

Chapman University's Musco Center for the Arts Opens in Orange County, California

By Motoo Komoda

In our November, 2012 newsletter I wrote about the start of construction on Chapman University's Musco Center for the Arts. The center is located on the university's campus in Southern California's Orange County. After 3.5 years of construction, the center celebrated its grand opening on March 19, 2016.

Project Overview

The new center has indoor space of 8,189 sq. m. (88,142 sq. ft) and cost about US\$82 million to build. In addition to a world-class, 1,044-seat multipurpose hall, the center has 9 dressing rooms, a recording studio and a conference room as well as a host of other features and amenities.

The center's multipurpose main hall bears the name Julianne Argyros Orchestra Hall. With its large stage, fly tower, concert hall-quality sound reflection panel system, an orchestra pit that can accommodate 70 musicians and a proscenium-style stage, this hall fulfills the design intent of a multipurpose theatre that can adapt to the performance needs of many genres.



Figure 1: Hall Exterior

Both the project architect—Pfeiffer Partners Architects—and the theatre consultant—Theatre Projects Consultants—are firms with strong previous experience in the design of halls and theatres. As the team worked on addressing the project's various constraints, the representatives of each of these two firms brought to the table various lessons learned on previous projects and views informed by previous experiences. I found it very rewarding to collaborate in the decision-making process with team members who could both articulate and lobby in favor of a strongly held idea or principle and also listen to the fact-based input of other team experts.

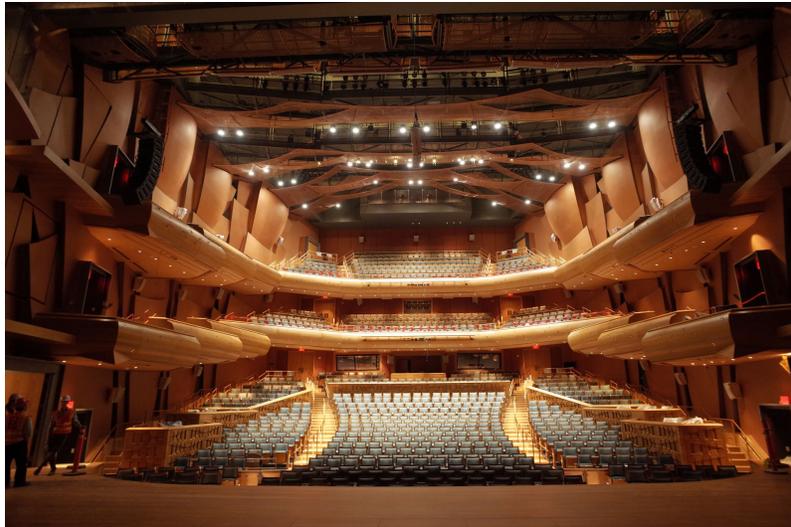


Figure 2: Hall Interior

The Design Concept of Continuity and Intimacy in Julianne Argyros Orchestra Hall

From the very beginning of our work, the project team collectively prioritized the design concept of visual continuity and a feeling of intimacy between the stage and the audience. The hall has a hexagonally-shaped footprint, with main floor audience seating, 2 tiers of balconies at the rear of the hall and 16 loge boxes at the sides of the stage. This configuration brings the audience very close to the stage. A straight line from the tip of the front of the stage to the top row of the center balcony seating measures just 29 m. (97 ft), a proximity that combines with the perspective effect of the hall's shape to make the audience feel quite close to the stage indeed.

The hall has a sound reflection panel system that we designed to acoustically provide appropriate reflections for classical music performances and also to visually contribute to the feeling of continuity between audience and stage. To achieve these acoustic and visual objectives, we created an ingenious design of double layers of eaves that connect to the side balconies. The weight of the reflection panel system is not trivial. When combined with the hall's steel frame and equipment for lighting, these elements have a total weight of 55,000 kg (120,000 pounds).

