IEEE Region 4 Student Paper Contest Guidelines

Purpose:

The IEEE Student Paper Contest offers the undergraduate IEEE Student member opportunities to exercise and improve both written and verbal communication skills. Throughout an engineer’s career, he/she will be constantly called upon to communicate ideas to others. Researching, writing, and presenting a paper provides a Student with invaluable early experience in expressing ideas related to engineering. Since the Region 4 Student Paper Contest’s primary function is to improve the engineering Student’s communicative skills, no Student should be discouraged from entering the contest due to a false requirement of technical sophistication.

A. Eligibility

1. An entrant must be an undergraduate student at a school in Region 4 at which there is an IEEE Student Branch at the time of entry and presentation at the Student Branch contest or Section contest.
2. An entrant must complete and submit an application for membership in the IEEE prior to entry in the Student Branch contest or Section contest.
3. An entrant may collaborate writing a paper with additional Students, all of whom meet the above criteria.

B. Number of Entrants

1. There shall be no limit to the number of entries.
2. Each Student Branch normally enters the first place winning paper. However, depending on the number of entries, additional entries may be allowed.
3. No paper may be entered in the Region 4 contest without the prior approval and certification of the Student Branch Counselor. Although this may be waived if the Student Branch Counselor is unavailable.

C. Prizes and Travel Expenses

1. The Institute Life Member Fund will provide a total of $1,500 prize money for the Region 4 Student Paper Contest which shall be allocated as follows:
   a) First Place - $800
   b) Second Place - $500
   c) Third Place - $200

2. The Schools represented by the Region 4 papers will receive appropriate recognition from Region 4.
3. Co-authors/co-presenters shall share equally in the allocation of cash awards.
4. The Region 4 Student Activities Budget will support the Area and Region 4 contest expenses, including reasonable travel, unless other funds are available. It is encouraged that the local Section participates in the funding.

D. Subject Matter

1. Papers shall cover technical, engineering, management or societal aspects of subjects reasonably within or related to areas with which the author is familiar, either from courses, hobbies, school projects, summer work or other similar experience.
2. The work need not be original in content since the primary function of the Region 4 Student Paper Contest is to improve the Student’s communication skills.

E. Written Preparation

1. All papers must be in MS Word or PDF format, double-spaced and formatted for eight and one-half by eleven-inch paper. An equation or symbol that cannot be typed may be written.
2. The pages of the paper must be numbered consecutively. The Introduction, Body, Conclusion, Tables and Diagrams may not exceed 15 pages while the above sections with the Appendices may not exceed 20 pages.
3. In general, the contents of the paper shall be organized as follows:
   a) Separate flyleaf page: Since the judges must handle the papers without knowledge of the identity of the author or his/her school, it is required that the paper itself show no identification other than the title. The title, name of the author, School, Branch, Counselor’s name, author’s IEEE member number, and his current address must be shown on the flyleaf, which can be removed.
   b) Title Page: On the title page, only the title of the paper may appear. The title should consist of the minimum number of key words necessary to portray accurately the contents of the paper. Reader interest is stimulated by a well-chosen and concise title.
   c) Table of Contents: The table of contents shall consist of a list of parts of the paper and the page numbers, in the order in which they occur.
   d) Abstract: The abstract shall not describe the paper, but should give, in brief, the essential facts of its contents. For example, it should be a brief statement of the problem or objective and a concise summary of the results or conclusion, touching upon methods or other details only if they are unique or if they are of some particular significance. The abstract should be no longer than 100 words.
e) **Introduction:** The introduction should lead to the development of the subject so that the reader may obtain a clear understanding of the significance of the paper or article prepared. This can often be done by briefly giving the state of the art as background and then by bringing out the added advantages of the method of approach and emphasizing the importance of the results or conclusions.

f) **Body:** No mention of the author’s name and school shall be made in the body. Any reference to the author’s should read “the university” without giving the actual name. The main argument of the subject is carried out in the body of the paper, complete with supporting data. The argument should proceed in a logical sequence according to prepared outline. The writing should be in the third person. Support data and results can be presented most effectively as curves, charts or tables. Standard graphical symbols and abbreviations should be used on all drawings. (Ref. “Graphical Symbols for Electrical and Electronic Diagrams”, IEEE STD 315. [http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=7737])

Well-known abbreviations may be used in the text but should be defined where used the first time followed by the abbreviation in parentheses. Generally, the use of abbreviations should be confined to tables and illustrations. Illustrations and tables should supplement not duplicate, text materials. Likewise, they should complement, not duplicate each other.

g) **Conclusion:** The conclusion is often considered the most important part of the paper. It should be stated concisely in a separate section at the end of the paper. If there are three or more conclusions, better emphasis can be obtained by numbering each conclusion and setting it off in a separate paragraph.

h) **Tables:** Generally, each table should be typed on a separate sheet and numbered consecutively using Roman Numerals (Table I, Table II). Small tabulations or listings may be made in the text where necessary for continuity. Each table should be titled by giving the brief description as a heading following the table number at the top. Ditto marks should not be used in tables, but brackets may be used to group information on several lines.

