B. Make a detailed outline and use it as the basis for both the oral and written presentations of your work.
   1. The introductory paragraph(s)
      a. State the precise subject of the paper immediately.
      b. State the problem to be solved.
      c. Summarize briefly the main results and conclusions.
      d. Tell the reader how the paper is organized.
   2. The main body of the paper
      a. Include enough detail in the main body of the paper so that the reader can understand what you did and how you did it; however, you should avoid lengthy discussions of technical details that are not of general interest to your audience.
      b. Include a brief section covering notation, background information, and key assumptions if it is awkward to incorporate these items into the introductory paragraph(s).
      c. Include sections on theoretical and experimental methods as required.
      d. Plan the results section to achieve the most effective mix of text, figures, and tables in the presentation of the findings.
   3. The concluding paragraph(s)
      a. Explain how the theoretical and experimental results relate to the original problem. State why these results are important.
      b. State the final conclusions explicitly in plain language.

II. Writing the paper

A. Prepare an abstract that is concise, complete, and intelligible to a general reader in the respective field of research. The abstract should not exceed 200 words, and it should contain no references or mathematical symbols.
   1. Summarize the objectives of the paper.
   2. Summarize the results and conclusions.
   3. State the basic principles underlying new theoretical or experimental methods that are developed in the paper.
B. Write the rest of the paper as though you were talking to a group of interested colleagues about your work.
   1. Strive for accuracy and clarity above all else.
   2. Like the abstract, the introduction should be accessible to general readers in the respective field of research.
   3. Make the paragraph the unit of composition.
      a. Begin each paragraph with a sentence that summarizes the topic to be discussed or with a sentence that helps the transition from the previous paragraph.
      b. Provide a context for the discussion before asking the reader to consider new information.
      c. Place the important conclusions in the stress position at the end of the paragraph.
   4. Allocate space to a topic in proportion to its relative importance.
   5. Use standard technical terms correctly.
   6. Avoid strictly the following-
      a. illogical or potentially offensive sexist language
      b. religious, ethnic, or political references;
      c. personal attacks;
      d. excessive claims about the value or general applicability of your work; and
      e. pointed criticism of the work of other people.
C. For each table, compose a caption that briefly summarizes the content of the table. Comment explicitly in the text on the significance of the numbers in the table; do not force the reader to guess at your conclusions.
D. For each figure, compose a caption (or legend) that explains every detail in the figure—every curve, point, and symbol.
E. Revise and rewrite until the truth and clarity of every sentence are unquestionable.
F. Prepare a complete and accurate set of references that gives adequate credit to the prior work upon which your paper is based.
   1. The author-date system of documentation is required for all papers appearing in the Proceedings of the NTU URECA.
   2. In preparing your list of references, you should strive for completeness, accuracy, and consistency. Using the information provided in your list of references, the interested reader should be able to locate each document that you cite in your paper.

III. Achieving a natural and effective style

To achieve a natural and effective writing style, you should adhere to the following principles that are elaborated in chapter 5 of Menzel, Jones, and Boyd (1961):
   1. Write simply.
   2. Use the active voice.
   3. Use plain English words rather than nonstandard technical jargon or foreign phrases.
   4. Use standard technical terms correctly.
   5. Avoid long sentences and extremely long (or short) paragraphs.
   6. Avoid slavish adherence to any set of rules for technical writing, including the rules enumerated here.
   7. Remember that the main objective is to communicate your ideas clearly to your audience.

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References