

ABOUT THE ITACET FOUNDATION: In an industry where technological progress is quickly advancing and where information and training are always required, the ITA-CET Foundation has been set in 2009 by the International Tunnelling and Underground Space Association ITA-AITES as a body for education and training actions. The Foundation is associated with the ITA-AITES Committee of Education and Training. One of the objectives of the ITA-CET Committee is to prepare the programmes and choose the lecturers for training sessions and short courses organized by the ITACET Foundation. The training sessions and short courses organized by the Foundation are available for ITA member nations and other interested organizations and companies. Courses' Portfolio and more information are available on www.itacet.org

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IMPRESSUM

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President's Address



Eng. Abdullah bin Abdulrahman Al-Muqbel

The Foundation started to co-organize Training Sessions to the attention of the representatives of the Tunnelling Industry.

The event initiated the concept of DEMINAR which means the combination of classical lectures and demonstration of products; this time the event was on Waterproofing and Drainage and took place in VSC Hagerbach (Switzerland) last 23-24 September; it gathered 50 participants

The lectures were delivered by representatives of 16 companies and the demos were made by 5 suppliers.

We have the intention to develop this new concept and the programme for 2016 is already under preparation.

Interview: Pauli Arenram, ITATech Committee Chairman



Mr Pauli Arenram is chairman of the ITA-AITES ITATech committee and Vice President Business Development of Atlas Copco Mining & Rock Excavation Technique.

The committee ITATech is an impressive workforce, with members from several well known companies active in the field of Tunnelling.

Can we say that collaboration and cooperation, even between business competitors, is the key to a successful recognition and dissemination of research results?

In my view there is a multitude of ongoing research projects on new technologies globally, some of it known some of it not yet known to us.

The difficult part is to disseminate the new results to all key stakeholders and to get fast enough acceptance for new methods in favour of traditional, tested and proven methods fast enough. Proof of concept requires time and trust.

As a result of its work, the ITATech committee already published several publications since its creation in 2013.

Is the committee also considering training activities as a way to promote new technologies and methods of construction in Tunnelling ?

Yes, we are currently investigating the training needs in our industry at the ITA-AITES Prime Sponsor side, which is not an easy thing since as soon as one get close to the e.g. application, or machine-operation, the specialty training will

have to come from those who sit on the specialty knowledge, normally the machine/equipment supplier.

Recently ITATech did develop a comprehensive training package on Lining & Waterproofing, published at the WTC 2015 in Dubrovnik, Croatia.

The training package structure has a common basic level and an advanced level. The advanced level will be offered by companies specialized in the specific fields, whereas the basic program can be run by many different suppliers.

According to its membership rules, ITATech members of activity groups belongs to the corporate world and are either ITA AITES prime sponsors or supporters.

Does the ITATech committee also have relation with technical schools and universities?

Correct, ITATech is formed by and governed by the ITA-AITES Prime Sponsors and supporters.

Each member has multiple contacts with a set of educational institutions at their own discretion, but under the ITA umbrella we keep these contacts on a small flame, as such contacts are a task for other committees, like ITACET.

About the ITATech committee.

The goal of the ITATech committee is to promote new and state of the art construction technologies and methods for the sustainable development of underground space.

The ITATech activity groups include all processes related to underground construction.

ITATech Activity Groups is open to ITA Corporate Members willing to involve themselves in the development of new technologies. More information on the committee's web site <http://www.ita-aites.org/en/wg-committees/committees/itatech/>

Coming Soon:

CHALLENGES IN UNDERSEA DEEP LONG DISTANCE TUNNELS (UDLDT): GEOTECHNICAL ASPECT AND STRUCTURAL DESIGN OF SHIELD TUNNELS.

Shanghai 17-18 October 2015 - Tongji University



ITACET Foundation, Tongji University and Beijing Jiaotong University together with co-organizer: BY Civil Engineering Consulting Company, will organize a two-day high level training course for professionals in tunnelling field.

The objective of the course is to encourage uses of underground space for the benefit of the public, environment and sustainable development, and to promote international exchange and collaboration on underground technology and experience.

The course is organized by Tongji University's Prof. Bai Yun with participation from renowned experts of the field Messrs. Yuan Dajun (PRC), Eivind Grøv (NO) and Harald Wagner (A). Mr. Wagner and Mr. Grøv are delegated by the ITA-AITES ITA-CET Committee.

