



IEEE Region 6 Student Paper Contest

←BACK

IEEE Region 6 Student Paper Contest Guidelines (May 1996)

Adopted: August 1969

Revised: February 1982

Revised: October 1984

Organization of Contents:

Section A: General Guidelines

Section B: Conduct of Regional Contest

Section C: Conduct of Area Contests

Section D: Conduct of Branch Contests

Section E: Written Presentation Format

Section F: Oral Presentation Format

Section G: Guidelines and Criteria for Judges and Judging

A. General Guidelines

1. 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 constantly be 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 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 requirement of technical sophistication.

2. Overall organization:

A Student Paper Contest shall be conducted annually within Region 6. The Contest shall consist of competitions at the Branch, Area, and Region levels. A Section Contest may be held in lieu of or may be supplementary to a Branch Contest.

3. Eligibility:

An entrant must be an undergraduate student at a Region 6 school at which there is an IEEE Student Branch at the time of entry at the Branch Contest. (Note: A student who is an undergraduate at the time of his/her Branch Contest remains eligible even if he/she graduates before the Area or Region Contest.) (At his discretion, the Student Activities Chairman may authorize an entrant from a school not having a Student Branch if exceptional circumstances exist.)

An entrant must be a member of IEEE or must have submitted an application for membership prior to entry in the Branch Contest.

An entrant must write his/her own paper even when the project was performed in collaboration with others. The author's contribution must be clearly defined from that of his collaborators.

4. Subject matter:

Papers should cover technical, engineering, management, or societal aspects of subjects reasonably within or related to the areas with which the IEEE is concerned, and with which the entrant is familiar, either from courses, hobbies, summer employment, or other similar experience. An entrant may report on his/her original work, work performed within a group of which he/she is a member, or the results of research of the literature. In any case, the author shall delineate his/her sources according to accepted practice.

B. Conduct of Regional Contest**1. Place and date:**

The Regional Contest shall normally take place on or before September 30, at a site specified by the Student Activities Committee. (Note: The Contest is usually scheduled as a special session of the WESCON Professional Program in Los Angeles or San Francisco)

2. Entry requirements:

Contest entry shall be restricted to the winners of those Area Contests with three or more contestants, and winners of Area Contests with less than three contestants upon recommendation from the Region Director, Region Student Activities Committee Chairman, Region Student Representative, and written recommendation from the Contest Judges.

3. Roles:

Contestants may freely edit and revise their papers, but papers must be submitted

on special manuscript paper by July 10, according to instructions in the WESCON speaker's kit provided to each contestant, Written and oral presentations shall be as specified in Section G.

4. Prizes and expense reimbursement:

The Institute Life Member Fund provides \$525 prize money, which shall be allocated as follows: First place, \$300 second place, \$150: third place, \$75. Additional prize awards, if available, may be offered at the discretion of the Contest Chairman, such As those donated by industrial supporters of IEEE student activities. Additionally, the top three winners will receive certificates and their schools a duly inscribed plaque. Travel expense reimbursement for each entrant (and his Branch Counselor, when available funds permit) must be applied for according to instructions provided by the Region Student Activities Chairman. IEEE Form A-95 or the WESCON expense report form will be used depending on SAC instructions.

5. Winning paper publication:

Each year the top three winners in each region have their papers published in the hardbound book, "IEEE 19xx Student Papers," a document distributed to Student Branches and engineering libraries throughout the world. The three authors must provide a 2" x 3" black-and-white reproducible portrait and a brief (about 100-word) biography by September 30. The Region Student Activities Chairman will forward the winner's nets, address, portrait, biography, IEEE member number, and WESCON manuscript to IEEE headquarters by October 10.

6. Contest Chairman responsibilities:

The overall conduct of the Contest is the responsibility of a Regional Contest Chairman, appointed by the Student Activities Chairman. Specific duties of the Contest Chairman include:

- a. Notifying in advance Area Student Activities Coordinators of the planned Region Contest.
- b. Arranging for all needed facilities and services in cooperation with the Director of Education, WESCON Staff, ECI Inc., beginning by early January.
- c. Soliciting and properly charging judges.
- d. Collecting written presentations from entrants (WESCON manuscripts) and distributing them (copies of the WESCON Session Record) to judges.
- e. Chairing or arranging for chairing oral presentation portion of the Contest.
- f. Arranging for the presentation or delivery of all prizes, plaques, and certificates.
- g. Promptly notifying the Student Activities Chairman as to the Contest outcome (the SAC then has the responsibility of notifying the Student Services Manager at IEEE Headquarters, B.5 above, and requesting the Student Paper Contest prize money and certificates).
- h. Submitting an itemized expense statement to the Student Activities Chairman for

expense reimbursement.

