



# ITA - AITES GENERAL ASSEMBLY AND WORLD TUNNEL CONGRESS

20 - 26 April 2018  
Dubai, United Arab Emirates  
[wtc2018.ae](http://wtc2018.ae)

The Role of Underground Space in Future Sustainable Cities



## Welcome Message



Dear Colleagues,

The Society of Engineers – UAE and its UAE Tunnelling Chapter warmly welcome you to the ITA-AITES General Assembly and World Tunnel Congress 2018 in Dubai, United Arab Emirates. We are thrilled to bring this prestigious event to the Arabian Gulf for the first time.

Inspired by the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of UAE and Ruler of Dubai, to achieve a smart and sustainable city by 2021, the WTC 2018 will be held 20–26 April 2018 at the prominent World Trade Center in Dubai under the theme “The Role of Tunnels in Building Future Sustainable Cities.”

We cordially invite you to participate with us and witness the world’s leading tunnelling event that will explore the latest innovations, trends and advances in all areas of tunnelling, from tunnel project development to design to construction and to tunnel service life strategies, and how these can support sustainability. The program will feature multiple technical tracks, along with tunnelling training courses, poster presentations, the General Assembly, technical tours to ongoing tunnel projects in the UAE, and a lively exhibition with companies from all over the world presenting their latest tunnelling solutions, innovations and technology. Along with plenty of networking occasions, delegates will find ample opportunities to learn and share new and exciting developments, and mingle with colleagues and leading experts from all over the world. With your WTC 2018 visit, you will also have the chance to experience our warm Arabian hospitality and enjoy the multitude of entertainment, cultural, culinary and leisure activities offered in one of the world’s most vibrant and leading cities. Our event team is always there to provide you any assistance, be it for the exhibition, hotel & travel, or obtaining your visa. You can always find the most updated information on [www.wtc2018.ae](http://www.wtc2018.ae).

The Society of Engineers-UAE, the UAE Tunnelling Chapter, and tunnel professionals across the Gulf are thrilled to host this prominent event and are looking forward to welcome you to Dubai.

Best Regards,

**Eng. Dawoud Al Hajri**  
President  
Society of Engineers-UAE

## Welcome Message



Dear Delegates,

On behalf of Dubai Tourism it gives me great pleasure to extend a very warm welcome to Dubai for the World Tunneling Congress 2018. We are proud that Dubai has been chosen as your host city which reinforces the strong partnership between Dubai and the International Tunneling and Underground Space Association.

Dubai has established a strong international reputation as a vibrant and diverse destination with a quality hospitality offering, first-class infrastructure and a range of headline grabbing attractions. In a single day, you can experience everything from awe-inspiring sand dunes to lush green parks; from indoor skiing to sandy beaches; and from historic souks to ultra-modern shopping malls.

These contrasts give Dubai its unique flavor and personality, a melting pot of local traditions with an international lifestyle. Dubai is perfectly located between East and West- with one-third of the world’s population living within a four-hour flight, and two-thirds, within an eight hour flight. In addition, Dubai’s diverse population comprises over 200 nationalities making it a dynamic city built on innovation and infused with opportunities.

Dubai aspires to become the world’s most visited city and hosting the World Tunneling Congress in 2018 will contribute significantly towards strengthening the growth of Dubai and the UAE.

I hope you will have a successful congress and an enjoyable stay in Dubai.

Yours faithfully,

**Helal S.K. Al Marri**  
Director General

# Leadership Team



**WTC 2018**  
**Eng. Dawoud Al Hajri**  
President  
Society of Engineers-UAE



**WTC 2018 Chair**  
**Eng. Salma Almaamari**  
Vice President  
Society of Engineers-UAE



**WTC 2018 Co-Chair**  
**Eng. Rayed Al Arashi**  
Council Board Member, Head of Arbitration  
Society of Engineers-UAE



**ITA Liaison**  
**Eng. Olivier Vion**  
Executive Director, ITA-Aites



**Program Chair**  
**Eng. Wolfgang Angerer**  
Tunnel Design Manager-  
Tunnels and Earth Engineering  
MENAI, CH2M Hill



**Program Co-Chair**  
**Eng. Jonathan Mark Cottam**  
Managing Director  
Gulf Rock Engineering Group



**Sponsorship & Exhibition Chair**  
**Eng. Alan Thomson**  
Managing Director, ADSSC



**Marketing Chair**  
**Eng. Nick Chittenden**  
Regional Manager -  
Underground Construction  
Middle East, BASF Construction  
Chemicals UAE LLC



