



# MECHANIZED TUNNELING AND MICROTUNNELING SHORT COURSE

OCTOBER 4 - 5, 2012 SANLIURFA, TURKEY

Sanliurfa Hilton Hotel

TURKISH SOCIETY FOR INFRASTRUCTURE AND  
TRENCHLESS TECHNOLOGY

## Course Advisors:

Prof. Dr. Nuh Bilgin (ITU)

Prof. Dr. Hanifi Çopur (ITU)

Assoc. Prof. Dr. Cemal Balcı (ITU)



## **MECHANIZED TUNNELING AND MICROTUNNELING SHORT COURSE**

Turkish Society for Infrastructure and Trenchless Technology (AKATED) organized a two-day comprehensive short course on "MECHANIZED TUNNELING AND MICROTUNNELING" to be held in October 4-5, 2012, on Sanliurfa, Turkey with support of the academicians from Istanbul Technical University (ITU) and the International Society for Trenchless Technology (ISTT).

The course, in parallel with growing demand on infrastructure, intends to bring together all actors of the trenchless technology and tunneling industries including representatives and technical staff of the public institutions making high budgeted investments on infrastructure systems, contractors, engineering firms, consultants, machine manufacturers and suppliers, and thus, opening an additional window to the sector for gaining a positive momentum.

The course will cover a quite wide range of topics varying from design to application related to mechanized tunnel-microtunnel excavation and construction methods being applicable to any geological conditions from hard rock to soft ground in cities and rural areas, as well as introducing some mega projects in Turkey. The lectures will be presented by well-known and highly professional experts, academicians, contractors, representatives of public institutions-owners, machine manufacturers and suppliers. Prof. Levent Ozdemir (Ozdemir Engineering) from USA and Prof. Daniele Peila (Polytechnic University of Turin, Board Member of ITA) will participate as international trainers of the course.

The course is going to take place in Sanliurfa, a city in the southeastern part of the country where a number of new tunnel projects are to be introduced in the near future. As part of the course, a technical excursion is scheduled to Suruc Tunnel which is currently under construction as the world's fifth biggest water delivery project (by State Hydraulic Affairs). Please visit [www.nodigturkey.com](http://www.nodigturkey.com) for detailed information on the course program, trainers, sponsors, and registration info.

We kindly invite you to Sanliurfa to evaluate the large-scale tunnel and microtunnel projects which will soon take place in areas such as water, transportation, energy, and enjoy the most beautiful pieces of civilization in place.





### **Turkish Society for Infrastructure and Trenchless Technology (AKATED)**

Turkish Society for Infrastructure and Trenchless Technology (AKATED) was founded in 2010 and joined the International Society for Trenchless Technology (ISTT) in the very same year to represent our country. AKATED, through its professional Working Groups, endeavors to bring together public institutions, universities and private companies involved in infrastructure and trenchless technology under the same roof.

AKATED grabbed the attention nationwide on infrastructure and trenchless technology through events such as the “Workshop on the Earthquake Effects on Underground Infrastructures, Management of Underground Infrastructures and Trenchless Technologies” which was held on the 17 August 2010, and the “No Dig Turkey” which was held on 18-19 November 2011 with the participation of the H.E. Minister of Forestry and Water Works Prof.Dr. Veysel EROGLU.

ISTT organizes INTERNATIONAL NO DIG events (an International Trenchless Technologies Conference and Exhibition) every year in a different country. AKATED represented our country quite successfully in NO DIG SINGAPORE 2010, and subsequently in NO DIG GERMANY 2011.

With the kind support of Prof.Dr. Veysel EROGLU, the Minister of Forestry and Water Works, AKATED is now entitled to

organize INTERNATIONAL NO DIG 2015 (the International Trenchless Technologies 2015 Conference and Exhibition) in Istanbul. Taking this occasion, we will host thousands of professionals and expert institutions from all around the world.

This achievement of AKATED was shown as a model in the “Be An Istanbul Convention Ambassador” Programme which was organized on 22 December 2011 under the auspices of the Ministry of Culture and Tourism. Achievement award was presented to AKATED by Mr. Murat Yalcintas in person, the President of Istanbul Chamber of Commerce (ITO).

