

Modern Theatres –

Three theatres from 2011-2020

Harbin Opera House, Harbin, China (2015)

David Staples

Many young architects have made the pilgrimage to a nondescript school building in Clerkenwell to work for Zaha Hadid Architects. Few have achieved such rapid success in their subsequent career as Ma Yonsong. Born in Beijing in 1975 he founded MAD Architects in 2004.

China has been a magnet for western architects drawn by the opportunities for major and signature buildings afforded by China's rapid development. In 2014 Ma was the first Chinese architect to win a competition and commission to design an overseas cultural landmark, The Lucas Museum of Narrative Art was originally planned for Chicago. It was subsequently redesigned when the museum benefactor George Lucas decided to build the project in Los Angeles.

The city of Harbin has a population of five million with over ten million in the metropolitan area making it the eighth most populous Chinese city. Its location in the far North

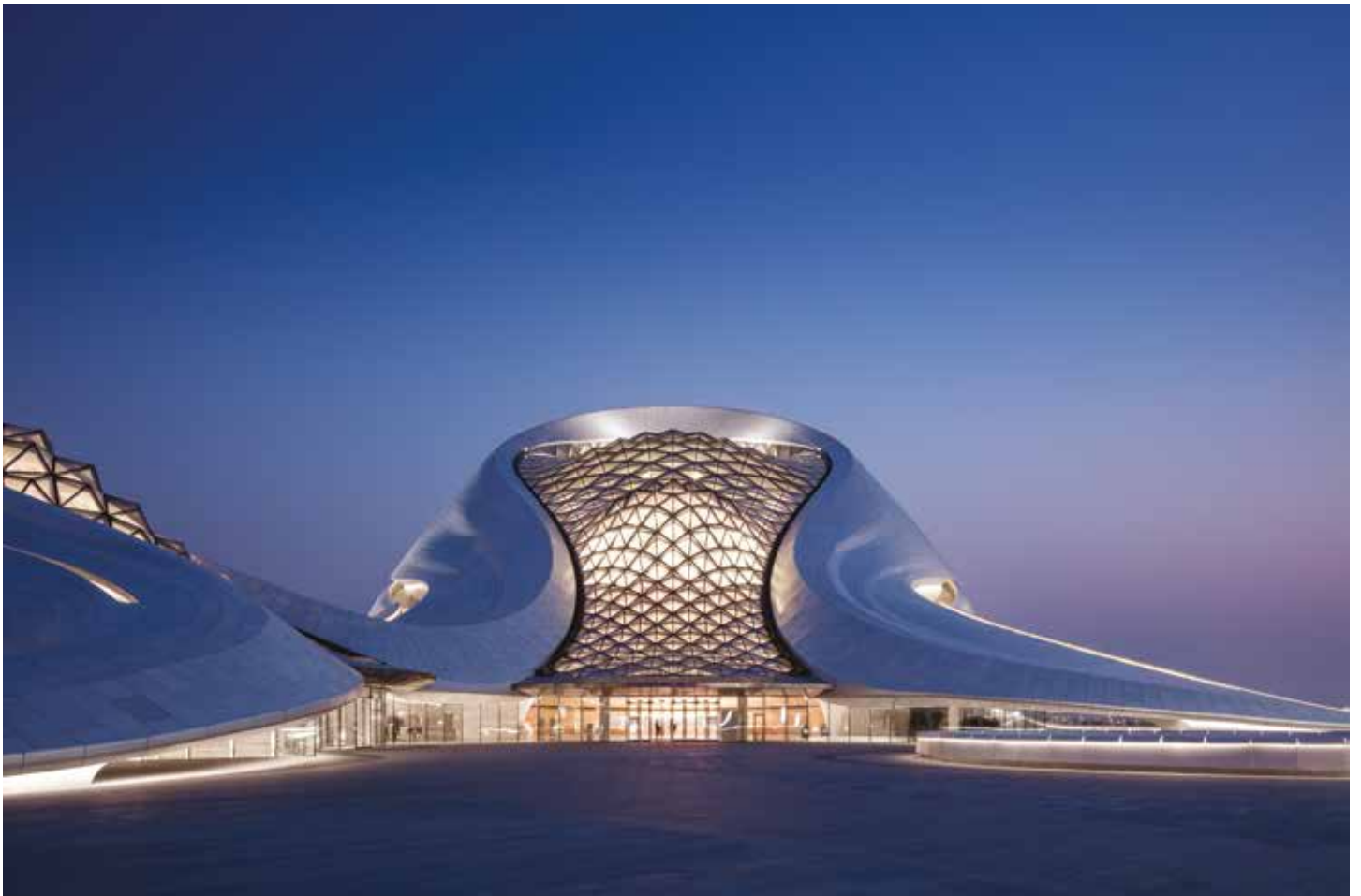
East of the country gives it the coldest and longest winter of any major Chinese city with an average daily winter temperature of -19.7°C (-3.5°F), temperatures below -35.0°C (-31.0°F) are not uncommon.