C. Conduct of Area Contests

1. Area definitions:

- a. Northeast: Utah, Montana, Southern Idaho
- b. Northwest: Washington, Oregon, Northern Idaho, Alaska
- c. Central: Northern California, Nevada, Hawaii
- d. Southern: Los Angeles vicinity
- e. Southwest: San Diego vicinity, Arizona, New Mexico

2. Place and date:

The 5 Area Contests are conducted as part of the respective Spring Area Meeting on a date and at a site proposed by the Area Student Activities Coordinator and approved by the Region Executive Committee. Cooperation and coordination in advance (by the preceding Autumn Area Meeting) between the ASAC and EXCOM particularly through the Area Chairman and the Region Student Activities Chairman, will maximize participation and minimize costs of the meeting. On-campus Area meetings enhance student-professional interaction.

3. Entry requirements:

Contest entry shall be restricted to one participant from each Student Branch, normally the Branch Contest winner.

4. Rules: Written and oral presentations shall be as specified in Section E and F. Judges and judging criteria shall be as specified in Section G.

5. Prizes and expense reimbursement:

The Regional Student Activities Committee budget provides \$750 prize money, \$150 allocated to each Area as follows: First place, \$75; second place, \$45; third place, \$30. Additional prize awards, if available, may be offered at the discretion of the Contest Chairman, such as those donated by industrial or other supporters of IEEE student activities. The top three winners will also receive certificates. The Regional Student Activities Committee budget includes funds for reimbursement of reasonable travel expenses, limited to reimbursing one entrant per Student Branch, the Branch Chairman, and the Branch Counselor. In many oases, car-pooling, Branch or Section cooperation and support, etc., can help considerably to enhance student participation at minimum cost. Reimbursement must be applied for by completing a standard IEEE Regional Expense Report, Form A-95, and sending it promptly to the appropriate Area Contest Chairman. The report must conform to

"Region 6 Policy for Reimbursement of Travel and Living Expenses," as revised for the year of the travel. Each person qualified for reimbursement must submit his/her own expense report. Nothing is to be charged directly to IEEE.

6. Contest Chairman responsibilities:

The overall conduct of an Area Contest is the responsibility of an Area Contest Chairman. The Area Contest Chairmen are appointed by the Student Activities. Specific duties an Area Contest Chairman include:

- a. Arranging for all needed facilities and services, in cooperation with the Area Chairman.
- b. Soliciting and properly charging judges.
- c. Promulgating Contest information to all Branches in the Area.
- d. Collecting written presentations from entrants and distributing them to judges.
- e. Chairing or arranging for Chairing the oral presentation portion of the Contest.
- f. Arranging for the presentation or delivery of all prizes and certificates.
- g. Collecting, endorsing, and forwarding to the Region Student Activities Chairman expense reports submitted for travel reimbursement.
- h. Promptly notifying the Regional Contest Chairman of the names, mailing addresses, phone numbers, IEEE member numbers, Branch, and paper titles of winners.

D. Conduct of Branch Contests

1. Date:

Branch Contests should take place at least 3 weeks prior to the respective Area Contest. Contest dates are selected by the Branch Executive Committee and Counselor. The Area Contest date is available from the Area Student Activities Coordinator or the Region Student Activities Chairman.

2. Entry requirements:

All Students meeting eligibility requirements A.3 are eligible to enter their Branch Contest. There shall be no limit placed on the number of entrants.

3. Rules:

A Branch Contest may be held in accordance with the written and oral presentation and judging requirements of section E, F, and G, or, at the option of the Branch Executive Committee and Counselor, local rules may be followed.

4. Prizes and expense reimbursement:

Any prizes or expenses incurred are at the discretion of a Branch and involve Branch funds only. Suitable certificates are available for those Branches wishing to use them, however.

5. Contest publicity and entrant solicitation:

The Branch Executive Committee and Counselor are jointly responsible for adequately publicizing a contest and making the benefits of participation known to their membership.

