

## 2005 Undergraduate Student Paper Contest

Revised 12/7/2004

Sponsored by Region 5 & Life Members

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### Schedule

#### First level, Section/Branch Contests:

- **January 21, 2005** - recommended submission deadline for local competitions

#### Second level, Area Contests:

- February 18, 2005 - deadline to review, revise, and rewrite papers
- **February 22, 2005** - submissions deadline tentatively set by all the Area Chairs to receive the local undergraduate papers. Email your paper to the Area Chairs on time. Late entries are subject to disqualification.

#### Final level, Region 5 Contest:

This will require you to travel to the Region 5 Conference. The IEEE will pay for your reasonable expenses. Your professors will work with you to allow for travel. If you have any problems in this regard, contact your student advisor at once.

- **March 18, 2005** midnight MST - deadline to submit papers to the Region 5 competition
- April 9, 2005 - start of the oral presentations at the Region 5 Conference

### Paper Presentation Rules

#### Quick Guide:

- [Section A](#): General (for all)
- [Sections B, C, D](#) and [E](#). Conduct of Contest (for administrators)
- [Sections F](#) and [G](#). Written and Oral Presentation Rules (for students and judges)
- [Sections H, I](#), and [J](#): Judging Guidelines and Criteria (for judges)

#### A. General

1. Purpose: To improve communication skills of undergraduate IEEE student members.
2. Levels: Competitions occur at the Local (LC), Area (AC), and Region (RC) levels (in that order). Local contests may be Branch or Section contests, or any combination thereof. Oral presentations are required at LC & RC levels. Winners may revise their papers before submission to the next level.
3. Eligibility: The LC entrant must be an undergraduate and an IEEE member (or pending). Graduation before the AC or RC does not affect eligibility. Entrants may collaborate with up to two other entrants.
4. Subject: Papers must cover technical, engineering, management, or societal aspects of subjects relevant to the IEEE. A paper must address a research of the literature, entrant's original work, or work performed by a group the entrant belongs to.

## **B. Regional Contest**

1. Venue: The RC is part of the annual Region 5 Conference. The 2005 Region 5 Conference is being held at the Omni Hotel and Resort, Broomfield, Colorado. There are other events that may be interest you. Please visit <http://r5.ieee-denver.org>.
2. Entry: Only the top three winners of each AC may enter.
3. Suppression: The Contest Chair may suppress contestant identification to prevent actual or inferred unfairness.
4. Prizes: Region 5 and the Institute Life Member Fund provide \$1500 prize money, allocated thusly (per paper, not per entrant): First Place, \$800; Second Place \$500, Third Place \$200; plus certificates (entrants) and inscribed plaques (entrants' schools). The Contest Chair may offer additional prizes.
5. Expenses. The Regional Student Activities Committee (RSAC) reimburses authorized travel expenses after receiving an entrant's completed IEEE Regional Expense Form A-95.

## **C. Area Contest**

1. Date: The AC Chair selects a pre-01 March contest date.
2. Entry: The AC entrant must first win the LC against at least one other paper. If the LC is among more than 3 papers, the top 2 winners enter the AC.
3. Prizes: First, second and third place winners receive \$125, \$100, and \$75, respectively—plus certificates and a reimbursed trip to compete in the RC. The AC Chair may award additional prizes.

### **Area locations:**

- North Area: KS, MO, OK, and Southern IL.
- West Area: CO, South WY, Southwest ND, West NB, West TX, and Southeast NM.
- East Area: AR, LA and East TX.
- South Area: TX (except East & West TX).

## D. Local Contest

- Venue: The LC Chair selects the place and pre-01 February date.
- Prizes: The local unit determines and funds its LC prizes and expense

## E. Contest Chairs

### 1. Appointments:

- Local Student Activities Chair appoints the LC Chair.
- Area Chair appoints the AC Chair.
- Regional Activities Chair appoints the RC Chair.

