

# Workshop: Optimizing and Debugging Web Audio API Applications

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## ABSTRACT

In this tutorial, we will look at two different aspects of working with the Web Audio API.

First, we'll have a look into the performance characteristics of the different AudioNodes available, their performance profile, overall CPU and memory cost, and strategies to use resources (CPU, memory) more efficiently. For example, we'll learn how to look into the source code of different implementations, and determine the algorithm and techniques used in each browser, to make better choices when developing applications.

We'll then look into ways to make processing lighter, while still retaining the essence of the application, for example to make a "degraded" mode for mobile. We'll use techniques such as substituting rendering methods to trade fidelity against CPU load, pre-baking assets, minimizing resampling.

Throughout the workshop, we'll use tools and techniques to debug audio problems, both using in-browser tools, or JavaScript code designed to inspect static and dynamic audio graphs and related Web Audio API objects.



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*Web Audio Conference WAC-2016, April 4–6, 2016, Atlanta, USA.*

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