AKATED aims at making positive contributions to the national economy, knowledge and qualified labor force in the field of infrastructure and trenchless technologies. Please visit [www.akated.com](http://www.akated.com) to learn more about AKATED.



4 OCTOBER 2012			
Time		Lecturer	Lecture
8:30	9:00	Yasin Torun, Prof. Dr. Nuh Bilgin	Opening Speeches
9:00	10:00	Doç. Dr. Cemal Balcı	Site and Laboratory Investigations
<b>10:00</b>	<b>10:30</b>		<b>Coffee Break</b>
10:30	11:30	Prof. Dr. Nuh Bilgin	Principles of TBM Design and Selection, Problems Encountered in Large Diameter TBM Tunneling
11:30	12:30	Bahadır Çınar	Utility Tunnelling
<b>12:30</b>	<b>14:00</b>		<b>Lunch</b>
14:00	15:00	Prof. Dr. Nuh Bilgin	Machine Selection and Performance Prediction: 25 Years of Experience in Mechanized Excavations in Turkey
15:00	15:45	Taner Bilge	Wear Protection and Hard-Facing Applications in TBMs
<b>15:45</b>	<b>16:15</b>		<b>Coffee Break</b>
16:15	17:15	Dr. Ing. E.h. Martin Herrenknecht Dr. Karin Bappler	Newest Technology and Trends in Mechanized Tunnelling
17:15	18:00	Prof. Dr. Hanifi Çopur	Roadheaders and Impact Hammers, Machine Selection, Performance Prediction, Applications
18:00	18:30	S. Enis Arıoğlu	Istanbul Strait Crossing Roadway Tunnel Project
<b>19:00</b>	<b>22:00</b>		<b>Dinner</b>

5 OCTOBER 2012			
Time		Lecturer	Lecture
8:30	9:30	Prof. Dr. Daniele Peila	Soil Conditioning, Face Treatment and EPB Applications in Italy
9:30	10:00	Muammer Çınar	TBM Applications in Gassy Grounds
<b>10:00</b>	<b>10:30</b>		<b>Coffee Break</b>
10:30	11:15	Suat Seven	Chemical Agents in TBM Applications
11:15	12:00	Fevzi Aksu	Mobile Laboratory for Ground-Muck Conditioning Applications in Shielded Tunnelling
<b>12:00</b>	<b>13:30</b>		<b>Lunch</b>
13:30	14:15	Özgür Savaş Özüdoğru	Manufacturing of Disc Cutters, Selection of Suitable Disc Material for Different Formations, General View and Suggestions
14:15	15:00	Mücahit Namlı	Microtunnelling Applications in Turkey
<b>15:00</b>	<b>15:15</b>		<b>Coffee Break</b>
15:15	16:00	Prof. Dr. Nuh Bilgin	TBM Applications in Squeezing Grounds, Collapses and Practical Suggestions
16:00	16:15	Yasin Torun, Prof. Dr. Nuh Bilgin	Evaluation - Certification - Closing
<p><b>NOTE:</b> All lectures are going to be translated simultaneously from Turkish to English and from English to Turkish.</p> <p>Program content and speakers may be subject to change.</p>			

**OCTOBER 2, 2012 TUESDAY**

**09:00 - 09:30 OPENING AND REGISTRATION**

**09:30 - 11:00 OPENING SPEECHES**

**Yasin TORUN** - Chairman, TSITT

**John HEMPHILL** - Executive Director, ISTT

**Prof. Dr. Samuel ARIARATNAM** - Chairman, ISTT

**Dr. Ahmet Esref FAKIBABA** - Mayor of Sanliurfa

**Akif OZKALDI** - General Manager, DSI

**Sadrettin KARAHOCAGIL** - Chairman, GAP

**Celalettin GUVENC** - Governor of Saniurfa

**Prof. Dr. Veysel EROGLU** - Minister of Forestry and Water Works

**Cevdet YILMAZ** - Minister of Development

**11:00 - 11:30 BREAK**

**11:30 - 12:00** Dr. Rustem KELES - General Manager, SASKI

"Trenchless Technology and General Applications in Turkish Water Administrations"

**12:00 - 12:30** Prof. Dr. Magdy Abou RAYAN - Chairman, IWTA

"International Approaches in Non-Revenue Water Management"