Harbin took advantage of this extreme climate by establishing a traditional ice lantern show which has grown into the Harbin International Ice and Snow Sculpture Festival, the largest annual ice and snow festival in the world featuring huge ice sculptures many the size of actual buildings. The 2017 festival attracted 18 million visitors.

MAD Architects won the international open competition for Harbin Cultural Island, to create a master plan for an opera house, a cultural centre, and the surrounding riverside, wetland landscape along Harbin's Songhua River. The site is surrounded by rivers and accessed by bridge.

The exterior of the building is a series of curvaceous, undulating forms clad in white aluminium panels reminiscent of snow-covered hills. The snow illusion is reinforced by a white plaza and entrance routes to the building.

*Harbin Opera House
Photo courtesy of
David Staples*





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The external language flows into the building where the floors, flowing walls and ceiling of the lobbies and public areas are also a stark white except for the walls surrounding the Grand Theatre which appear carved from warm rich wood. Audiences and the public can ascend staircases to a rooftop viewing platform and external performance space.

This wooden appearance carries into the 1,538 seat Grand Theatre where the audience is housed in 12 seating blocks. At stalls level a main body of seats is surrounded by five parterres. The circle and upper circle/boxes are let into the curving wooden walls. These walls merge into a sinuous ceiling and sweep down to the front of the room to create an unusual and somewhat dominant proscenium frame. Chinese planning authorities mandate a large stage with two side stages and a rear stage for new opera houses built in China. Harbin follows this model which seems to be based on a traditional central European concept of opera house staging. Hopefully, one day a project in China will break from this rigid view of what constitutes an opera house or Grand Theatre stage.

The smaller theatre seats 414 and is much more conventional with straight rows of seats facing a wide-open end stage without proscenium arch. The rear wall of this stage is a massive window that visually links the theatre and exterior.

Knowing that Ma Yonsong worked with the Zaha Hadid team it is easy to understand some of the inspirations for this building. A previous chapter [of Modern Theatres] commented on Zaha's Guangzhou Opera House where strong flowing external shapes are let down by poor execution. Harbin is a later building and much more successfully executed.

Dubai Opera (2016) Karin Winklessesser

A Music Ship Drops Anchor

The opera house in Dubai was inaugurated in 2016 as the centre of a new quarter in the booming city state. Dubai had a population of only 90,000 in 1960 and was an underdeveloped sleepy desert sheikhdom. Today it is one of the fastest growing countries in the world. At the moment, the population is about 2.8 million. A new quarter was built in one piece, Downtown Dubai. This is where the new opera house was built as a nucleus of this quarter.

