IISE UNDERGRADUATE STUDENT TECHNICAL PAPER COMPETITION

The purpose of the competition is to encourage undergraduate students to write and present outstanding technical papers.

Submission Form, Global Level (Microsoft Word)
Score Sheets (Microsoft Word)
Hints for preparing your paper and presentation

Eligibility

- Students must be an undergraduate student when the nominated paper is written.
- Paper can be projects done for a company as part of a course, internship, or other activity. They may be undergraduate research projects done at the home institution.
- A faculty member may serve as an advisor on a project, but the work should primarily be done by the students.
- A faculty member cannot be a co-author of the paper.
- Only IISE members are eligible to participate.
- Each participating university, including the host institution, may submit up to two papers as entries.

The paper should be written in a professional journal format, including page numbers and table of contents. Every principal author must make an oral presentation at their respective University Region Conference. The first place winner will be eligible to compete in the Undergraduate Technical Paper Competition Global Finals at the IISE Annual Conference & Expo in May 20-23, 2017 in Pittsburgh.

At the regional level, the paper may be written and delivered in the language of the region, or in the language established by the host committee (host committees should, of course, confer with the other chapters in the region before making any decision). The conference host committee is strongly encouraged to budget funds for translation of the document into English, should it be necessary. English is the official language of the IISE Annual Conference & Expo. The written document must be submitted in English for judging at the international level. Translation services are not provided by IISE.

Paper and Page Layout

Papers must adhere to the following guidelines:

- 8½-inch x 11-inch paper
- The paper should not exceed 20 pages including appendices.
- Font should be Times New Roman, point size 11.
- Margins of 1 inch (2.5 cm) all around.
- Single spacing
- Full text justification
- The following information should be placed at the top of the first page:
- Paper title: 16 point Times New Roman bold and centered.

- Author(s) listing: 12 point Times New Roman bold, centered and include names, university, city, state, zip code and country.
- Text should be organized into sections and subsections, with an introduction and a conclusions section being advisable. A single line should separate paragraphs; no indentation should be used. Font guidelines are as follows:
- Section headings: numbered, 12 point, bold, upper and lower case, left-justified and leave one blank line above only.
- Section sub-headings: numbered, 11 point, bold, upper and lower case, left-justified and leave one blank line above only.
- Regular text: 11 point Times New Roman, full justified and a single line between paragraphs.
- Sub-bullets must be indented.
- Figures, tables and their captions
- Tables and figures when included in the main text need to be as close to the point of their introduction as possible. It is noted that figure and table numbering should be independent. Captions guidelines are as follows:
- Figure captions: 10 point Times New Roman, centered and place below the figure, leave one blank line above and below.
- Table caption: 10 point Times New Roman, centered and place above the table, leave one blank line above only.
- Equations should be centered and numbered, with the number in parentheses, positioned flush to the right margin. Preferably, they should be prepared with an equation writer.

Rules

The entry form is only submitted at the level of the region conference. For the international competition, the host institution sends the first, second and third place winning papers along with the faculty advisor's certification that it is undergraduate work and that the student is a member of IISE. The papers should be submitted in electronic format (preferably as a color PDF) to Bonnie Cameron at IISE headquarters within one week of the conclusion of the region conference. It is recommended that competitors at the regional conference level submit papers and certifications to the host chapter via color PDFs.

Each student chapter can select up to two papers for the competition at its University Region Conference. If there are more than two competing papers from a chapter, the chapter should conduct its own competition at the local level to determine which two papers will compete at the regional level. The individual chapter competitions are not the responsibility of the region conference host.

Multi-authored papers are permitted, provided the names of all authors are on the paper. If four or fewer chapters participate in the University Region Competition, a maximum of three papers may be accepted from each school. All schools, however, must be informed of the change.

The participating schools must submit three copies of each paper for presentation at the University Region Conferences. These should be addressed to the president of the host chapter.

The papers must be submitted at least four weeks prior to the conference to allow time for judging. Flexibility on this regard is up to the host chapter. Keep in mind, however, that the judging is based on the written portion of the project as well as the oral presentation. Depending on how many entries there are, the judges may need 3 to 4 weeks to properly evaluate the papers.

The faculty advisor, or department head, of the participating school must certify that the paper is an undergraduate work and that the student is a member of IISE. This should be stated on the first page of his or her letter to the president of the host chapter.

The participants in the international competition will be the first place winners of each of the University Region Conferences. This competition will include an oral presentation by the finalists in front of their peers and professional ISEs at the IISE Annual Conference & Expo. Again, the oral presentation at the region level may be made in the native language of the competitor, however, the winning regional paper must be submitted in English. Translation services are not provided by IISE.

Only the first place winner (one paper) will represent a region in the competition at the IISE Annual Conference & Expo.

In the event that the first place winner is unable to present at the finals, the second place winner will represent the region at the finals.

Criteria

1. Depth, significance and originality of subject matter
2. Excellence of written presentation
3. Excellence of oral presentation

Judging

Judging is based on 75 percent written presentation and 25 percent oral presentation. Each presenter must be allowed an equal amount of time, not to exceed 15 minutes plus three minutes for a question and answer period. Questions can come only from students and judges outside the presenter's chapter. The Host Committee is responsible for establishing the actual minutes allowed, which should be a function of the number of entries received.

There should be a minimum of three judges. Faculty members from competing schools are not eligible to serve as judges. Judging forms are also found in the appendices. The same forms must be used for all levels of competition, including the international level.

The faculty advisor of the host chapter along with the conference committee shall select the judging committee. The committee should have at least three qualified judges (and four are recommended if

research papers are included in the competition, with an additional academic and/or research judge); it is recommended that one should be an educator, one an industry representative and the third either:

1. An educator with practical experience and knowledge of new developments in the field

2. A current graduate student who possesses industrial experience

3. A management consultant or top industrial leader who has knowledge of recent developments in the field

Judges selected should have little or no ties to any of the competing chapters or competitors. The host chapter should plan so that the judges deliver their results on the same day of the oral presentations. The host chapter should reserve a conference room or other area where the judges can deliberate in private after the oral presentations.

The host committee is responsible for providing the judging criteria and instructions (see appendix on line) to all judges along with the papers. The judging should take place in two steps:

Written paper: All scores must be submitted before oral presentations begin

Oral presentation: Scoring should occur immediately after the presentation

No ranking shall be made until both scores have been tabulated. The important directive is that papers must be original works by undergraduate students. Multi-authored papers are permissible, however, it is assumed that one person will be the principal author and this person will make the oral presentation. The award will be given to the principal author only.

For the international competition, judging will be done on-site, immediately after the oral presentations. The judges will be a committee of prominent, professional industrial engineers selected by the vice-president for student development. The judging criteria will be the same as that of the regional conference. The committee selects the winners of the first, second and third place awards.

Regional Winners

The region winners should be announced during the University Region Conference Awards Banquet. The host chapter should present monetary awards to the winners, with the money coming from conference funds. Suggested amounts are:

1. First Place - $500

2. Second Place - $300

3. Third Place - $200

The host chapter chairperson is also responsible for the release of suitable publicity of award winners to college publications, IISE publications and students' hometown papers. The chairperson of the University Region Conference should send an electronic version of the first, second and third place papers to Bonnie Cameron at IISE Headquarters no later than one week after the region conference concludes. Papers received after this date will not participate in the global competition. All finalists whose membership has expired before the finals must renew their membership prior to the region conference or they will not be able to represent their region.