## International Black Sea Mining & Tunnelling Symposium 2016 was held in Trabzon/Turkey

MEI sponsored International Black Sea Mining & Tunnelling Symposium (IBSMTS) (www.blacksea2016.com) which was organised by Karadeniz Technical University (KTU) Department of Mining Engineering and Karadeniz Technical University (KTU) Mining Association in Trabzon/Turkey at November 2-4. Two parallel short courses were held on 2<sup>th</sup> November. One of the short courses was about tunnelling which delivered by Dr. Nick Barton, Prof. Dr. Turgay Onargan (Dokuz Eylul Univ., Turkey), and Prof. Dr. C. Okay Aksoy (Dokuz Eylul Univ., Turkey). The other course was on *Comminution&Control&Modelling in Mineral Processing* which delivered by the experts from Metso by Murat Us (Mining Eng., Sales Manager) and Mert Katkay (Mining Eng., Sales Engineer) and Dama Engineering by Dr. Tuğcan Tuzcu (Head of Mining and Mineral Processing Dept.). At November 3-4, six keynote lectures, 19 poster presentations, and 46 oral presentations were presented with sum of 71 scientific papers. Over 200 researchers from Norway, Iran, Algeria, and Turkey attended to the symposium with their scientific studies.





Dr. Nick Barton in *Tunnelling* course (November 2)



Lecturers and participitants after the *Tunnelling* course (November 2)



Photos from *Comminution&Control&Modelling in Mineral Processing* short course (November 2)



Opening Ceremony (November 3)



Prof. Dr. Ali Osman Yılmaz (Head of KTU Dept. of Mining Eng.) making his speech at opening ceremony



Mr. Metin Güneş (Head of KTU Mining Association) making his speech at opening ceremony



A/Prof. Dr. Kerim Aydıner (Head of Organisation Committee) making his speech at opening ceremony



Exhibition Area



Prof. Dr. Ali Osman Yılmaz in registration desk with some of the students from KTU Dept. of Mining Eng. that worked in the organisation of the symposium











Sessions





2 NOVEMBER 2016

09:00 - 17:00

## WHOLE DAY TUNNELLING COURSE



KARADENIZ TECHNICAL UNIVERSITY - TRABZON - TURKEY

WHOLE DAY TUNNEL COURSE CONSISTS OF THREE PARTS. FIRST PART OF THE COURSE WILL BE GIVEN BY DR. NICK BARTON WHO IS THE DEVELOPER OF ONE OF THE MOST CITED AND USED ROCK MASS CLASSIFICATION SYSTEMS, "Q". SECOND PART OF THE COURSE WILL BE GIVEN BY PROF. DR. TURGAY ONARGAN ABOUT NATM TUNNELLING WHO HAS MANY CONSULTING EXPERIENCES FOR TUNNELLING PROJECTS. PROF. DR. C. OKAY AKSOY WILL PERFORM THE LAST COURSE ABOUT NUMERICAL METHODS IN TUNNELLING WHO HAS ALSO GREAT CONSULTING CAREER IN TUNNEL WORKS.