While Dubai boomed the performing arts, entertainment and culture lagged some way behind. This is not to say the area is devoid of activity. In Dubai 37% of the population is of Indian origin and that community has many events based on traditional and contemporary Indian music and dance. International groups like Cirque de Soleil are presented regularly in the Emirate. Finally the city decided to build an opera house, however to be used as a

multi purpose building. Dubai has a number of large companies which are independent but closely related to the government and ruling family. One of the largest is Emaar Properties which has grown to become a global property development company. Its signature project is Downtown Dubai a mega-development covering 200 hectares. At its centre is Burj Khalifa the world's tallest building. Immediately adjacent is the Dubai Mall the world's largest shopping mall. These both adjoin the Dubai Fountain the world's largest choreographed fountain. The district houses several major hotels and extensive residential properties.

The internationally renowned architects Atkins in cooperation with architect John Rostock designed the opera house that is embedded in the new quarter. The outer shape of the building close to the sea has the form of a dhow, the traditional Arabian sailing boat. The large, oversailing roof creates a large field of shadow which also serves the surrounding area. The foyer is oriented towards the exterior, it is enclosed by a large glass wall, only "interrupted" by wooden panels to shade the sun.

The auditorium itself has been designed in a classical horseshoe shape. In the upper gallery, boxes with large floral decoration serve for local social purposes whereas Atkins has taken up the European theatre tradition in designing it with dark red seats and warm wooden materials covering the walls.

Emaar's vision for the opera house was to create one of the pre-eminent venues among the international touring circuit, competing with the likes of London and New York. The team was charged with creating a multi-purpose facility that can host not only spectacular shows, but also accommodate a wide range of performances from classical music and opera to more popular entertainment. Theatre Projects worked with Emaar and project managers Mirage to develop a sophisticated concept for the new project.

The auditorium and stage were conceived as having three different forms or modes. The theatre mode was anticipated as the most frequently used form. An auditorium with 1800 to 1900 seats depending on detailed configuration faces a large stage to house musicals, opera or ballets. A flexible proscenium arch allows the width and height to be varied, and in front of the stage two elevators can be used to create a small or large orchestra pit or extend an apron stage into the auditorium.

In concert mode for all types of music ranging from full symphony orchestras with choir



to soloists and traditional Arabic music, the proscenium arch can be opened or removed entirely to open the concert platform to the audience.

*Dubai Opera
Photo courtesy of
MAD architects*

A more unusual mode is flat floor. All the seating can be taken to storage below the auditorium creating a large flat floor extending unbroken from the rear wall of the stage to the back of the auditorium an area of over 1,800 m². This large space can be used for banquets, weddings, ceremonies, exhibitions, and any other event. The theatre technology, lighting, sound and acoustics had to be adapted to the multiple configurations of the auditorium, which led to a series of innovative solutions.

Feedback from audience and touring companies has been very positive. For Dubai the Opera House is a new landmark inviting tourists and the multi ethnic population to mingle.



*Dubai Opera
Photo courtesy of
MAD architects*

Boulez Saal, Berlin (2017) Karin Winkelsesser

The innovative Pierre Boulez hall in the historic centre of Berlin was inaugurated on 4 March 2017. It is the showplace for the Barenboim-Said Academy, housed in a converted part of the Berlin State Opera's former scenery store. Frank Gehry designed the hall, whose layout can be changed according to the requirements of different types of music performances.

The Barenboim-Said Academy is the brainchild of Daniel Barenboim, lifetime chief conductor of the Berlin State Opera, and Edward Said, a Palestinian literature and arts expert (1935 to 2003). They founded the East-Western Divan Orchestra in 1999, to bring together young musicians from Israel, Palestine and Arab countries for concerts each summer.

Following Edward Said's death, Barenboim founded the Academy, with the help of public and private funding, to extend the

orchestra's function to a permanent base for joint learning. The Academy is built within the shell of the Berlin Staatsoper's old scenery store. The 34-million-euro construction cost of the Academy was two-thirds funded by the German government, which also helps finance the running costs. It was realised within the cost and time limits.

