



**Aviation Sustainability Center**  
A Center of Excellence Sponsored by  
FAA & Transport Canada

**Joseph A. Hartman Student Paper Competition**

Submission Deadline: 11 March 2019

**RULES AND GUIDELINES**

The Aviation Sustainability Center (ASCENT) is currently seeking submissions of undergraduate and graduate level student technical papers relating to aviation noise and emissions, including:

- Aircraft Noise and Impacts
- Aviation Emissions and Impacts
- Aircraft Technology Assessment
- Environmentally and Energy Efficient Gate-to-Gate Aircraft Operations
- Aviation Modeling and Analysis

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.

Graduate student papers are eligible if submitted while the student is enrolled, regardless of whether the student graduates before winners are chosen or announced. Please note in your submission your graduation date. The submission form will record the date of submission to verify the paper is eligible.

Undergraduate student papers must be based on work performed while enrolled as an undergraduate and will be accepted from undergraduate and graduate students, as long as it's within the first year of graduate-level study.

**Format**

Here are the format requirements for submitted papers:

- Must be written in English.
- Must not exceed in 15 pages double-spaced, excluding title page, table of contents, appendices, and references. Total page number should not exceed 20 pages.
- Must include page numbers.
- 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 must be 1" and configured for US letter size paper if possible.

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 of which they occur.

### Abstract

The abstract should not describe the paper, but should briefly give 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 table 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 of 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, 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.

### Acknowledgements

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, November1952.

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**

By submitting this paper to ASCENT, the authors warrant that they are its sole authors, and that they have the right to submit this paper to ASCENT. If there is more than one author of a paper, the submitting author represents that this agreement is made on behalf of all the authors. If the paper was produced in the course of employment and constitutes a "Work for Hire" with copyright ownership retained by the employer, the authors warrant that the paper has been cleared through their employer for public release. The authors hereby represent that this permission is not in conflict with or a violation of any previously issued permissions or copyrights to that material. For any portion for which previous copyrights have been granted, the authors warrant that they have obtained permission for its use and all such permissions are acknowledged in the paper. Further, the authors certify that this work does not infringe any trademark, patent, trade secret, or other intellectual property rights.

The authors also warrant that the paper does not contain classified material, does not libel anyone, invade anyone's privacy, or otherwise violate any law.

The authors retain all rights to said material in accordance with U.S. Code Title 17, Copyrights, revised to 1 January 1978. Any third party requests to ASCENT for permission to use portions of papers submitted to ASCENT must be made to the authors.

### **Submission Process**

The submission deadline is 11 March, 2019 Papers are to be submitted via the electronic form found on [ascent.aero/competition](http://ascent.aero/competition).

Any changes to this process or anticipated dates will be posted at the ASCENT public website: [ascent.aero/competition](http://ascent.aero/competition)

### **Notification Process**

A panel comprising experts associated with the ASCENT Center of Excellence will judge papers. Winners will be notified in prior to the April 2019 ASCENT meeting.