The program of the event, including registration information is available to download on the Foundation website www.itacet.org

Next events in preparation:

TUNNELLING AND LANDSLIDES.

10-11 January 2016. Riyadh, Saudi Arabia



Landslides and Tunnelling and ground instabilities represents a major risk to transport infrastructures and their users.

Because of specific soil conditions, several regions of the Kingdom of Saudi Arabia are exposed to these risks.

The construction of road or rail infrastructures in mountainous or hilly regions often poses technical problems in terms of ground stability.

The aim of this course is to explain and demonstrate the means of identifying and dealing with difficulties linked to unstable mountain slopes and hillsides - especially the risk of landslides. It outlines the main principles and provides theoretical and operational tools enabling participants to understand and deal with such issues.

The course will also underline how tunnels can play a key role in the actual solution, either by acting as a drain and controlling water flow or as an alternative solution enabling the infrastructure to be built away from the areas of unstable ground that are at the most risk of landslides.

By bringing international experts in Riyadh to speak at this event, we will give a unique opportunity to engineers and tunnelling specialists to hear about the latest scientific, technical progress and development on this topic.

To know more about this event read the promotional leaflet available on www.itcet.org

ROCKFALL PROTECTION TECHNIQUES.

12 January 2015 - Riyadh, Saudi Arabia

The training action has the goal to present and discuss innovations of protection devices that can be used to protect infrastructures against rockfall events.

The training course will be developed as follows:

- Short presentation on rockfall design peculiar and critical aspects
- Discussion on the trajectories forecast methods. The lessons will not discuss in detail the various codes that are available on the market but will discuss the key point to be taken into account, weakness and mistakes that can be done during design;
- Presentation of the possible technological alternatives

to give a global picture of the tools that a designer has available when has to face a real design

- Technological and design aspects of net fences, embankments and drapery meshes.

This is the core of the course and after the discussion on the construction aspects the dynamic behaviour of these structures will be presented.

Design methodologies will be proposed and discussed.

Key histories discussion.

Events Report:

DEMINAR ON WATERPROOFING & DRAINAGE

23-24 September 2015. VSH Hagerbach Flums hochwiese, Switzerland

In the scope of the DEMINAR Waterproofing and Drainage, Hagerbach Test Gallery Ltd and ITA-CET invited experts, who highlighted the topic of Waterproofing and Drainage from different perspectives.

Main topics of the training session included :

- General considerations which aspects have to be taken into account for a comprehensive Waterproofing and drainage concept.
- Case studies, who illustrated long term experiences and the use of different sealing methods.
- Sealing issues
- Drainage of water with special focus on sustainability.

The purpose of the Deminar, (combination of DEMonstration and SemINAR), was to put in relation the theoretical background for Waterproofing and Drainage with practical demonstration and presentation of possible solutions presented in a 1:1 scale.

At the evening of the first day the participants were invited to informal exchanges with colleagues and friends at a gala-diner.

More information about VSH VersuchsStollen Hagerbach are available on their web site: www.hagerbach.ch



HEALTH & SAFETY & LOGISTIC IN TUNNEL CONSTRUCTION

08 September 2015. Buenos Aires, Argentina.

AATES, Asociación Argentina de Túneles y Espacios Subterráneos co-organized with the ITACET Foundation a training session on "Health & Safety & Logistic in Tunnel



Construction".

The training session provided an introduction to Health & Safety, & Logistics in tunnel construction with focus on long & deep conventional tunnels in high altitude.

Lectures on Geotechnical hazards were also included as well as information on specifics aspects of H&S and logistics needed for such long tunnels.

The ITA-CET Committee delegated two lecturers for the training session, namely, Prof. Robert Galler from Leoben Montan University in Leoben (AT) and Mr. Gerard Seingre, Site Manager at Nant de Drance SA (CH).

MECHANISED TUNNELLING 29-30 June 2015. Guadalajara, Mexico

Amitos, Asociación Mexicana de Ingeniería de Túneles y Obras Subterráneas co-organized 29-30 June 2015 with the ITACET



Foundation a Two-Day training session on "Mechanised Tunnelling".

The training session aimed to provide general information to young engineers and to update tunnelling professionals on topics related to Mechanised Tunnelling.

The Course topics were presented in such a way to build the basic concepts of Mechanized Tunnelling necessary for professionals. An on site visit was also organized

Eight lecturers delegated by the ITA-CET Committee participated the seminar, namely Messrs Lars Babendererde, Alessandro Boscaro, Michel Ducrot Eric Leca, Fernando Molina Metzger, Dennis Ofiara, Daniele Peila and Georg Siebert

The program main topics were: Introduction & Overview , Improvement & Support systems, Operation and Management & Examples.

