

Introduction

The construction of tunnels has found an important role in improving living standards and underground spaces have become an inseparable part of cities. Authorities of major cities have put utilizing subsurface spaces to solve traffic problems and provide better services to its citizens a priority. Current outlook on design and construction of road and urban tunnels, metro and railway tunnels, and water and service tunnels, all indicate an increasing dependency of the well-being of modern societies to underground structures.

Regardless of this positive outlook; the tunneling industry faces various challenges. However much progress has been made in recent decades and new horizons were opened. Using innovative construction methods and technologies, and utilizing new software for modelling and design, made it possible to face many of the challenges and to construct tunnels with various diameters even in difficult or mixed ground conditions.

The tunnelling industry must be able to provide for needs of the future. Better planning for making best use of subsurface spaces; gaining a better understanding of uncertainties and managing risk; increasing of safety during construction; making use of robotics for maintenance of TBM cutting tools; better understanding of soil conditioning for EPB machines; developing better tools to non-destructively image and evaluate ahead of excavation faces; and making use of past experiences to improve quality of performance whilst reducing unnecessary costs are just few items that could help developing new horizons for the tunneling industry.

Objectives

This conference aims to provide an opportunity to share relevant knowledge and experience and discuss further development possibilities in tunnelling. The Iranian Tunnelling Association (IRTA) formally invites scientists, university professors, students, researchers, specialists, and professionals involved in tunnelling to participate in this event. Undeniably, an active attendance and participation of those involved in the tunnelling industry in this conference, will guarantee viability and promotion of underground space technologies. In addition to technical sessions and presentations, the conference will include a workshop, a trade exhibition, and technical visits which will surely offer lots of interesting information and also facilitate the establishment of new contacts.

Important Dates

- Abstract deadline 13/Feb/2019
- Abstract notifications 18/Mar/2019
- Full paper deadline 13/Jun/2019
- Full paper notifications 21/Aug/2019
- Deadline of revisions 18/Sep/2019

Conference themes

The topics of this conference include, but are not limited to the following:

Research and development

- Tunnelling training
- New tunnelling technologies
- Value Engineering in Underground Spaces

Identification and design criteria

- Importance of geological, geophysical and geotechnical studies and investigations
- Analysis and design; criteria and approaches
- Support systems
- Monitoring and Instrumentation
- Environmental impacts
- Risk analysis
- Seismic effects

Underground space construction technologies

- Tunnelling methods (Mechanised, Drill and Blast, Cut and Cover)
- Specific underground spaces (Oil and Gas industries, Underground mines)
- Urban Underground Spaces
- Trenchless Technologies (Microtunnels and, Pipe-Jacking, HDD)

Financial, contractual and managerial issues in underground projects

- Contractual practices and risk management
- Design, Construction, and operation management
- Providing financial resources and investments

Other topics

- Underground space regulations and standards
- Social and environmental considerations
- Health and safety issues
- Architecture in underground space
- Equipment, utilities and techniques for underground structures
- Operation and maintenance of underground spaces

Guidelines for authors

Participants are requested to follow the guidelines given below for the preparation of their abstracts:

- Full name and contact details of corresponding author including E-mail address and phone number.
- The abstract should be in Farsi or English, with the maximum length of 450 words. The Paper Title should not exceed 60 characters.
- Abstracts should be submitted via the conference web site, in MS-Word format.



First Call for Papers



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