**Scientific Chair**  
**Dr. Alaa Ashmawy**  
Dean, School of Engineering  
American University in Dubai



**Scientific Co-Chair**  
**Eng. Paul Groves**  
Head of Tunnels and Ground Engineering,  
WS Atkins



**Technical Tours Chair**  
**Mr. Chris Gregory**  
Underground Project Manager  
Gulf Rock Engineering



**Leisure & Social Chair**  
**Claudia Langton**  
Marketing Communications -  
Gulf States  
BASF Construction Chemicals UAE LLC

# Program at a glance

	Day1 20 April 2018 Friday	Day2 21 April 2018 Saturday	Day3 22 April 2018 Sunday	Day4 23 April 2018 Monday										
09:00 - 10:00	Tunnelling Training Courses	Tunnelling Training Courses Congress Registration	ITA Executive Meeting	General Assembly	Opening Ceremony									
10:00 - 11:00						Congress Registration	Congress Registration	Keynote Lectures						
11:00 - 12:00									Congress Registration	Congress Registration	Lunch			
12:00 - 13:00												Congress Registration	Congress Registration	Lunch
13:00 - 14:00														
14:00 - 15:00	Congress Registration	Congress Registration	Working Group Meetings											
15:00 - 16:00				Congress Registration	Congress Registration	Working Group & Committee Meetings								
16:00 - 17:00							Congress Registration	Congress Registration	Technical Sessions					
17:00 - 18:00										Congress Registration	Congress Registration	Working Group & Committee Meetings		
18:00 - 19:00													Congress Registration	Congress Registration
19:00 - 20:00	Congress Registration	Congress Registration	ITAtch Industry Reception (Invitation Only)											
20:00 - 21:00				Congress Registration	Congress Registration	ITAtch Industry Reception (Invitation Only)								
21:00 - 22:00							Congress Registration	Congress Registration	ITAtch Industry Reception (Invitation Only)					
22:00 - 23:00										Congress Registration	Congress Registration	ITAtch Industry Reception (Invitation Only)		

	Day5 24 April 2018 Tuesday	Day6 25 April 2018 Wednesday	Day7 26 April 2018 Thursday													
09:00 - 10:00	Congress Registration	Exhibition	Technical Sessions	Technical Tours												
10:00 - 11:00					Congress Registration	Exhibition	Technical Sessions	Technical Tours & Post Congress Tours								
11:00 - 12:00									Congress Registration	Exhibition	Technical Sessions	Technical Tours & Post Congress Tours				
12:00 - 13:00													Congress Registration	Exhibition	Technical Sessions	Technical Tours & Post Congress Tours
13:00 - 14:00																
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21:00 - 22:00									Congress Registration	Exhibition	Technical Sessions	Technical Tours & Post Congress Tours				
22:00 - 23:00													Congress Registration	Exhibition	Technical Sessions	Technical Tours & Post Congress Tours

## Program Topics

- **Multi-Utility Tunnels – The ultimate solution**
- **Contractual Risk Sharing – a win / win arrangement**
- **The right tunnelling construction method for the right application**
- **Maintenance free design in sewer tunnels – Fact or Fiction**
- **Urban dewatering and flood control with underground structures**
- **Review of current tunnel design methods for mined tunnelling methods**
- **Innovation in Tunnelling technologies**
- **CAPEX vs. OPEX – how to define life cycle project cost**
- **Sustainable use of underground space**
- **Ground engineering and risks management**
- **Advances in the material sector**
- **Repair and maintenance of underground structures**
- **Smart City – how can underground space contribute**
- **The importance of Project Management in Project development**
- **Case studies on TBM projects**
- **Life Safety for underground structures**

## Important Dates

- **Call for Papers 15 March 2017**
- **Abstracts Due 01 August 2017**
- **Initial Paper Due 15 December 2017**
- **Final Paper Due 15 February 2018**

For more information please email: [wtc2018@mci-group.com](mailto:wtc2018@mci-group.com)

## Exhibit and Sponsorship

Gain visibility at the premier event for professionals who work within the tunneling industry. The World Tunnel Congress 2018 Dubai puts your brand in front of targeted and influential professionals.