SOFT GROUND URBAN TUNNELLING & ROCK TUNNELLING IN KARST CONSTRUCTION

Training course WTC2015, Dubrovnik, Croatia. 22 – 23 May 2015

The two-day training session held prior to the World Tunnel Congress 2015 in Dubrovnik, Croatia, closed the 23th of May with very positive feedback from the participants and the lecturers. The course has been co-organized by the WTC Host ITA Nation member, ITA Croatia, and the ITACET Foundation. In coordination with ITA Croatia, the ITA Committee for education and training (ITA-CET) developed the program, selected the lecturers and reviewed the presentations proposed.



This year, the pre WTC Training session has been programmed with two theme, "Soft Ground Urban Tunnelling" and "Rock Tunnelling in Karst"; each occupying one full day of the training session. Registration option allowed participants to follow the full two-day course or only one day.

One hundred and forty participants attended, two third were from Croatia and neighbouring SEE countries, the remaining third being of very international origin, with participants from Asia, Australia, North and South America and other European countries.

Several students and teaching staff from civil engineering faculties of the universities of Zagreb, Rijeka and Split were invited to attend by the WTC15 organization. This generous initiative from Mr. Davorin Kolic, chair of the WTC2015 allowed them to travel to Dubrovnik, stay for the duration of the training session and follow the full two-day course free of charge.

Thirteen lecturers were invited by the ITA-CET Committee to speak during the course. The Balance between the participation of university professors and delegates from the industry was a

key factor of the success of the training session. The participants had the opportunity to listen to high level academical presentation and learn from the field experience of renowned engineers and designers by listening to several case study.

The program scheduled several questions and answers session, whose were animated by lively exchange between the public and the lecturers. The participants also enjoyed the opportunity to meet the lecturers during the break and at the end of each day's sessions.

The Foundation would like to thank ITA Croatia for the impeccable organization of this event, the ITA-CET Committee for having developed the program, all thirteen lecturers and, last but not least, all participants of the training session.

TUNNELLING AND DEEP EXCAVATION FOR INFRASTRUCTURE IN URBAN AREA May 11-12 2015, Yangoon Myanmar

The Myanmar Tunnelling and Underground Space Committee of the Myanmar Engineering Society with support of the ITACET Foundation organized a two-day training session held at the Myanmar Engineering Society..

The seminar has been attended by more than 245 very active participants predominantly from Yangon and Mandalay, from public and private agencies, such indicating both strong interest and demand for improved use of urban space.

Seminar Summary
from Dr. Zaw Zaw Aye,
Chairman of the training
session in Yangon.

"Yangon in 2015 is offered an opportunity to improve and to implement advanced urban infrastructure in public transport (mass transit, highways, railways), individual transport, flood protection, hydro power, green energy, etc.

The World Bank under its new president, Dr. Jim Yong Kim, provides financial support for the implementation of socio economic beneficial urban infrastructure provided, projects follow the banks safeguard principles.



Urban infrastructure needs huge numbers of trained and skilled engineers in a great variety of engineering disciplines.

With Myanmar entering the age of underground infrastructure implementation, MES together with the Myanmar Construction Industry has shown readiness to further support similar capacity building endeavours."

Zaw Zaw Aye is an Executive Vice President and the Director of the Board of SEAFCO Public Company Limited Thailand, and Vice President of the Thailand Underground and Tunnelling Group of the Engineering Institute of Thailand.

Scholarship 2015

HELPING YOUNG PROFESSIONALS TO ACHIEVE HIGHER LEVEL OF EDUCATION

The Foundation offered its scholarship for the academic year 2015-2016 to Mr. Sandeep Singh Nirmal from India.

The granted 5'000 Eur will help Mr. Sandeep Singh Nirmal to follow the ITA-AITES endorsed MSc on Tunnelling & Underground Space at Warwick University, UK.

The ITACET Foundation aim to aid young professionals to achieve an higher level of education in the field of Tunnelling and Underground Space Use.

The Foundation use its financial and organisational means to help organise continuing education action and sponsor young professionals by granting scholarship to follow ITA-AITES endorsed Master course or Training session.

More information and scholarship criteria on www.itacet.org

The Newsletter of the ITACET Foundation is published three times a year. Online version is available on www.itacet.org

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