



Sustainability 2015



*An International Conference on
Environmental Sustainability in Air
Vehicle Design and Operations of
Helicopters and Airplanes*

*Presented by
- AHS International -
Montreal/Ottawa Chapter*

*22nd – 24th September, 2015
Montreal, Canada*

Call for Papers

"Sustainability 2015" will take place during the 22nd – 24th September, 2015 at the venue of the Hilton Bonaventure in Montréal, Canada. The theme of the conference will be ***environmental sustainability in the design, manufacture and operation of rotary-wing and fixed-wing aircraft.***

As the aviation industry adapts to the significant global environmental challenges of the future, emerging technologies and methodologies must provide new and transformational capabilities. "Sustainability 2015" provides a tremendous opportunity for the aviation industry (comprising the helicopter, airplane, propulsion and operator communities) to meet, present and discuss advances in the key areas of design, manufacturing and operation of their products with the collective aim of reducing their environmental impact and carbon footprint.

Call for Abstracts

The submission of abstracts for technical papers/presentations for this event is now being welcomed under the following 6 thematic subject areas (Examples are given below of the subject matter being considered under each theme, but technical submissions on other relevant subjects within these themes will also be accepted):

1. Innovative Air Vehicle Eco-design Concepts

(Expert Reviewer: Susan Gorton – NASA)

- a. *New material technology developments*
- b. *Aerodynamics advancements*
- c. *More electric aircraft*

2. Eco-design Tool Developments

(Expert Reviewers: David Zingg - University of Toronto; Manuele Margni - École Polytechnique de Montréal)

- a. *Enhanced design tools and methodologies (including CAD/CAM)*
- b. *Optimization techniques (MDO) for sustainability*
- c. *Aviation Life-Cycle Analysis (LCA) methodology improvements*

3. Environmentally-friendly Manufacturing & Green Supply Chain

(Expert Reviewers: Ali Yousefpour – National Research Council of Canada; Vince D’Arienzo - Bell Helicopter)

- a. *Manufacturing technology developments*
- b. *Management of manufacturing and chemical waste (recycling)*
- c. *“Green” as a Lean (economic) enabler*
- d. *Greener aerospace supply chain (forward & reverse logistics)*

4. Powerplant Advancements

(Expert Reviewers: Sam Sampath – University of Toronto; Hany Moustapha - École Technologie Supérieure)

- a. *Propulsion technology developments*
- b. *Challenges to retrofitting the existing fleet for sustainability*

5. Alternative Fuels & Sustainable Operations

(Expert Reviewers: Christian Mascle - École Polytechnique de Montréal; Jeff Cochrane - Nav Canada; Sam Sampath – University of Toronto)

- a. *Operational best practices for sustainability*
- b. *Environmental aspects of Maintenance/Repair/Overhaul (MRO)*
- c. *Route optimization technology*
- d. *End-of-service life issues (Recycle/reuse/remanufacture/safe disposal)*
- e. *Greener fuels*

6. Noise in the Community

(Expert Reviewers: Doug Boyd - NASA; Steve Colavincenzo - Bombardier Aerospace)

- a. *Psychoacoustic aspects of helicopter noise*
- b. *Noise abatement lessons learned from the fixed-wing community*

Abstracts must be received no later than **Friday, the 27th of March 2015**. Late submittals will not be included in the evaluation process. Please send your abstracts to sustainability@vtol.org

The abstract should conform to AHS International's procedure as described here. It should be submitted in English and be in line with the format indicated below. An abstract should be submitted as an MS-Word document (.doc) or in a Portable Document File (.pdf) format.

This conference will accept either formal technical papers, accompanied by a PowerPoint presentation at the conference, **OR** the submission of a PowerPoint presentation alone (without an associated technical paper). ***In either case an abstract will still be required*** to be submitted for vetting in accordance with the format set out in this guidance material (see below). ***Submissions which will provide formal technical papers will be given preference by the technical reviewers.***

Technical papers and conference PowerPoint presentations must present subject matter of technical merit and relevance to the themes of the conference. Those submitting abstracts will be asked, at the time of submitting their abstract, to state whether they are committing to produce a technical paper for the conference, or only committing to produce a technical presentation. Any subsequent request to change from a commitment to produce a paper to produce only a presentation will be granted at the discretion of the technical reviewers, and will be agreed on a case-by-case basis.

Submittal of an abstract is a professional commitment: if the abstract is accepted, the author commits to prepare a final paper (or PowerPoint presentation), to personally attend "Sustainability 2015" event and to make a conference presentation. If an author finds that he or she will be unable to make the presentation, then it is incumbent upon him or her to find a substitute presenter.

Subject matter in papers presented at previous technical conferences, or papers published previously in journals are not eligible for consideration

unless they contain a significant amount of new content which represents original/additional research findings not previously published. This ineligibility includes papers or presentations (or facsimiles thereof) that are submitted for presentation at a national meeting of any professional organization at any time prior to “Sustainability 2015”. One author may present no more than two papers.

Other Important Information

Authors will be notified of paper/presentation selection by **Friday, the 1st of May, 2015**.

The associated full paper must be submitted by **Friday, the 26th of June, 2015**.

The associated PowerPoint presentation must be submitted by **Wednesday, the 16th of September, 2015**.

“Sustainability 2015” will be open to an international audience. As such, it is the policy that all papers/presentations submitted for inclusion in the event’s Proceedings and all presentations made at the conference are completely unrestricted. That is, they must not contain any proprietary, sensitive, classified or otherwise controlled information. Authors must make note of this when submitting abstracts and it is every author’s responsibility to obtain the appropriate clearances for the abstract, paper and presentation being submitted: this can sometimes take several weeks depending upon your own organization’s clearance procedures.

All papers/presentations accepted and presented at the conference will be made available as proceedings of the conference and authors will be required to sign an assignment of copyright for publication by AHS International.

No Paper/No Presentation – No Podium

A general “No Paper/No Presentation – No Podium” policy will be in effect for all contributed papers/presentations. This policy means that an author will not be scheduled to speak if the paper/presentation has not been properly submitted as required for this conference. Any paper/presentation received after the final submittal date will not be included in the final version of the **“Sustainability 2015”** proceedings.

Registration

Presenters of all papers/presentations delivered at the technical sessions must register for the event and are eligible to pay the reduced registration rate for the **“Sustainability 2015”** event, regardless of whether they are members or non-members of AHS International.

Abstract Format

The submitted abstract should conform to the layout shown on the next page:

Name

Title and Position

Organization/Affiliation

Address

Telephone

Email

Paper Title

ABSTRACT – Maximum 1000 words

Stream (Select one from): *Innovative Air Vehicle Eco-design Concepts; Eco-design Tool Developments & Life Cycle Analysis (LCA); Environmentally-friendly Manufacturing & Green Supply Chain; Powerplant Advancements; Sustainable Operations & Alternative Fuels; Noise in the Community*

Final Submittal Format (Specify either Option A or B):

Option A - PowerPoint Presentation & Technical Paper

Option B - PowerPoint Presentation Only

Background: *in no more than ~400 words*

Results achieved: *in no more than ~400 words*

Future research plans: *in no more than ~200 words*