### Exhibits

The exhibition hall is a major attraction where our participants come to learn about products, services and solutions, and to network with key industry leaders. Exhibiting can help your business grow by giving you access to regional and international professionals within the tunneling industry. Through your participation as an exhibitor, you will meet key influencers and leaders who understand this exponentially growing demographic.

### Sponsorship

Sponsoring an activity or event at the conference takes your visibility to another level and is the premier opportunity to stand out to all the viewers and readers as well as meet and influence a multidisciplinary audience of more than 1,000 professionals in the field of tunneling. Various sponsorship packages are designed to create a real impact for your brand and provide a fantastic return on your marketing investment.

### Advertising

An array of unique promotional opportunities leading up to the World Tunnel Congress 2018 will be marketed to thousands of industry professionals who attend, exhibit, and sponsor at the event. You can expose attendees and other businesses to your company and promote your expertise within the industry in order to have a large impact at the show.

To learn more about sponsor opportunities download the sponsorship prospectus from our website [www.wtc2018.ae](http://www.wtc2018.ae).

For Sponsorship & Exhibition queries please contact:



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Sponsorship Manager  
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# Exhibition Floor Plan



## Tunnelling in the Gulf

The GCC has one of the fastest-growing populations in the world. By 2020 this population is forecast to increase by one-third, to 53 million people. With such a population boom, the demand for better infrastructure, public transportation, roads and therefore tunnelling has increased dramatically in the last few years across the Gulf. Furthermore, the leaders of the GCC countries are actively promoting sustainability and as a consequence large scale tunnelling projects are being commissioned.

Early tunnel projects consisted mostly of underpasses, road tunnels and pedestrian tunnels. Dubai's oldest tunnel is the Shindagha Tunnel under Dubai Creek, opened in 1975. Since 2008, the first major infrastructure projects were undertaken, including Sheikh Zayed highway tunnel, Abu Dhabi deep sewer tunnel (STEP) and Dubai Metro, the first urban rail network in the Arabian Peninsula, with its combined 13km of tunnel and several underground stations. Since then, a number of mega infrastructure projects are being introduced around the Gulf to improve public transportation, sewerage systems and storm water management.

This includes the Riyadh Metro, currently the largest public transport system in development, the Doha Metro, the Mesaimmer Storm Water System, Doha's IDRIS deep sewer project, Bahrain's Muharraq deep gravity sewer, Dubai Metro's Route 2020 expansion, Makkah Metro in Saudi Arabia, and Dubai's upcoming Strategic Deep Sewer Tunnel Project and Deep Tunnel Storm Water System. In addition Jeddah, Madina, Abu Dhabi and Kuwait are planning metro systems; the GCC rail network requires significant tunnelling across the Al Hajar Mountains as well as the road tunnels that are already being constructed through these tough, arid regions between the UAE and Oman. Future projects are being planned to connect parts of cities across bays and to man-made islands such as the Palm Jumeirah, and to provide secure and safe access for museums.

Tunnelling the Gulf is unique in that the opportunity exists to look ahead and develop a planned underground infrastructure to meet the demands of the future today. Tunnelling is unique in every part of the world, but one of the key challenges is to build and retain local expertise with an understanding and experience of what is needed to guarantee a successful project, ensuring tunnelling is a key part of the master planner's vision for a sustainable future.



Makkah King Khaled Road Tunnels



Dubai Metro



Abu Dhabi Step

## Tunnelling in the Gulf



Muharraq Sewer Tunnel Bahrain



Riyadh Metro



Rashid Hospital Tunnel



DEWA Power Cable Diversion Tunnel



Storm Water Project Doha



Sharjah - Khor Fakkan



Greenline Metro - Doha



Sharjah - Khor Fakkan



Palm Jumeirah Submerged Tunnel

## Venue



The Dubai World Trade Centre has played a pivotal role in the growth of international trade for the Middle East, ever since our inauguration in 1979. Then, it was through the landmark 39-storey Sheikh Rashid Tower. Today it is the region's largest purpose-built complex for events and exhibitions. The epicentre for business tourism in the region, it powers the MICE sector through its size, resources, diversity of calendar and scale of events. Over the years DWTC has been much more than Dubai's very first major business landmark.