		COURSE OUTLINE		
Time	Lecturer	Course Title		
9:00 - 12:00 Dr. Nick Barton		Empirical methods in drill-and-blast and TBM tunnelling, for civil and mining engineers: Q and $Q_{\text{TBM}}$		
13:30 - 15:00 Prof. Dr. Turgay Onargan		Support Design Principles and Applications in NATM Tunnelling		
15:30 - 17:00	Prof. Dr. C. Okay Aksoy	Principles of Numerical Modeling Methods in Tunnel Design and Introduction of Non- Deformable Support System		
Target Audiences: Mining Engineers, Civil Engineers, Tunnel Engineers, Rock Engineers, Engineering Geologists, Modelers of Jointed Media.				
Course 1: 9:00 - 12:00 Title: Empirical methods in drill-and-blast and TBM tunnelling, for civil and mining engineers: Q and Q <sub>TBM</sub> Lecturer: Dr. Nick Barton (Nick Barton & Assoc., Oslo, Norway) Objectives of the short course: This half-day short course will cover some key elements of the lecturer's developments and work in rock me- chanics and rock engineering. The course will start with the Q-system, an example of observational empiricism, using a key-note treatment of rock mass classification and its many site-interpretation and tunnel-and-cavern design aspects. TBM tunnelling performance will follow, from world records to more common performance, es- pecially problems caused by fault zones. The Q <sub>TEM</sub> prognosis method for estimating penetration rate PR and advance rate AR, will also be described and illustrated. First part of the course: TBM PERFORMANCE, PROGNOSIS by Q <sub>TEM</sub> , AND RISK CAUSED BY FAULTING				
Course 2: 13:30 - 15:00 Title: Support Design Principles and Applications in NATM Tunnelling				
	Objectives of This course v	rof. Dr. Turgay Onargan (DEU, Mining Engineering Department, İzmir, Turkey) the short course: vill cover discussed 'Rock engineering design in NATM Tunnelling – the importance of process, behavior, choice of design criteria, review, and consideration of risk', outlining his views on the is.		
Course 3: 15:	Deformable Lecturer: Pr Objectives of This course w Non-Deformal behavior, rock	ples of Numerical Modeling Methods in Tunnel Design and Introduction of Non- e Support System rof. Dr. C. Okay Aksoy (DEU, Mining Engineering Department, İzmir, Turkey) the short course: rill cover discussed 'Numerical modeling principles in Rock engineering and Tunnelling and also ble Support System". Selection of time-dependent rock mass deformation characters, rock mass is mass properties and the evaluation of non-deformable support system is the important issues for method routing of more and the informable support system is the important issues for		



This short course will be held within the INTERNATIONAL BLACK SEA MINING AND TUNNELLING SYMPOSIUM. For further details of the course (registration fee, curriculum vitae of lecturers, course/symposium venue, contents of courses and etc.) please check the symposium website: <a href="https://www.blacksea2016.com">www.blacksea2016.com</a>

the system. The short course give some outlining his views on the design process.



2 NOVEMBER 2016





09:00 - 17:00

KARADENIZ TECHNICAL UNIVERSITY - TRABZON - TURKEY

WHOLE DAY COURSE CONSISTS OF THREE PARTS. FIRST PART OF THE COURSE WILL BE PROVIDED BY THE EXPERTS FROM SECTOR'S LEADING COMPANY METSO ABOUT NEW TECHNOLOGIES FOR ORE PROCESSING, SECOND PART OF THE COURSE WILL BE GIVEN BY MPES FOCUSING ON THE NUMERICAL METHODS IN MINERAL PROCESSING, LAST PART WILL BE PRESENTED BY PROFESSIONALS FROM DAMA ENGINEERING ABOUT MODELLING IN MINERAL PROCESSING.

COURSE OUTLINE			
Time	Speakers	Course Title	
9:00 - 12:00	Murat US (Metso) Dr. Birol SÖNMEZ (Metso) Mert KATKAY (Metso)	New trends in comminution circuits: HPGR(High Pressure Grinding Roll) Stirred milling technology & applications in ultra-fine grinding Expert control & automation systems in mineral processing	
13:30 - 14:30	Murat YAZICIOĞLU (MPES)	The need to utilize modelling methods and industrial trainings in mineral processing operations from the perspective of plant performance	
15:00 - 17:00	Sabri KARAHAN (DAMA) Tuğcan TUZCU (DAMA)	Modelling in mineral processing and plant performance improvement: functional performance analysis	

Target Audiences: Mining Engineers, Mineral Processing Engineers



This short course will be held within the INTERNATIONAL BLACK SEA MINING AND TUNNELLING SYMPOSIUM. For further details of the course please check the symposium website: www.blacksea2016.com