E. Written Presentation Format**1. General format:**

All papers must be typewritten, double spaced on one side only on standard 8-1/2 by 11 inch paper. An equation or symbol that cannot be typed in may be written in. Authors prepare original copy to assure legible, sharp reproduction of texts figures, photographs, computer listings, plots, sketches, schematic diagrams, etc., maintaining required margins. Margins should be 1-1/4 inches right and left on all pages (entire body not more than 6 inches wide), top margin 8 lines, bottom 4 lines above page number. Page number centered 1 inch from bottom of the page. The pages must be numbered consecutively, starting with the Abstract as page number 1. The main portion of the paper (Introduction through Body and Conclusion, plus Tables and Figures) may not exceed 15 pages. The entire paper (Title page though Appendices) may not exceed 24 pages. Appendices should not be used as artificial extension of the paper. Each copy of a paper submitted for judging should be securely stapled. Binders or protective covers are optional.

2. Organization of paper:

All papers shall include the following components, in the order listed (except Appendices are optional).

- a. Title page: The title page lists the title of the paper, the name(s) of the author(s), the IEEE membership number of the principal author (write "IEEE Student Member No. xxxxxxxx" or if membership has been applied for but

processing is not completed, write "IEEE Student Membership pending), the name of the institution, and the approximate date (month and year) when the paper was written. The paper title should consist of the minimum number of key words necessary to portray accurately the contents of the paper.

b. Table of Contents: The Table of Contents consists of a list of the parts of the paper and their page numbers, in the order in which they occur

c. Abstract: An Abstract is a very brief summary of an entire paper. It appears by itself on a separate sheet of paper. The Abstract should not describe the paper, but should give 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 1000 words.

d. 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.

e. Body: 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 a prepared outline. The writing should be in the third person. References should be cited an appropriate in the text by number, (See (h) below.) Every figure should be cited in the text. Support data and results can be presented most effectively as curves, charts, or tables. Main equations as they are developed should be numbered consecutively, with the number in the right margin. Standard graphical symbols and abbreviations should be used on all drawings. (Ref. "Graphic Symbols for Electrical and Electronic Diagrams," IEEE STD 315.) Well known abbreviations may be used in the text, but should be defined where used the first time followed by the abbreviation in parentheses. (See 7 below.) 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.

f. Conclusions: The Conclusions are often considered the most important part of a paper. They 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.

g. Acknowledgments: Acknowledgments of assistance should be placed at the end of the paper. See 4 below.)

h. References: To enable the reader to consult important works used by the author in the preparation of his manuscript and other related literature which might be helpful, a suitable reference list should be appended. References

should be numbered consecutively and should follow the form shown below:

For a periodical: R. N. Hall, "Power Rectifiers and Transformers," Proc. IRE, Vol. 40, pp. 1512-1518, November 1952.

For a book: W. A. Edson, Vacuum Tube Oscillators, John Wiley and Sons, Inc., New York, New York, pp. 170-171, 1948.

For an article: B. Lawrence, B. H. Weil, and M. H. Graham, "Making on-line search available in an industrial research environment," Journal of the American Society for Information Science, pp. 364-369, Nov.-Dec. 1974.

i. 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 Appendices. 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 (such as, if Table IV were last in the text, Table V would be first in the Appendices).

3. **Tables and figures:**

Each table should normally be typed on a separate sheet and numbered consecutively using Roman numerals: Table I, Table II, etc. 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.

Figures should be numbered consecutively using Arabic numerals: Figure 1, Figure 2, etc. Three types of figures may be used: photographs, oscillograms, and line drawings. Every figure should include a caption which fully identifies what is being illustrated, but reading material on an illustration itself should be kept to a minimum. Portions of illustrations may be identified by letters and explained in the captions. Whenever feasible, several curves should be combined on the 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 through the article, although it is also permissible to bind them together at the end.

4. **Information regarding genesis of project, student's role, originality, etc.:**

No separate statement regarding the originality of contributions or the specific

contributions of an author is required; however, it is desirable to include information of this type to enable judges to fairly assess the content of a paper.

5. **Biography:**

Include a note of information about the author on a final page.

6. **Submission deadlines and the number of copies to be submitted:**

Unless a Contest Chairman specifies that additional copies are to be sent, 3 copies should be submitted. They should be posted so as to be received by a Contest Chairman at least two weeks in advance of the Contest (oral presentation) date, and the Chairman should be separately notified that manuscripts have been submitted.

7. **Further Information:**

"Information for IEEE Authors." IEEE Spectrum. August 1965, pp. 111-114.

"Supplement to Information for IEEE Authors," IEEE Spectrum. May 1966.

