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**[A Symphony Hall: L'Auditori Barcelona](#)**

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**Authors**

Higini Arau-Puchades<sup>1</sup>

<sup>1</sup>Arau Acustica

**Abstract**

This paper describes the design of the Concert Hall of Barcelona, called "L'Auditori". The acoustical design of the project was finished in 1990 but it was built later and finally opened on 22nd March 1999. The acoustics of the concert hall have been very well received by audiences.

In this manuscript, we outline several acoustic features which had to be designed using old methods because the more modern systems had not yet been developed. However, construction was delayed nine years, which meant that new computer tools were available when work was coming to an end in 1990, it allowed us to carry out an overall review of many aspects of the design,

A very important issue that required years of research before we discovered the cause of the problem was that musicians could not hear themselves on stage, yet Gade's measurements of ST1 made in 2001 were comparable with those found in the best reference halls. In this paper we discuss this issue, and conclude that the musicians were correct.

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## A Symphony Hall: L'Auditori Barcelona

Higiní Arau-Puchades,

*Arau Acustica,*

*www.arauacustica.com*

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### ABSTRACT

This paper describes the design of the Concert Hall of Barcelona, called "L'Auditori". The acoustical design of the project was finished in 1990 but it was built later and finally opened on 22nd March 1999. The acoustics of the concert hall have been very well received by audiences.

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A very important issue that required years of research before we discovered the cause of the problem was that musicians could not hear themselves on stage, yet Gade's measurements of STI made in 2001 were comparable with those found in the best reference halls. In this paper we discuss this issue, and conclude that the musicians were correct.

### 1. GENERAL ACOUSTIC DESIGN

This hall was designed with the aim of emulating the acoustics of the three most famous concert halls in the world: the Amsterdam Concertgebouw, Boston Symphony Hall and the Vienna Grosser Musikvereinssaal. It aimed to be a modern version of a classical hall. The hall nominally seats 2326 (maximum 2335) and is the home of Barcelona City & Catalanian National Orchestra.



Figure 1. Barcelona Auditorium view