**12:30 - 13:30 LUNCH BREAK**

**13:30 - 14:00** Umit CANTURK - TEKSU

"Trenchless Technology and Applications of Non-Revenue Water Management in Turkey"

**14:00 - 14:30** Arcan HACIRAIFOGLU - DOGUS VANA

"Trenchless Technology and Applications of Non-Revenue Water Management in Turkey"

**14:30 - 15:00** Onur KAYA - BORETEC

"Trenchless Technology and Applications of Horizontal Directional Drilling in Turkey"

**15:00 - 15:30 BREAK**

**15:30 - 16:00** Dr. Ihsan Engin BAL - ISTANBUL TECHNICAL UNIVERSITY

"Trenchless Technology and Applications of Fiber Reinforced Polymers (FRP) in Water Transmission Systems"

**16:00 - 16:30** Abdullah Sarikaya - ENERMAK

"Trenchless Technology and Applications of Ground Penetrating Radar (GPR) in Turkey"

**16:30 - 17:00** Mehmet PAZARCI - SAMPAŞ

"Underground Infrastructure Mapping and Information System"

**17:00 - 17:30** Sener POLAT - TSITT

"Trenchless Technology and Applications of Cured-In-Place Pipe (CIPP) in Europe"

**17:30 - CLOSING**

**3 OCTOBER 2012 WEDNESDAY**

**09:00 OPENING**

**09:00 - 09:30** Yasin TORUN - TSITT

"The Situation and Importance of Trenchless Technology in Turkey"

**09:30 - 10:00** Prof. Dr. Samuel ARIARATNAM - ISTT

"Trenchless Technology in International Dimension - Yesterday, Today and Tomorrow"

**10:00 - 10:30** Assoc. Prof. Cemal BALCI - ISTANBUL TECHNICAL UNIVERSITY

"TBM Selection and Rock Cutting Tests"

**10:30 - 11:00 BREAK**

**11:00 - 11:30** Prof. Dr. Hanifi COPUR - ISTANBUL TECHNICAL UNIVERSITY "Trenchless Technology and Applications of Microtunneling in Turkey"

**11:30 - 12:00** Dr. Gregor NIEDER - BOHRTEC GMBH

"Microtunneling for Small Diameters up to DN800 - 30 Years' Experience in Germany"

**12:00 - 12:30** Sezgin SEZGIN - ILCI İNŞAAT A.S.

"Trenchless Technology and TBM Applications in Suruc Tunnel"

**12:30 - 13:00** Prof. Dr. Nuh BILGIN - ISTANBUL TECHNICAL UNIVERSITY "Trenchless Technology and Applications of Tunneling in Turkey"

**13:00 - 14:00 LUNCH BREAK**

**14:00 - 16:00** TECHNICAL TOUR (SURUC TUNNEL)

**16:00 CLOSING**



NOTE: Simultaneous translation will be available in Turkish- English and English-Turkish. Program content and speakers may be subject to change.



## COURSE ADVISORS AND TRAINERS



**Prof. Dr. Nuh Bilgin**

Prof. Dr. Nuh Bilgin received his BSc degree from ITU Mining Engineering Department. He had his PhD degree on mechanical excavation from Newcastle Upon Tyne University and became Associate Professor in 1982. In 1989, he became Professor in

ITU Mining Engineering Department. Subsequently he worked as the Vice Dean of the Faculty of Mines of ITU between 1991 and 1993, the Head of ITU Mining Engineering Department between 1997 and 2003, the Head of the Mine Mechanization and Technology Division of ITU Mining Engineering Department between 2003 and 2010, and the Deputy Dean of ITU Faculty of Mines between 2008 and 2009. He was the coordinator of a NATO Science for Stability Project on "Development of Rapid Excavation Technologies for the Turkish Mining and Tunneling Industries". He worked as project coordinator in Istanbul Metro Tunnel projects. He conducted two research projects for Nautilus Minerals-Australia regarding equipment design for deep sea mining. Nuh Bilgin has over 150 published scientific papers including a book on mechanical excavation.