Instrumental in developing Dubai's position as a leading events destination, we remain at the very pulse of the city's central business and leisure district. If you're travelling by car, it has direct access from the city's main highway and commercial skyscraper corridor, Sheikh Zayed Road - giving you a direct gateway to all areas of Dubai and the wider UAE. Within the DWTC complex, take advantage of its extensive multi-storey parking facilities for around 5,000 cars. It is also on the main public transport bus and metro route, with its own dedicated metro station. Whichever way you choose to reach DWTC, it could not be simpler.

The DWTC is easily accessible through public transport like the Dubai Metro and Taxis around the area. It is at the center of many 3 star to 5 star hotels, therefore accommodation is also easily available.



## Accommodation



# About Dubai



Dubai is a cosmopolitan city of diversity and contrasts at the crossroads of Europe, Asia and Africa. In the blink of an eye, the city has transformed itself into a buzzing international metropolis.

Easy accessibility, state-of-the-art infrastructure, modern venues and hotels as well as unique partnerships between the government and the meetings industry has placed Dubai as the leading business events destination in the Middle East, Africa, and South Asia.

Dubai brings together the highest standards of comfort and convenience with the traditional adventure of Arabia. From bustling souqs to towering skyscrapers to the vast desert, Dubai is an ideal location for any business event. Its strategic location between East and West means that one-third of the world's population is within a four-hour flight and two-thirds are within an eight-hour flight. In addition, the Dubai International Airport is served by over 150 airlines flying to over 280 destinations.

Choosing Dubai means choosing a genuine global brand that embodies excellence, opportunity, advancement and partnership. Add to that a collective public and private focus on creating a truly world-class business events ecosystem and you have the perfect host city.

## Did You Know?

20

Million Misitors

Dubai Aims to welcome 20 million visitors a year by 2020.

200

Nationalities

Dubai is Home to more than 200 different nationalities.

#1

Airport

Dubai International airport is the world's number 1 airport for international passengers.

4<sup>th</sup>

Most Visited city

Dubai is the 4th most visited city in the world-according to Mastercard's Destinations Cities Index 2015.

Top 20

safest cities

Dubai has been named as one of the top 20 safest cities in the world by Aon Hewitt.



Business Events

Dubai is the premier business events in the Middle East.

2/3

World's Population

Two-thirds of the world's population lives within an eight-hour flight time to Dubai.

83%

Foreign Population

Dubai was named as the "most cosmopolitan city in the world" in the latest World Migration Report, with 83 percent of its population foreign born.



# Dubai Attractions

## Sheikh Mohammed Centre For Cultural Understanding

Gain a greater appreciation of Dubai's culture and customs at the Sheikh Mohammed Centre for Cultural Understanding (SMCCU). The SMCCU opened in 1998 to help visitors gain a better understanding of the culture and customs of the UAE. The institution invites guests to take part in their full schedule of activities, including a range of Arabic classes, heritage tours, and guided mosque visits.



## Desert Safari



Exploring the dunes, the wadis (dry river beds) and mountain passes is essential if you want to experience Dubai at its fullest. Your tour operator will pick you up at your hotel and take you off-road in a sturdy 4x4 to power up the sand dunes and slide down the far side, or drive along the narrow, rocky mountain passes or through the wadis. Explore the rocky wadis, head to the Hatta Pools to trek in the mountains

or swim, or drive through the Dubai Desert Conservation Reserve to hopefully catch a glimpse of a rare oryx or gazelle.



## Dubai Museum

When you visit the Dubai Museum — housed in the Al Fahidi Fort which was built in 1787, the oldest existing building in the city — you'll encounter colourful dioramas and exhibits that depict everyday life in the days before the discovery of oil.



## Dubai Safari Park

Dubai Safari Park will be opening in 2016. The park will be home to 10,000 animals from around the world, with 350 species of animals, some rare and endangered. The good news is that the Dhs1 billion safari park-zoo will be over 119 hectares (to put that into perspective, the very famous San Diego Zoo is just 40 hectares). Animal-wise, the park will be split into a safari village, an Arabian village, an Asian village and an African village. There will also be a butterfly park, a botanical garden and educational and veterinary facilities.



## Waterparks



Wild Wadi Adventure



Atlantis Aquaventure

There are many Waterparks in Dubai, which offer different rides and attractions in each of them. Some of the popular ones are Wild Wadi Adventure, Aquaventure, and Yas Island in Abu Dhabi.

