



65<sup>th</sup> Pittsburgh  
Regional  
Science &  
Engineering  
Fair

## ISEF GUIDE

April 2-3, 2004

Heinz Field

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The Intel International Science and Engineering Fair (ISEF) is the Olympics, the World Cup and the World Series of science competition. Held annually in May, ISEF brings together more than 1,200 students from 48 states and 40 nations to compete for over \$1 million in scholarships, tuition grants, internships, scientific field trips and the grand prize: a trip to attend the Nobel Prize Ceremonies in Stockholm, Sweden.

As the only local ISEF-Affiliated Fair, PRSEF will nominate up to four Senior Division students to attend an all-expense paid trip to ISEF in Portland, Oregon, May 9-15, 2004. Over the past two years, PRSEF students won over \$60,000 at ISEF in cash prizes, scholarships and trips.

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Pittsburgh Regional Science and Engineering Fair  
c/o Carnegie Science Center  
One Allegheny Avenue  
Pittsburgh, PA 15212-5850

Phone: 412.237.1534      [www.pittsburghsciencefair.org](http://www.pittsburghsciencefair.org)



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## **Preliminary ISEF Procedure**

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Under current Pittsburgh Regional Science and Engineering Fair (PRSEF) rules, Senior Division Fair entrants must apply to be eligible to advance to the International Science and Engineering Fair (ISEF). Any student who now wishes to be considered for ISEF must be a PRSEF entrant and submit a Preliminary ISEF Application and Research Paper by February 20, 2004 to:

Lisa Kosick  
Pittsburgh Regional Science and Engineering Fair/ISEF Coordinator  
c/o Carnegie Science Center  
One Allegheny Avenue  
Pittsburgh, PA 15212

In brief, the practice is as follows:

1. An applicant submits a Preliminary ISEF Application and a Research Paper\*.
2. Each research paper shall be reviewed upon submission by an individual with expertise in the category represented by the paper. These judges are affiliated with local universities/hospitals and are not otherwise involved in category judging. (This is the first step in the screening process)
3. The second step occurs during judging when the ISEF judges visit the exhibits represented by the papers they selected. The ISEF judge may select one or more exhibits for panel review.
4. During the final step, the student(s) will be evaluated by a panel of all ISEF judges (up to 8) at an interview after fair category judging has been completed.
5. Winner(s) will be announced during the Awards Ceremony on Saturday, April 3, 2004.

\*See Guidelines for format and content in this Guide

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## Preliminary ISEF Requirements

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In addition to the research project, all entrants to the Pittsburgh Regional Science and Engineering Fair (PRSEF), who wish to be considered for advancement to the Intel International Science and Engineering Fair, must submit a research paper on no more than 20 pages describing the project along with the Preliminary ISEF Application. A research paper exceeding this limit will be disqualified. It is required that all projects be endorsed by the sponsoring school. Multiple entries for each school are permitted. **Three** copies of the Research Paper must be submitted to the PRSEF office on or before February 20, 2004. Questions, call 412-237-1534 or email Lisa Kosick, [kosickl@csc.clpgh.org](mailto:kosickl@csc.clpgh.org).

Submit:

Lisa Kosick

Pittsburgh Regional Science and Engineering Fair/ISEF Coordinator

c/o Carnegie Science Center

One Allegheny Avenue

Pittsburgh, PA 15212

### REQUIREMENTS

- maximum of 20 pages
- single-sided, 8 1/2" x 11" paper
- double-spaced
- 12 point font
- 1 inch margins (top, bottom, right, left), left aligned, not justified
- page numbers at bottom
- graphics must contain a caption
- references must be single-spaced
- 3 stapled copies must be submitted to PRSEF – do not use covers

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## Outline for the Research Paper

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### OUTLINE

#### Title Page

Each paper submitted must contain a title page. This page must include: 1) Title of the paper, 2) Name of the project and 3) Category of the research presented. **The title page is not counted as one of the twenty single-sided pages of the paper.** Initial evaluation of all Research Papers will be done without reference to the student or the student's school, in order to ensure fairness. The title page should be the ONLY place containing the name of the student and any acknowledgements.

The following must be included within the 20 page limit:

#### Abstract

The abstract must not be more than 60 words (do not count articles, i.e., an the, etc.) *This is different from the 100-word abstract that is required for PRSEF.*

#### Research Topic Selection

Briefly state how you chose your research topic. Include it on the same page(s) as the abstract.

Research Paper must include:

- Purpose – Briefly describe the problem being solved, the question being answered, the hypothesis being tested or the product being developed.
- Rationale – Why is the work you have performed important?
- Relevant literature – Provide a brief, but accurate, review of the literature.
- Methodology – What methods did you use? Explain the process. Document any outside assistance or special circumstances. Describe the experiments/laboratory work performed.
- Outcomes – Describe the results of the research or mathematical study.
- Conclusions – Describe the strengths and weaknesses of the research; conclusions or interpretations.
- References – The reference list should include any documentation that is not your own. (i.e. books, journal articles). See an appropriate reference in your discipline for format. At least one journal article is required in the list of references. Judges at the regional and international competitions may review the list of references.

# Preliminary ISEF STUDENT APPLICATION FORM 2004 PRSEF

All Preliminary ISEF Applicants must first register for the Pittsburgh Regional Science and Engineering Fair. Application Form and research paper are due on or before February 20, 2004.

1. TITLE OF PROJECT \_\_\_\_\_  
(titles of more than 30 characters must be abbreviated)

2. TITLE OF RESEARCH PAPER \_\_\_\_\_

3. CATEGORIES (CHECK ONLY ONE)

Senior Division (Grades 9 - 12)

Behavioral & Social Science

Biology

Chemistry

Computer Science/Math

Earth/Space/Environment

Engineering/Robotics

Medicine & Health/Microbiology

Physics

4. STUDENT'S NAME \_\_\_\_\_  Male  Female Grade \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone ( ) \_\_\_\_\_ Student's email address \_\_\_\_\_

5. CERTIFICATION

We have submitted the necessary PRSEF paperwork. We understand that a maximum of four senior division student projects will be chosen to receive an all-expense paid trip to compete during the International Science and Engineering Fair held May 9-15, 2004 in Portland, Oregon. Airfare, hotel and meals will be provided for the students by the PRSEF office. Chaperones will be provided for the week. Teachers and parents may accompany the student at their expense. If selected to advance to ISEF, we agree to accept direction set forth by the PRSEF chaperones.

Student's Signature: \_\_\_\_\_

Parent's Signature: \_\_\_\_\_

6. MAIL TO

Pittsburgh Regional Science and Engineering Fair  
c/o Carnegie Science Center  
One Allegheny Avenue, Pittsburgh, PA 15212-5850

Contact: Science Fair office, 412/237-1534



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