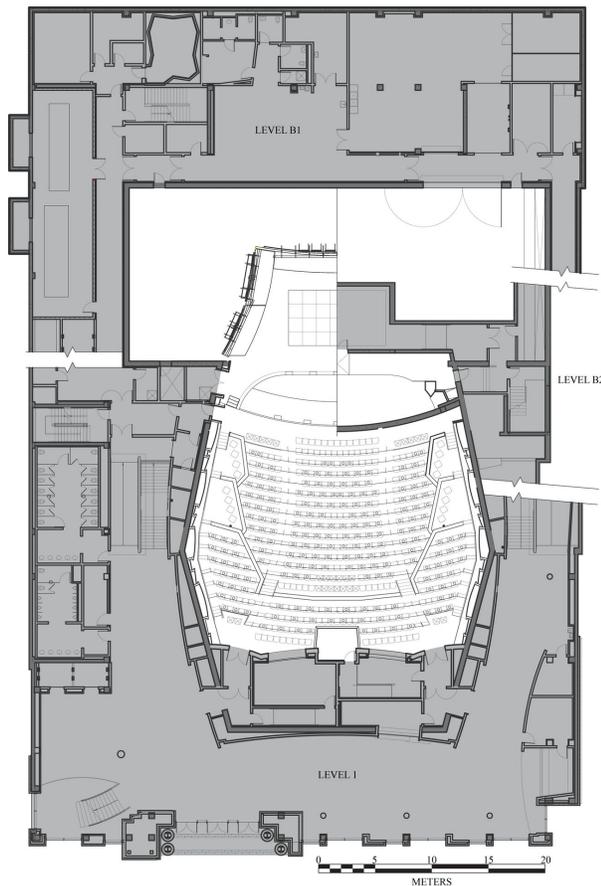


Figure 3

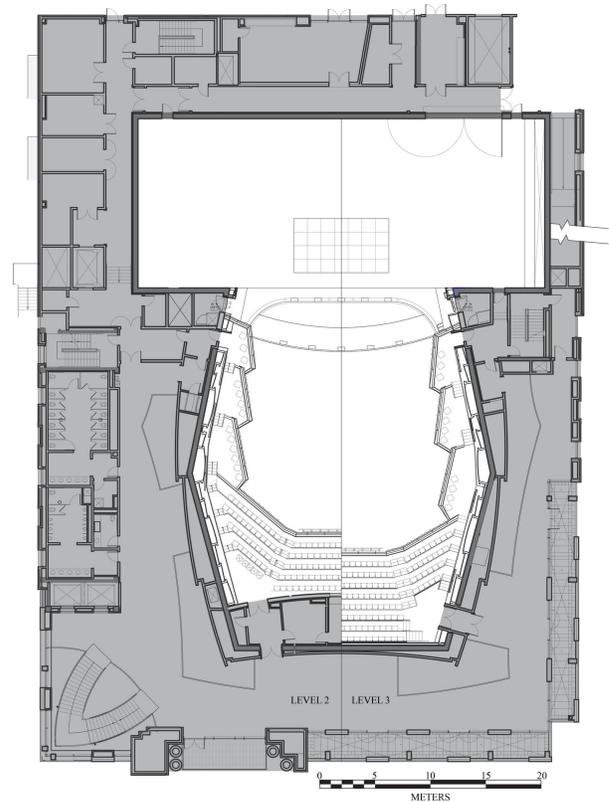


Figure 4

Hall Plan

The proscenium opening measures 19 m. (62 ft) wide by 11 m. (36 ft) high. For large-scale orchestra performances, the size of the stage area can be increased by raising the floor of the orchestra pit to the same height as the stage

floor. In this configuration the stage and the orchestra protrude into the audience seating area, further increasing the sense of proximity and intimacy between audience and performers.

Adaptable Acoustics for Non-Amplified and Amplified Performance

The hall's programming included use of the hall for amplified events in addition to non-amplified classical music concerts. To adapt the hall's sound reverberation characteristic for performances that use electro-acoustic equipment, we installed a large number of motorized, sound-absorbing curtains. On the

side walls of the hall, the curtains can be unfurled like banners from between the petal-shaped, three-dimensional wall elements. On the ceiling, the curtains can be deployed horizontally along lighting bridges. Each banner and curtain can be separately deployed and retracted at the touch of a button. The system makes it possible to customize the hall's reverberation characteristic to suit specific performance needs.

When the sound reflection panel system is in use, the hall's longest possible sound reverberation time is 2.1 seconds. (This value is calculated for a full hall based on measuring the empty hall at 500 Hz.) The shortest sound reverberation time that can be achieved is 1.4 seconds (calculated value for a full hall as above). The short reverberation time configuration can be set up by storing away the sound reflection panel system and using both the proscenium curtain and all of the sound-absorbing side wall banners and ceiling curtains. The hall's acoustical design obtained great flexibility in customizing the sound reverberation time to meet the needs of diverse events and performances. We fully succeeded in achieving the client's programming goal of a multipurpose hall.

Inaugural Gala, First Classical Music Concert and the Hall's Bright Future

On March 19 2016, the opening gala event featured the Los Angeles Opera Orchestra and star soloists Placido Domingo, Deborah Voigt and Milena Kitic. They were joined by numerous graduates of the university and performed one after another of opera arias, delighting the audience and delivering a truly star-studded and spectacular inaugural concert.

On April 2, Pacific Symphony performed a program of Grieg's Piano Concerto, featuring pianist Grace Fong,



Figure 5: Hall Longitudinal Section

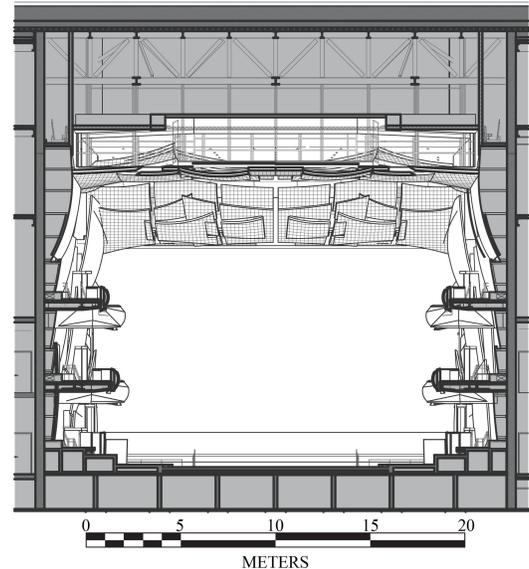


Figure 6: Hall Cross Section

and Beethoven's Symphony No. 5. Through my impressions from the evening of opera arias and the Pacific Symphony's performance, I confirmed that we achieved our acoustical goals for this new venue.

In the future, the hall will hopefully be used both as an educational facility within Chapman University and to deepen cooperation with regional performing arts organizations, helping to foster the performing arts and bring increased performance opportunities for community audiences to attend. For more information about the Musco Center for the Performing Arts at Chapman University please consult the center's website: <http://muscocenter.org>