Peer Review Form for Scientific Articles AE2223-I

Fill in this form by typing, not by handwriting. Adjust space to need. The criteria correspond to those mentioned more elaborately on the checklist scientific articles, to be found on Blackboard. Use that checklist for a more elaborate description of the criteria.

Elements

1. Abstract
Readable as stand-alone text – Informative on research and results – Clear key words

Comments:

Contains all elements expected and easily conveys the message.

2. Introduction
Background information on problem – Clear motivation for research – Research question stated clearly – Structure article discussed if necessary

Comments:

Contains all elements expected and easily conveys the message.

3. Method
Well-argued – Sufficient definition of concepts – Connection to research question

Comments:

Subsection Data Corrections:

Sub-subsection BNC:

A mention is made regarding a background noise model, It would be interesting to ensure or at least demonstrate this model is indeed representative of reality. Also, and this is maybe more of a personal matter but it would be nice if you could explain how you plan on dealing with a multi-aircraft problem (i.e. multiple aircraft flying in the vicinity of your microphone and how to separate the emission of each one of them).

Sub-subsection DEC:

You state horizontal velocity is used for frequency correction. Why does vertical velocity not affect the frequency correction when the source is clearly moving also towards the microphone?

Sub-subsection GSC:

It is a good idea to introduce notation before using it, for example at the beginning of the paper (see template provided on Brightspace).

You state the directionality of the microphone reduces considerably the amount of "valid" data for analysis purposes. It could be interesting to add in the recommendations a fragment explaining how the sample quality could be improved.

Sub-subsection AAC:

Suggestion, rewrite equation 4 as: $L_p(r_0, f, T, h, P)$

You state a humidity level of 70% is chosen, how do you come up with this value?

*Minor detail: check for the consistency of indentation and make it uniform throughout the document!

Subsection Metrics Determination:

Sub-subsection Loudness:

How do you justify the division into 24 one thirds of octave bands? Is it an arbitrary selection…?

Rephrase: Subsequently, a table ... ISO 226:2003.
Rephrase: Using this table ... can be found.

Sub-subsection Sharpness:

Note $\int$ should be replaced by $\sum$ as your domain is not continuous but discrete!
Also, $N'(z)$ is nowhere to be found.

Sub-subsection Tonality:

Rephrase: First, the tonal components ... narrow band samples.
Be careful with the use of comas, as some sentences become difficult to understand!

Sub-subsection Psychoacoustic Annoyance:

Rewrite into: $W_s(S,R,F)$, $W_{\{RF\}}(S,R,F)$ no need to write the dependence of variables or functions with words. Use mathematical notation, clear and concise… which also helps reduce the amount of, space it takes… *recall, 8-page limit specified by project description.

Rephrase: Hence, assuming high values ... for loud noises.
Rephrase: As it was explained in section B.
Rephrase: "Schneider Suggests [14]" and "the following equation" should be Equation (15)

Inconsistent use of indentation (example; after equation 15)

4. Results and discussion
Results presented clearly - Validity of results discussed and supported – Relation text/illustrations clear

Comments:

You include Table 1 in this section although there is no reference or explanation about it whatsoever. Aside of that, it is unclear to the average reader what the Aircraft/Metric values mean exactly. It would be even better if you would include the specific aircraft models (so to make it more informative) instead of just stating (Aircraft – XYZ).

Rephrase: which means that program thinks ...
Rephrase: This implies that the mesh ... indeed is correct.

Include the limitations of your analysis.

5. Conclusions
Link to research question – Follow from previous material – Recommendations further research

Comments:

Too much emphasis is made on what was done but not much is explained regarding the performance of your method and how it compares with previously developed metrics. It would be interesting to discuss what your research brings to the table as in, what new findings you've made and whether using this new process provides an edge over previous procedures.

Additionally a clear link should be made between the research question and the conclusions as well as clearly answering said question.

Reference use

6. Use of sources

Correct references – Good use of literal quotes – Good use of paraphrasing

Comments:

Sources are used appropriately.

7. Bibliography

References meet requirements – Correspondence references in text and bibliography

Comments:

Fulfills all requirements and specifications. Text correspondence with the sources provided.

Content

8. Data analysis / research sufficiency

Your opinion on the data analysis and research sufficiency

Comments:

Throughout the paper a clear explanation is made about how certain techniques and methods are applied to analyze the properties of a sample although I was not able to understand how your research is relevant to science, in other words, what innovation do you present respect to previous publications in the field?

9. Argumentation

Your opinion on the academic value of the argumentation – Critical review of literature

Comments:

There is substantial reason for the research to be performed. The problems are stated clearly and the literature review performed in a diligent way.

Structure

10. Paragraphs

Well-constructed – One topic – Clear topic sentences – Clear paragraph structure

Comments:

For the first 4 pages, the structure is very good and a clear separation between ideas and concepts is made. Form there on a revision should be made on the use of comas and the overall cohesion of sentences. Note, sometimes the way you use comas kills the sentence innate meaning and

Style

11. Style and language use

Correctness – Objectiveness – Clarity – Attractiveness

Comments:

The quality of the first 4 pages is indeed really good but from there on, there is a substantial decrease in clarity and sentence quality. The message starts to be a bit blurry and is not as easy to follow. I assume this was due to the lack of time the final paper is presented this should not be an issue.

Side of this, the paper is objective and interesting to read.

Illustrations and layout

12. Tables and figures

Functionality - Number and caption – Reference in text – Reference to source – Legend/explanation

Comments:

The figures are easy to understand and support perfectly the text.
Remember to reference Figure 4 in the text!

13. Format

Font – Headings – Page lay-out – Adherence to template

Comments:

Generally speaking it fulfills all requirements and is of good quality.

Personal recommendation: use a two-column setup as it minimizes the amount of blank space and also keeps the presentation neat.