**Prof. Dr. Hanifi Copur**

Hanifi Copur gained BSc and MSc degrees in Mining Engineering Department of the Istanbul Technical University in 1987 and 1991, respectively. He completed his PhD on rock cutting mechanics / mechanical excavation of mines and tunnels in the Colorado School of Mines in 1999. He

worked as a research engineer in the Earth Mechanics Institute of the Colorado School Mines between 1995 and 1999 and research assistant in the Mining Engineering Department of Istanbul Technical University between 1988 and 1994. He has been working in the Mining Engineering Department of the Istanbul Technical University and currently works as professor in the same department. He has many scientific research and industrial reports and publications on mechanical mining and tunneling.



**Assoc. Prof. Dr. Cemal Balci**

In 1993, Cemal Balci received his BSc degree in Mining Engineering from Istanbul Technical University. In 1996, he started to work as an assistant in ITU Faculty of Mines Department of Mining Engineering, Mine Mechanization and Technology Division.

In 2004, he got PhD after completing his study on Comparison of small and full Scale Rock Cutting Test to Select Mechanized Excavation machines. In 2005, he became Assistant Professor. Between January 2001 and 2004, he joined the research group in Earth Mechanics Institute, Colorado School of Mines. In 2010, he became an Associate Professor. He made researches in numerous areas including the selection of tunneling machines, performance assessment, Machine Data Collection and Assessment in Tunnels and in the Fields, rock mechanics and rock cutting mechanics, and mechanized excavation systems. He also worked as coordinator in many national and international implementation and research projects.



## INTERNATIONAL TRAINERS



**Prof. Dr. Levent Ozdemir**

Prof. Dr. Levent Ozdemir had his BSc and MSc degrees on Mining Engineering from Colorado School of Mines in 1973 and 1975, respectively. He had PhD degree on Mining and Civil Engineering in 1977 from the same university. Areas

of Qualification: Tunneling and underground construction, including: mechanical rock and soil excavation; hard rock and soft ground mechanical tunneling, microtunneling, mechanical mining, raise boring and shaft drilling, design; selection and performance assessment of mechanical excavators, including hard rock TBMs, Earth Pressure Balance (EPB) machines and Slurry Shield TBMs, Microtunneling machines, Mechanical trenchers, Roadheaders, Raise borers, Shaft drills, design and construction of civil underground structures, geotechnical site investigations and ground support evaluations. Field Tunneling Work: He has performed field work in over 90 mechanical tunneling and microtunneling project sites worldwide, including both hard rock and soft ground/soil tunnels, TBMs, Earth Pressure Balance machines (EPBs) and Slurry Shields, Microtunneling machines Roadheaders and mechanical miners. He has a number of scientific and industrial research and consultancy reports and publications on mechanized tunneling and mining. He is currently owner of a company (Ozdemir Engineering) in Colorado USA providing for consultancy services to many international companies.



**Prof. Daniela Peila**

He got his BSc degree in Mining Engineering from Polytechnic University of Turin in 1987. He is currently working as a professor in the Department of Mining Engineering of the same university. Since 2010, he has

been the Board Member of ITA. He worked in many working groups of ITA. Between 1994 and 1995, he was with the 4th Working Group "Use of Underground Structures". Between 1995 and 1999, he was the vice head of the same working group. Between 2000 and 2010, he was the head of the 18th Working Group "Education and Training". Since 2010 he has been the trainer in 9th Working Group on "Seismic Effects". In addition, he was responsible for various training and education activities in ITA. Between 2005 and 2008, he was the member of the ITA's "Training and Education". He has been the Technical Director of ITA-CET since 2008, and the Chief Technical Director of the Training and Education Foundation on Use of Tunneling and Underground Structures since 2009.



## **FEES AND REGISTRATION**

### **Registration Fee**

Before August 15, 2012 – \$1,400 (USD)

After August 15, 2012 – \$1,500 (USD)

### **The registration fee includes:**

- \*Course tuition
- \*Course notebook
- \*Lunches and refreshments at breaks
- \*Dinner on the first day of the course
- \*Accommodation in Sanliurfa Hilton Garden Inn
- \*Round-trip domestic flight ticket to/from Sanliurfa



NOTE: “Mechanized Tunneling and Microtunneling Short Course” attendees will be entitled to participate in “No-Dig Turkey 2012 Conference” event which is going to be held on October 2-3, 2012 in Sanliurfa. Please call the given contact details to arrange your accommodation and round-trip flight tickets.





**Registration and Contact:**

ZED Event Management & Consultancy

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