### 2. Some specific duties:

- Post due dates and contact information via e-mail and Website(s) in a timely manner.
- Solicit, select, and oversee judges.
- Manage document submission process.
- Manage presentation or delivery of prizes, plaques, and certificates.
- Promptly notify the entity Chair (e.g., AC Chair notifies the Area Chair) of contest outcome (RSAC notifies the IEEE Student Services Manager).

### 3. Chair duties

#### *The Contest Chair:*

- Ensures the following are present: digital projector and screen, pointer, blackboard or equivalent. Lectern is optional
- Briefly explains the rules at start of contest.
- Introduces speakers before their respective presentations, unless identities are suppressed.
- Fairly enforces the rules.
- Allow judges up to 3 minutes after a presentation to complete their assessments.
- Uses timing system that provides:
  - Signal to begin the presentation.
  - Warning signal at 10 minutes.
  - Stop signal at 12 minutes.
  - Stop signal at 15 minutes, terminating Q&A

## F. Written Presentation Rules

### 1.

General format: Papers must be submitted as Portable Document Format (PDF), single-spaced and formatted for letter- sized paper. The body must be 2,500 to

3,000 words — over/under results in penalty (with the Introduction, Body, Conclusion, Tables, and Figures, this is about 7 pages). The optional Appendices must not exceed 5 pages. You may use the standard IEEE template (2005 conference site) :

[http://r5.ieee-denver.org/images/website%20docs/TPS\\_Manuscript\\_Instructions.pdf](http://r5.ieee-denver.org/images/website%20docs/TPS_Manuscript_Instructions.pdf)

2. Style: While third person is preferable, first person is acceptable if it enhances clarity or readability (e.g., “our team” or “I” vs. “the author”). Active voice and a tight writing style enhance paper quality.
3. Structure: Include the following, in the order listed (appendices are optional).
  - Title page: The title is concise, but conveys the subject. List on separate lines: title, author name(s), principal author’s membership number (“IEEE Student Member No. xxxxxx” or “IEEE Student Membership pending”), school name, and month/year of contest.
  - Table of Contents: Use formal format, with page numbers.
  - Abstract: In 100 words or less, briefly states the problem or objective and summarizes the results or conclusion, touching upon details only if they are particularly significant.
  - Introduction: Explain the significance of the paper; summarize what the paper will deliver. One-way: briefly explain the problem and then how the paper will address it.
  - Body: Provide the subject arguments in logical sequence, with supporting data.
  - Conclusions: Summarize the major points of the paper.
  - Originality statement: Briefly explain the originality of the paper and project.
  - Acknowledgments: Briefly list specific contributions of each author and of supportive parties.
  - References: List the literature used to develop the paper. Number references consecutively and follow this form:
    - *Periodical*: R.N. Hall, Power Rectifiers and Transformers," Proc. IRE, Vol. 40 pp, 1512-1518, November 1952.
    - *Book*: W.A. Edison, Vacuum Tube Oscillators, John Wiley and Sons, Inc., New York, New York, pp. 170-171, 1948.
    - *Article*: B. Lawrence, B.H. Well, 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.
    - *Appendices*: In these, include material that is helpful (but unessential) for supporting the arguments in the body. Each appendix item must have a reference in the body. Number items consecutively, continuing the sequence used in the body (e.g., if Table 3 were last in the text, Table 4 would be first in the appendices).
4. Graphics:
  - These supplement—not duplicate—text (or each other).
  - Enhance presentation of supporting data with curves, charts, or tables.
  - Layout option: Place graphics in the text or place at the end.

- Provide explanatory caption for each graphic.
  - Letters, explained in captions, may identify portions of graphics. When feasible, combine multiple curves in one graphic, and identify appropriately.
  - Tables may be images (or files) embedded in the document. Don't build with spaces or tabs (due to display disparities).
  - Number equations consecutively, from order of first appearance. Number tables consecutively (e.g., Table 1, Table 2). Number figures consecutively (e.g., Figure 1, Figure 2).
  - Use MS-Equation editor or embedded images for equations or symbols.
  - Use standard symbols and abbreviations. (Ref. "Graphic Symbols for Electrical and Electronic Diagrams," IEEE STD 315). Upon first use of an abbreviation, use the full wording then follow with the abbreviation in parentheses (AIP).
5. Submission deadlines: The Contest Chair sets the deadline. The contestants must follow the deadline. Tip: submit 3 days early, with receipt request.

