



Partnership for Air Transportation Noise and Emissions Reduction
An FAA/NASA/Transport Canada-sponsored Center of Excellence

**6th Annual
Joseph A. Hartman Student Paper Competition**

Submission Deadline: 31 January 2010

RULES AND GUIDELINES

Subject Matter

The Partnership for Air Transportation Noise and Emissions Reduction (PARTNER) is currently seeking submissions of Undergraduate and Graduate level student technical papers relating to the reduction of aircraft noise and emissions. Of particular interest are papers describing research in these areas:

- socio-economic effects of noise and emissions
- operational measures for noise and emissions reduction
- compatible land use management
- gaseous and particulate matter emissions and mitigation
- climate and air quality effects of aviation emissions
- alternative fuels
- aviation environmental policy
- aircraft and engine design for environment

This research competition seeks to capture the very best ideas concerning technical solutions, economic and policy analyses, methodologies, and processes that work towards reducing aviation noise and emissions exposure through source reduction technologies, alternative fuels, operating procedures, compatible land use management, and policy implementation.

The work need not be original in subject matter since the primary function of the Student Paper Competition is to encourage student activity in the environmental aspects of aviation. The work should, however, be original in treatment and concise in coverage of the author's contribution to the subject. Please discuss future research directions or plans if appropriate.

Eligibility

Any student attending an institution of higher learning anywhere in the world is eligible.

Graduating Students: A student's paper is eligible if submitted while the student is enrolled, regardless of whether the student graduates before winners are chosen or announced. The AIAA web site, where papers are to be submitted, records the date submitted. Papers submitted for the undergraduate level of the competition must be based on work performed while an undergraduate student, and will be accepted from undergraduate students and graduate students through the end of their first year of graduate level study.

Format

All papers must be written in English. The pages of the paper shall be numbered consecutively, and may not exceed 15 pages double-spaced, exclusive of Title Page, Table of Contents, Appendices, and Student Biography. Total paper length should not exceed 20 pages. Preferred font is Times New Roman, and no smaller than 10-point size except in mathematical formulas, subscript or superscript notations, diagrams and figures, page numbers, or captions for figures or tables. Margins shall be 1" and configured for US letter size paper if possible. The contents of the paper should be organized as follows:

Title Page

Provide paper title, name(s) of author(s), name(s) of research advisor(s), school affiliation and degree status.

Table of Contents

The table of contents should consist of a list of the parts of the paper and the page numbers, in order in which they occur.

Abstract

The abstract should not describe the paper, but should give, in brief, the essential facts of its contents; for example, 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.

Introduction

The introductions 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.

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. Support data and results can be presented most effectively as curves, charts, or tables.

Equations

Equations essential within the body of the paper should be numbered consecutively, with the equation number placed near the right margin.

Figures and Tables

Readers generally prefer having figures and tables distributed through the article, although it is also permissible to include them at the end. Figures are encouraged. Figures and tables should be consecutively numbered. Permission should be obtained for the use any photos or diagrams not created by the authors. In this case a credit should be included, acknowledging the copyright owner and/or source of the image, as an adjacent vertical text box text or in the caption, or within the body of the paper.

Conclusion

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.

Acknowledgments

Give credit where credit is due. Acknowledge any governmental, corporate, university or private sponsorship of the work. Cite grant number, if any. Individuals contributing significant assistance for the work or the paper, such as research advisors, associates and colleagues, or experimental subjects, may be mentioned here with or without names, as appropriate. Note that names should not be used without first obtaining permission to do so.

Footnotes and References

Footnotes (if any) should be placed above the 1" margin at the bottom of the page on which they are indicated. List all references at the end of the paper. Examples of acceptable formats are:

- For a periodical or magazine:
R.N. Hall, Power Rectifiers and transformers, Proc. IRE, Vol. 40, pp. 1515-1518, November 1952.

- For a book:
W.A. Edison, 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 online search available in a industrial research environment, Journal of the American Society for Information Science, pp. 364-369, Nov-Dec. 1974.

Appendices (Optional)

Detailed mathematical proofs, development of equations, data 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 an appendix or appendices.

Publication Agreement

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Submission Process

Entries will be accepted electronically through the AIAA web site: <<http://www.aiaa.org>>

Navigate to the "Conferences and Events" area of the site. In the search box displayed there to "Find a Conference, Event or Exhibit by Title, Location, or Venue," enter the word PARTNER and click the "Search" button.

A short description of PARTNER's Hartman Paper Competition should appear, offering several options to proceed. Choose "Get Details" to be redirected to the "Event Overview," which provides more information, or "Submit Paper" to proceed directly to the interactive submission process. Follow the site instructions for "abstract submittal," but upload there your entire paper as a single file (not as abstract alone or as multiple files abstract and paper).

The AIAA web site will be open for paper submittal October 2009 through January 2010. The system will allow for file upload in the following formats: Word, WordPerfect, Text, RTF, and PDF. Authors having trouble submitting papers electronically should email AIAA technical support at: <paper_tech_support@aiaa.org>. Questions about the competition may be addressed to the PARTNER Program Management Office, at: <info@partner.aero>.

Any changes to this process or anticipated dates will be posted at the PARTNER public web site: <<http://mit.edu/aeroastro/partner/news>>

Notification Process

Papers will be judged by a panel of subject matter experts from academia, industry, government and non-governmental organizations in the aviation environmental community, associated with the PARTNER Center of Excellence. Winners will be notified on or before 1 April 2010.