THE MASTERWORKS OF STRUCTURAL ENGINEERING

MIDAS Project Applications

BUILDING

www.MidasUser.com

MIDAS IT Tower, 17, Pangyo-ro 228 beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13487, Korea

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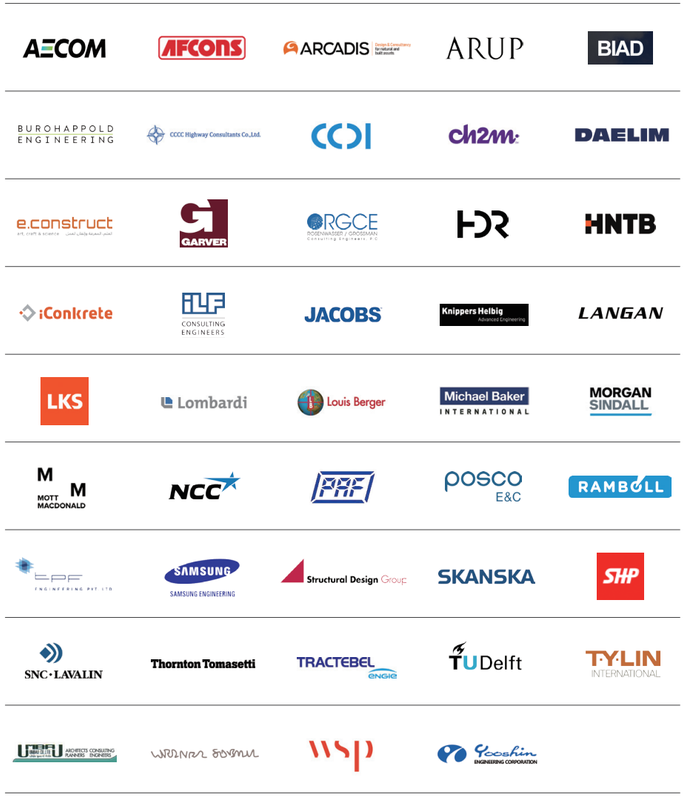
MIDAS IT always strives for constant growth and progress with midas users who have made us a trusted leader in technology.

This project application book was published by MIDAS IT, but what MIDAS IT did was just collecting the masterworks of midas users. This book is dedicated to the midas users without whom it would not exist.

MIDAS IT will keep providing the world with utilitarian values that support human pursuit of happiness with our creative technology.

MIDAS Power Users

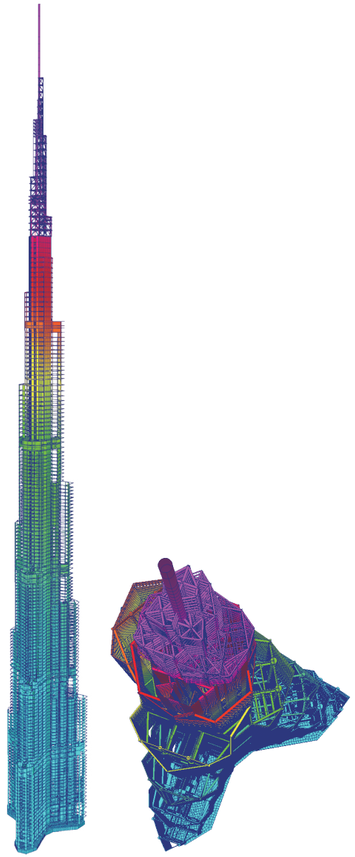


Contents

Burj khalifa

Dubai, UAE

Owner	Emaar Properties
General Contractor	Samsung C&T
Architect	Skidmore, Owings & Merrill
Engineering Consultant	MIDAS IT / Skidmore, Owings & Merrill / Arcadis
Construction Period	2004 - 2010
Type of Project	Mixed-use Building
Size of Structure	829m Height (164-story)

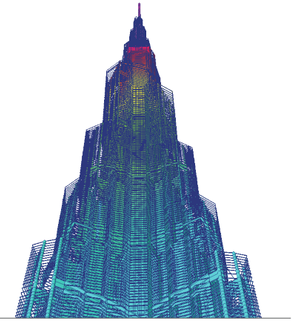


Main features used in this application

- Construction stage analysis with creep and shrinkage
- Linear static analysis with plate and wall elements

Description on this project

The Burj Khalifa is a mega-tall skyscraper in Dubai, United Arab Emirates. With a total height of 829.8m, the primary structure is reinforced concrete. It is designed to be the centerpiece of large-scale, mixed-use development. The design is derived from the Islamic architecture of the region, such as in the Great Mosque of Samarra. The Y-shaped tripartite floor geometry is designed to optimize residential and hotel space. A buttressed central core and wings are used to support the height of the building. Although this design was derived from Tower Palace III, the Burj Khalifa's central core houses all vertical transportation with the exception of egress stairs within each of the wings. The structure also features a cladding system which is designed to withstand Dubai's hot summer temperatures.