i) **Figures:** Figures should be numbered consecutively using Arabic numerals (Figure 1, Figure 2). Three types of figures may be used: photographs, oscillograms and line drawings. The reading material on illustrations should be kept to a minimum. In short, the reading material should be included in the captions. Portions of the illustrations may be identified by letters and explained in the captions. Whenever feasible,
several curves should be combined on the same coordinates. Their identifying letters or numbers should be in clear spaces between cross section lines. Readers generally prefer having the figures distributed throughout the article, although it is also acceptable to bind them together at the end.

j) **Appendices:** Detailed mathematical proofs, development of equations and examples which are subordinate to the main argument in the body of the paper, but not essential to following the argument, should be treated in the appendices. Main equations as they are developed should be numbered consecutively, with the number in the right margin. The equations, figures and tables in the Appendices should be numbered consecutively following the numbers used for the equations, figures and tables in the text (if Table IV is last in the text, Table V would be first in the Appendices).

k) **References:** To enable the reader to consult important works used by the author incidental to the preparation of the paper which might be helpful, a suitable reference list should be appended. References should be numbered consecutively and should follow the form shown below:


---

**F. Oral Presentation**

1. Fifteen (15) minutes shall be allotted for the oral presentation and five minutes for questions from the audience.

2. The Region 4 Paper Contest Chair shall arrange a timing system, with the following characteristics:

   a) A signal will be given at the beginning of the oral presentation.
   b) A warning signal will be given at the end of thirteen (13) minutes.
   c) A stop signal will be given at the end of fifteen (15) minutes.
   d) The contestant should cease talking when the stop signal is given. The judges will assess penalties for running overtime.
   e) The contestant will be stopped by the judges at the end of twenty (20) minutes if he/she continues past the stop signal.
f) In addition to the fifteen (15) and five (5) minute periods, the judges shall be given up to ten (10) minutes to complete their evaluations between presentations.

g) Individuals asking questions during the discussion period shall state their name and affiliation. If the audience does not present any questions, the judges should do so. Questions will be stopped at the end of five (5) minutes.

h) Demonstration or display apparatus may not be employed as a part of the contest presentation. Visual aids such as slides, placards, charts, viewgraph pictures, and videos may be used.

i) Each contestant is responsible for making arrangements with the Region 4 Student Paper Contest Chair for audio-visual equipment needed.

J. Judging

1. Papers will be evaluated and judged on the basis of twenty equally weighted judging criteria. Evaluation and judging is based on 60 percent given to the written paper and 40 percent weight given to the oral presentation. (Note that a significant percent of the judging criteria are related to the student’s written and verbal skills, emphasizing that Region 4 Student Paper Contest’s primary function is to improve an engineering Student’s communication abilities.)

2. Each of the twenty categories will be scored between 1 and 10. Accordingly, the following guidelines should be helpful:
   a) 1 point = Maybe someone should suggest that he/she change his/her major.
   b) 2 points = Did he/she even think about this point?
   c) 3 points = Two more tries might have helped.
   d) 4 points = Need some polish to smooth the rough spots.
   e) 5 points = Not bad.
   f) 6 points = What is expected of someone of this level.
   g) 7 points = Very smooth.
   h) 8 points = The individual must have put special emphasis on this area.
   i) 9 points = So logical and correct that the words seemed to form in your mind as the contestant spoke or wrote them.
   j) 10 points = What Moses felt on Mt. Sinai.

3. There shall be three (3) to five (5) judges. The use of the same judges for both the written and oral presentations is optional but encouraged.

4. The judges shall be selected to represent a cross section of various disciplines in electrical, electronics and related fields of engineering. The Section and Regional SAC should be called upon to assist in the selection of judges at all levels of the paper contest.
5. The judges should have a record of experience in written and oral communication of ideas.

K. Judging Criteria – Written Presentation Evaluation (55%)

1. Form – 70 points maximum
   a) Concise, informative abstract.
   b) Adequacy of Introduction.
   c) Logical development and analytical treatment in the Body.
   d) Adequacy of Conclusion.
   e) Compliance with Paper Contest guidelines on format.
   f) Clarity and directions in exposition.
   g) Grammar, spelling, style and choice of words.

2. Subject Matter – 40 points maximum
   a) Originality of ideas, experimental procedures, processes, results, or conclusions due primarily to this author.
   b) Originality of analysis, interpretation, restatement or inference based upon the work of others.
   c) Quality and level of technical, social or management content.
      Appropriateness, interest and importance.
   d) Factual and Technical accuracy.

L. Judging Criteria – Oral Presentation Evaluation (45%)

1. Form – 60 points maximum
   a) Organization – has introduction, body and conclusions with transition between each.
   b) Logical development.
   c) Poise, eye contact and platform manners.
   d) Grammar, fluency and choice of words.
   e) Clarity and directness in exposition.
   f) Use of graphic aids.

2. Subject Matter – 30 points maximum.
   a) Apparent technical and factual accuracy and grasp of the subject.
   b) Use of examples and analogies.
   c) Discussion.