"IEEE Recommended Practice for Units in Published Scientific and Technical Work," IEEE Spectrum, March 1966, pp. 169-173.

F. Oral Presentation Format

1. **General format:**

Each presenter shall be allotted 15 minutes for his presentation, followed by a 5 minute question period. The order of presentation shall be determined by lot. During a question period, questions may be asked by judges or by members of the audience.

2. **Procedures:**

a. The Chairman shall explain procedures to the contestants and audience at the beginning of the Contest.

b. Each speaker shall be introduced by the Chairman before beginning his/her presentation.

c. The Chairman shall arrange for a timing system which will give a warning signal at the end of 13 minutes, a stop signal at the end of 15 minutes, and a second stop signal at the end of 20 minutes to signal the termination of the question period. The Chairman is responsible for the fair and equitable enforcement of timing rules.

d. The presenter is responsible for recognizing individuals seeking to ask questions. Judges should always be given priority in the asking of questions,

however. Questioners from the audience must state their name and affiliation.

e. Each presentation shall be followed by a short break of up to 5 minutes to allow judges to complete their assessments, and to prepare for the next presentation.

3. **Display items and visual aids:**

Demonstrations and hardware displays are allowed, but should be appropriate for a technical presentation. Visual aids such as slides, charts, and motion picture films may be used. The following equipment shall ordinarily be available for all oral presentations:

35 mm slide projector, Screen, Over head or view graph projector, Pointer, Blackboard, Podium

Each contestant is responsible for arranging for any needed visual aids other than those listed above. When a large audience is anticipated, a public address system with a lavalier microphone shall be provided.

G. Guidelines and Criteria for Judges and Judging

1. **Judges:** There shall be 3 to 5 judges employed for both written and oral presentations. The use of the same judges for both types of presentations is optional. The judges should have a record of experience in written and oral communication of ideas. They should be selected to represent a cross section of various disciplines in electrical, electronics, and related fields of engineering. Judges are selected and appointed by the appropriate Contest Chairman. Qualified engineers in local industry are recommended for judging in order to enhance student interaction with the profession.

2. **Judging Criteria:**

Papers and presentations will be judged in three categories: The written presentation, the oral presentation, and the project (or study) itself. Each of these categories are weighted equally. In making this judgment, the following factors are considered:

A. The Written Presentation

- a. Organization (Logical? Inclusive? Compact?)

- b. Content (Interesting? Clear? Articulate?)
- c. Language (Grammar, spelling, choice of words)
- d. Illustrations (figures) (Pertinent? Clear?)

B. The Oral Presentation

a., b., c. of the above plus speaking effectiveness, audio-visual aids, and ability to handle well the questions asked from the audience.

C. The Project

- a. Usefulness (Does it fulfill a need with reasonable ease and economy?)
- b. Originality (Is the idea novel and are the procedures ingenious?)
- c. Development (Is the reasoning sound? Are the mathematical processes pertinent and correct? Are the experimental techniques satisfactory?)

At oral presentations, judges should ask such questions as necessary to determine the precise role of the author in the project, and they should be prepared to ask probing technical questions. On written presentations, originality scores must be based on information included in the paper itself. Contestants are always highly interested in learning how they fared. Judges are urged to add comments and constructive criticism to score sheets. These items can then be returned to contestants at the completion of a Contest to aid contestants in improving their communication skills. Judges should preserve their anonymity by not identifying their score sheets, however.

3. **Suggested method of scoring:**

Assign to each of the categories listed above a score on the scale of 5 to 1. Scores accurate to one decimal point, but not greater than 5 are appropriate.

5 - Excellent, 4 - Great, 3 - Good, 2 - Fair, 1 - Poor

Each judge will compute a score by adding the scores of the three categories for each paper. The maximum score would be 15. It is the responsibility of each group of judges to decide before the contest a fair method of compiling their individual scores into a final judgment.

IEEE Region 6 Central Area Student Paper Contest Judging Sheet

Student Name:

Paper Title:

1. Written Presentation

- a. Organization
- b. Content
- c. Language
- d. Effectiveness of illustrations

Written score (1-5)_____

2. Oral Presentation

- a. Organization
- b. Content clear
- c. Language
- d. Effectiveness of oral presentation
- e. Response to questions
- f. Audio-visual aids

Oral score (1-5)_____

3. Project

- a. Usefulness
- b. Originality
- c. Development

Project score (1-5)_____

Comments, constructive criticism

 **BACK**