## Dubai Mall

If shopping is your passion, then you're sure to love The Dubai Mall, located at the foot of the Burj Khalifa. Sprawling across 1.1 million square metres, it is the world's largest shopping, entertainment and leisure destination. You can shop at more than 1,200 retail outlets, from Armani to Zara, and visit the Dubai Aquarium.



## The Dubai Fountain

Have you ever seen water dance? You have the chance every day at The Dubai Fountain, located at the base of the Burj Khalifa and next to the Dubai Mall. Featuring the world's largest choreographed fountain system, this popular son-et-lumière show jets up to 22,000 gallons of water as high as 150 metres in the air at any one time. Each colourful, illuminated jet sways in time to music, producing what has become the most popular show in Dubai. The beam of light shining upward from the fountain can be seen from more than 30 kilometres away.



## Discover Dubai Frame

Dubai Frame is an impressive new project in Zabeel Park, costing approximately Dh.120 million and set for completion by the end of year. It comprises a 150 metre-high, 93 metre-wide structure resembling a huge picture frame, with a walkway made entirely of glass. Visitors are able to follow a path depicting the history of Dubai using modern technology, before taking a panoramic elevator up to the top of the frame for spectacular views.



## Dubai Opera



The definitive destination for performing arts in Dubai, bringing arts and music to life like never before. Located at what's billed as 'the most prestigious square kilometre in the world' in Downtown Dubai, Dubai Opera is the radiant centre of culture and arts in Dubai and the shining pearl of The Opera District. Dubai Opera passionately embraces its role as the creative heart of the city, producing and hosting the finest, most authentic, and engaging performing arts experiences from Dubai and the world.

## At The Top – Burj Khalifa



Soaring high at 555 meters, At the Top, Burj Khalifa SKY is fittingly Dubai's most iconic destination. You can enjoy exclusive access to the redefined, highest outdoor observatory in the world, spread across levels 148 and 125 of Burj Khalifa. Your journey begins when you step into the At the Top, Burj Khalifa SKY lounge, from where you will be personally escorted to a dedicated elevator. Inside, watch in amazement as specially designed projections give you the feeling of flying over global landmarks as you ascend to Level 125.

## Dubai Parks & Resorts

Dubai Parks and Resorts is the first integrated resort destination in the region. It's the home of three world-class theme parks and one water park, as well as Riverland Dubai, the grand entrance plaza, and a Polynesian themed family resort. LEGOLAND® Dubai and LEGOLAND® Water Park are the ultimate destination in the Middle East for families with children from 2-12. LEGOLAND® Dubai and LEGOLAND® Water Park are hands-on experiences allowing families to take part in LEGO® themed adventures through interactive rides, water slides, models and building experiences. Movie lovers all over the globe, MOTIONGATE™



Dubai welcomes you to a cinematic journey into the fantasy world of films. Dive into an alternative universe of captivating stories and adventures with your favourite animated characters from Hollywood. Enjoy unique, high-value entertainment with the latest-in-technology attractions and new-generation rides that recreate the thrill only motion pictures can deliver. The first theme park in the world dedicated to all things Bollywood! Action, adventure, romance, comedy, music, dance, flavour and emotion, Bollywood style.

## IMG World of Adventure

IMG Worlds of Adventure is Dubai's first mega themed entertainment destination promising visitors from around the world the excitement of four epic adventure zones in one location. Two of the four zones represent renowned global brands Cartoon Network and MARVEL, while IMG Boulevard and the Lost Valley – Dinosaur Adventure zones are original concepts created



by the IMG Group. IMG Worlds of Adventure is the largest temperature controlled indoor themed entertainment destination in the world, covering an area in excess of 1.5 million square feet. With the capacity to welcome more than 20,000 guests a day, the destination features a unique array of adrenaline-pumping roller coasters, thrill rides, and spine-tingling attractions based on popular Cartoon Network characters, iconic MARVEL Super Heroes and hair-raising dinosaurs.

## Dubai Ferris Wheel



Dubai will host the Dubai Eye, which will become the world's largest Ferris wheel. Inspired by the London Eye, this Ferris wheel will be much, much taller and have no rival. Set to stand 210 meters above the ground, its closest competitor is a Ferris wheel that was just finished in Las Vegas which stops just short at 170. At the base of the wheel is going to be a vast entertainment center and the wheel itself will showcase a large LED screen providing a platform for broadcasting and advertising to untold numbers.



# SAVE THE DATE

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