The building has two parts – the Boulez Saal and The Barenboim Said Academy which has class rooms and studios that were placed within the former scenery storage space that was 20 m high. Architects HG Merz used the structure of the existent building to keep alive the ambiance of a theatre working place. Circulation galleries and huge steel doors remained. They are especially visible in the foyer linking the academy and the Pierre Boulez Hall.

The Pierre Boulez hall bears the hallmark of three friends and grandees of the arts world: Barenboim had the idea, while internationally

renowned architect Frank Gehry of Los Angeles created the design pro bono together with acoustics expert Yasuhisa Toyota. The hall is named after the composer and conductor Pierre Boulez (1925-2016), a close, lifelong friend of both Barenboim and Gehry.

An expressive sketch of ovals was the inspiration for this space, which encompasses a full sweep of 360 degrees. The two artfully interlocking ellipses of the tiers create an impression of awe-inspiring weightlessness. It is a modular construction which, by reconfiguring its tiers and the ground floor with a combination of fixed and flexible seating, can create a variety of spatial correlations.

The hall seats up to 682, and each guest is seamlessly integrated into the space. The setting can adapt to the number of musicians and, above all, to the repertoire being performed. Each vantage point offers a different take on the concert, and even the performing artists will constantly discover new perspectives within the space. The intimacy of the hall allows solo musicians to appear on stage with the same integrity as chamber music formations, while comfortably fitting a medium-sized orchestra.

Acoustics and Architecture

To create the necessary acoustic isolation, the hall was built according to the “box within a box” principle. Three windows each on the south- and east-facing facades forge a visual link with the outside world. In this way, the visitor has a sense of being in a room right in the middle of the city. Three openings along the west side link up the atrium and the music academy. On the ground and first floors, these are light- and soundproof, and on the second floor they form a visual connection between the hall and the atrium.

The upper circle is arranged like a bridge, set into the new concrete walls that are hidden behind the north and south-facing facades. The balcony consists of a steel support with a trapezoid cross-section. The openness factor for the acoustics is 35 percent. The open side of the construction is lined with acoustically transparent materials, like a loudspeaker grille, which allows sound through and reflects it from the main walls into the hall.

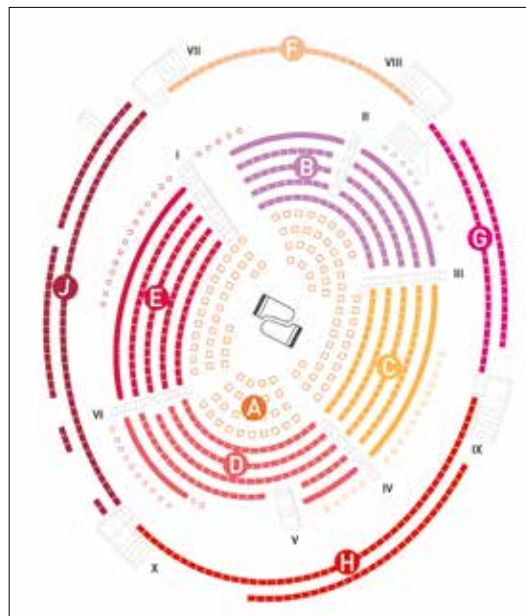
Outlook

Frank Gehry was so enthusiastic about this late work that he came over from Los Angeles to celebrate his 90th birthday at the Pierre Boulez hall in March 2019. Indeed, the hall has established itself as a lively place for music encounters and lectures. The intimacy



that the elliptical form offers however has its price. From the upper tiers one can hear well, but the sight is very restricted (partly due to German regulations on handrails) and the stairs are steep. The 360-degree stage means that more than half of the audience sees the performers from the back. In solo concerts, the performers (and the music instruments like pianos) turn by 180 degrees after the pauses to offer equal quality to all. However, the intimacy of the space and the experience of a close relationship between performers and visitors make the visit always a unique event.

*Boulez Saal
Courtesy of Volker Kreidler/
Boulez Saal*



*Boulez Saal – Auditorium
plan Courtesy of
Boulez Saal*