



Audio Engineering Society Convention Paper

Presented at the AES 157th Convention
2024 October 8–10, New York, NY, USA

This paper was peer-reviewed as a complete manuscript for presentation at this convention. This paper is available in the AES E-Library (<http://www.aes.org/e-lib>), all rights reserved. Reproduction of this paper, or any portion thereof, is not permitted without direct permission from the Journal of the Audio Engineering Society.

Very long title of complex audio algorithms and results

John Smith¹, Teri Jones^{1,2}, and John Maclane²

¹First University

²Second company

Correspondence should be addressed to John Smith (john.smith@fakemail.com)

ABSTRACT

Write the abstract here.

1 Introduction

Introduce to the topic.

2 Methods

Show your methods.

3 Results

Present results.

4 Discussion

Discuss the results.

5 Examples

Here are a few examples on LaTeX.

5.1 Citations

Citations can be used as follows, Pulkki [1] created VBAP and DirAC [2]. Notice the difference in the reference types allowed by natbib-package.

Table 1: This table shows a few trigonometric values.

θ	$\sin(\theta)$	$\cos(\theta)$
$\pi/4$	$\sqrt{2}/2$	$\sqrt{2}/2$
$\pi/3$	$\sqrt{3}/2$	$1/2$
$\pi/2$	1	0

5.2 Equations

Equations are used often in text and Equation 1 shows an example of this.

$$\cos(2\alpha) = e^{j2\pi} - 2\sin^2(\alpha) \quad (1)$$

5.3 Tables & figures

Tables can be created in various ways and for various purposes. The example in Table 1 shows basic trigonometric values using booktabs formatting.

There are also various ways to include and even draw figures in LaTeX. The most common is to include them. As is shown with Figures 1 and 2. LaTeX places the figures in the optimal place in the document by its type-setting rules but appropriate location can be hinted with

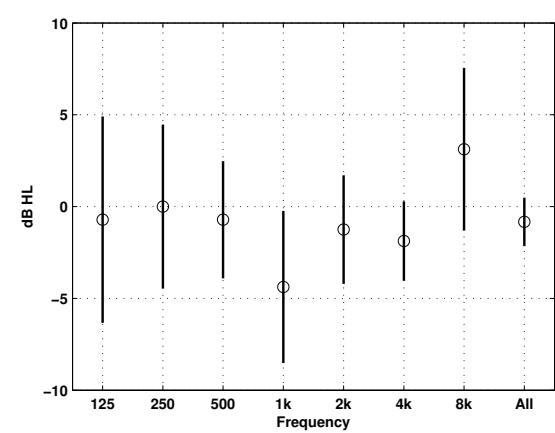


Fig. 1: This is an example of using the pdf format showing means and confidence intervals of audiometric data.

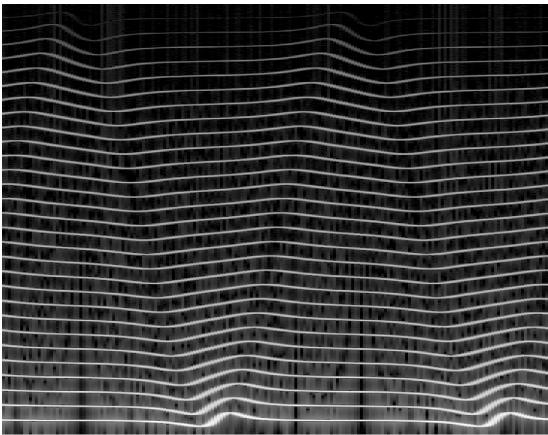


Fig. 2: This is a spectrogram of a spectral delay filtered sawtooth waveform using the png format.

[t], [b], and [h] arguments (corresponding to top, bottom, and here). Combination of these are also allowed. AES instructions recommend only placing figures and tables at the top or the bottom of the document but getting the preferred result might require some tuning by hand.

6 Summary

Summarize your work and conclude.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vestibulum fermentum, libero nec scelerisque condimentum, libero mi porta dui, sit amet varius enim dui nec nisi. Suspendisse nulla nibh, lacinia in sapien at, tempus faucibus dolor. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Ut facilisis erat accumsan tempor faucibus. Suspendisse ac dolor id odio iaculis sodales. Mauris nec arcu non tellus luctus mollis at vitae mi. Curabitur posuere feugiat molestie. Curabitur ac lorem vel arcu gravida volutpat.

Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. In lacus est, accumsan non dictum nec, volutpat non justo. Sed auctor scelerisque ante, vitae volutpat mauris elementum sit amet. Etiam interdum felis id dignissim imperdiet. Proin ullamcorper sit amet augue quis consequat. Nulla varius enim sed nisl tempus, a ultricies sem finibus. Ut

vel purus malesuada, sagittis ligula ut, luctus velit. Suspendisse iaculis magna id est consectetur condimentum. Nulla facilisi. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce erat justo, auctor ut malesuada sed, ultrices eu odio. Integer vitae facilisis eros, sed dapibus lacus. Sed eleifend, risus ut congue tincidunt, nulla ipsum vestibulum diam, ut laoreet metus erat auctor nunc. Donec nisi diam, aliquam eget pharetra non, viverra non enim.

Integer facilisis elit id mauris laoreet gravida. Etiam dictum auctor nibh, ac pharetra est aliquam et. Praesent a ligula ut turpis egestas cursus vel non ante. Nam varius facilisis urna eget finibus. Duis eleifend dui id lacus tempus aliquet. Praesent vel sodales dolor. Suspendisse potenti.

Curabitur nisi felis, mollis non justo nec, sollicitudin ullamcorper lorem. Nunc mattis ullamcorper vestibulum. Aenean vitae turpis vel ipsum porttitor placerat. Etiam quis turpis quis nulla cursus rhoncus. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Sed auctor est sed vehicula dignissim. Sed vel sem eget odio sagittis pharetra ut eu ex. Nullam fermentum ipsum non lacinia sollicitudin. Vestibulum purus ex, volutpat rutrum velit vitae, pulvinar ullamcorper mi. Maecenas tristique turpis ut justo pellentesque, in hendrerit ligula commodo. Pellentesque eget dignissim tellus.

References

- [1] Pulkki, V., “Virtual Sound Source Positioning Using Vector Base Amplitude Panning,” *Journal of Audio Engineering Society*, 45(6), pp. 456–466, 1997.
- [2] Pulkki, V., “Spatial Sound Reproduction with Directional Audio Coding,” *Journal of Audio Engineering Society*, 55(6), pp. 503–516, 2007.