MIDAS IT

Address	MIDAS IT Tower, 17, Pangyo-ro 228 beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13487, Korea		
Introduction	MIDAS IT specializes in engineering consultancy, web business and CAE software development. MIDAS IT provides world class consultancy services in the fields of civil, structural, geotechnical and mechanical engineering.		
Website	www.midasuser.com	**Email**	info@midasit.com

Libeskind and Hadid Tower

Milan, Italy

Owner	CityLife
General Contractor	CMB
Architect	Zaha Hadid and Daniel Libeskind
Engineering Consultant	Redesco Progetti
Construction Period	2014 - 2017
Type of Project	Mixed-use Building
Size of Structure	• Hadid Tower 170m Height (44-story) • Libeskind Tower 175m Height (28-story)

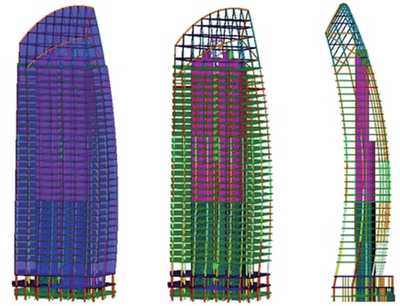
Main features used in this application

- Construction stage analysis with creep and shrinkage
- Finite element model for slabs and walls

Description on this project

Hadid Tower The project is located at the intersection of several important urban axes. The sinuous profile of the rooflines repeats over the entire complex. The tower is conceived as a stack of equivalent, economically efficient floors slabs that incrementally twist about a vertical axis.

Libeskind Tower The curved tower's facade is made of sustainable, state of the art glass, that will reflect the public space below and vistas around. Libeskind tower is personally crafted and conceived to provide a sculpted and highly visible skyline on the site.



Redesco Progetti			
Address	via Gioberti 5, 20123 Milan, Italy		
Introduction	Redesco is a specialized structural engineering consultancy, whose first core was established in 1975. Merging broad vision with focused specialization, they simply design and enable outstanding structures. Also, they focus on structures, from conceptual design to site supervision.		
Website	www.redesco.it	**Email**	redesco@redesco.it

Gate to the East

Suzhou, China

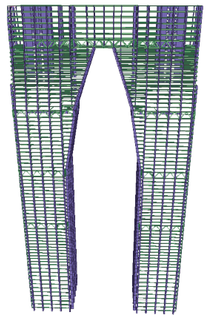
Owner	Suzhou Chinaing Real Estate
General Contractor	Shanghai Construction Group
Architect	RMJM
Engineering Consultant	East China Architectural Design & Research Institute
Construction Period	2004 - 2016
Type of Project	Mixed-use Building
Size of Structure	302m Height (71-story)

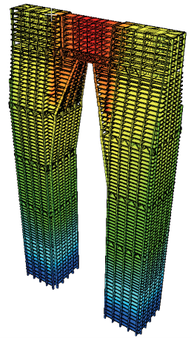
Main features used in this application

- Linear static analysis with P-delta effects
- Construction stage analysis with creep and shrinkage
- RC building design

Description on this project

The design for the Gate of the Orient is inspired by the combined Chinese traditions and western influences of the projects two lead designers. The result is a mix of westernized pure form and Chinese subtlety. The Gate of the Orient has drawn inspiration from the historic and cultural references of the traditional famous gardens of Suzhou and stands almost 300m high and sits directly above a major underground rail interchange, which is fully integrated into the building.





East China Architectural Design & Research Institute

Address	Block B 14/F, Huafu Building, 76 Shishan Road, Suzhou New Area 215011, China		
Introduction	ECADI is one of China's most influential architectural design institutions. Over the years, ECADI has designed projects for provinces and cities nationwide, and dozens of countries and regions as well. They have completed over 10,000 design and consulting projects, and cultivated many outstanding experts and talents including academicians and national design masters.		
Website	www.ecadi.com	**Email**	suzhou@ecadi.com

City Center and Hard Rock Hotel

Saint Juliens, Malta

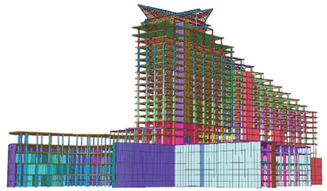
Owner	Seabank Group
Architect	MYGG Architecture
Engineering Consultant	F&M Ingegneria / Arup
Construction Period	Under Construction
Type of Project	Mixed-use Building
Size of Structure	68,400m²

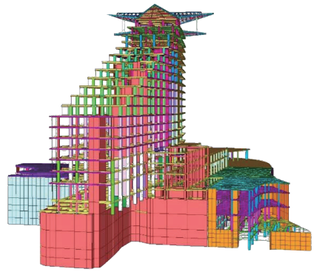
Main features used in this application

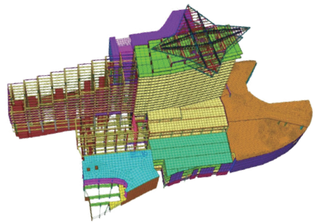
- DFX import for irregular model generation
- Construction stage analysis
- Linear time history analysis for walk vibration

Description on this project

The City Centre complex includes 3 main facilities: two residential towers, one of where located in the east side (Tower A), and the other in the north (Tower B), and an hotel (Hard Rock Hotel) that are connected together by a podium with a shopping mall and a multi-level parking. The building consists of 4 main facilities with foundation at 0.5m, the podium consists of 6 floors and reaches 22.25m. At this level, the two towers and the hotel erect separately. Both towers have a circular footprint of 1,200m² and reach 162.85m height (35 floors), while the hotel building has a rectangular plan 24 x 150m and it reaches 94.40m height (19 floors).







F&M Ingegneria

Address	Via Belvedere 8/10 30035 Mirano, Italy		
Introduction	F&M Ingegneria is a leading Italian multidisciplinary practice of designers, engineers and specialist consultant with over 35 years of experience. The firm provides a wide range of design services in infrastructural, building, environment and project management. They work across all sectors from education and residential to transport, from arts to health and sports facilities.		
Website	www.fm-ingegneria.com	**Email**	fm@fm-ingegneria.com