## **G. Oral Presentation Rules**

1. General format: Determine the order of presentations by lot. Each presenter has 15 minutes to present, including the 3-minute Question & Answer (Q&A). In the case of co-authors, only one may orally present. During Q&A, the presenter will recognize questioners and answer questions—giving priority to judges. The Contest Chair may veto inappropriate questions.
2. Visual aids
  - Permissible: Slides, Power Point, Charts and Transparencies.
  - Impermissible: Demonstrations, hardware displays, films, sound recordings or handouts.

## **H. Guidelines and Criteria for Judges and Judging**

1. Judges: The Contest Chair must select 3 or 5 judges for each portion (written, oral)—these need not be the same judges for each portion. Preference is for judges with expertise in written and oral communication. The Contest Chair must make reasonable effort to obtain a judge from outside the IEEE—someone with a degree or career in English or journalism (e.g., editor, English teacher, technical writer).
2. Judging Criteria: The criteria are on the official score sheets. Note: 70 percent of the criteria relate to communication skills, not technical skills.
3. Winner selection: The ranking of the cumulative scores determines the ranking of the winners. Judges vote to break a tie.
4. Judge Guidelines:
  - Score each criterion on a 1 to 10 scale. Scores of 2-4 weak, 5-7 normal, and 8-9 superior. Scores of 1 or 10 indicate extremes so a solid paper will get a 6.
  - The subject matter criteria emphasize technical grasp of the subject. At oral presentations, judges should ask probing questions to determine the presenter's role in the project.
  - Judges should add comments and constructive criticisms to score sheets, to help

contestants improve communication skills.

## I. Disputed Decisions

1. A Branch Counselor (or equivalent) may dispute contest results, for technical errors only (e.g., score sheet arithmetic, or a time limit breach not reflected in scores). Absent any technical errors, the decision of the judges is final.
2. A Branch Counselor (or equivalent) may appeal (the judges' response to a disputed decision) to the Contest Chair. The decision of the Contest Chair is final.

## J. Judging Criteria

The judging criteria are on a scale of 1 to 10 with 10 being the highest rating:

### 1. Written Presentation Portion

- Form (35% of overall score)
  - Concise, informative abstract.
  - Adequacy of introduction.
  - Logical development and analytical treatment in the body.
  - Adequacy of conclusion (delivers on the promise of the introduction).
  - Compliance with format rules.
  - Clarity and directness.
  - Grammar, spelling, and style.
- Subject Matter (20% of overall score)
  - Originality of ideas, procedures, processes, designs, results, or conclusions. For paper based on literature: originality of analysis and interpretation.
  - Quality and level of content.
  - Appropriateness, interest, and importance.
  - Factual and technical accuracy.

### 2. Oral Presentation Portion

- Form (35% of overall score)
  - Adequacy of introduction and conclusion.
  - Logical development of major points.
  - Flow and balance of subject material.
  - Poise, eye contact, and manners.
  - Grammar, fluency and word choices.
  - Clarity and directness (Tone, pace, enunciation, volume and delivery)

- Use of graphic aids.
- Subject Matter (10% of overall score)
  - Technical and factual accuracy, grasp of the subject.
  - Use of examples, metaphors, and analogies.

*Success tip: If doing PowerPoint, limit your text to only a few words per line and no more than 6 bulleted items per page. Use graphics liberally. For best results, add a photo that ties the project to a larger social or economic theme.*

Please contact [Region 5 Paper Contest Chair](#) with any comments or questions.

Web formatted rules information provided by Mark Lamendola, Kansas City Section, thanks Mark and the Area Chair for their time and effort to make this newer version available. Bob Scolli