RESOURCE SPEAKERS



Prof. Dr. Johann Golser is the founder of GEOCONSULT. He was involved in more than 300 projects of various sizes worldwide as The Engineer, Project Principal, Consultant or Panel of Expert's member. Prof Golser graduated in Civil Engineering and hasa doctor degree in Mining Engineering (Dr. mont.). Between 1984 and 2006 he was Head of Department for Geomechanics, TunneLling and Heavy Construction Engineering at the University for Mining and Metallurgy Leoben, Austria. 2006 till date he is senior advisor and consultant of GEOCONSULT Group.

More than 100 publications and technical papers in the fields of tunnelling, subway construction, foundation engineering, material laws for shotcrete and rock materials, testing, monitoring, training programmes and development of new technical and contractual approaches give evidence of the continuing efforts to improve the state of the art in tunnelling.



DI Klaus Rabensteiner graduated in Mining Engineering from the Montan University Leoben in 1984. During his time as assistant professor at the Montan University he became co-founder and managing director of GeoData in 1987. In addition to his work as project manager and chairman of the management board of Geodata Survey and Monitoring Group, he worked as a lecturer at various universities in Germany and Austria. He is expert in all aspects of geotechnical instrumentation and monitoring as well as data management of structures, all kinds of tunnels and underground excavations as well as for open cut construction, slope protections and landslides. In addition, he has experience in surveying of underground constructions with focus on automatic systems for heading control, control survey and scanning of surfaces

GeoData is a globally operating monitoring & instrumentation company group that provides its customers with valuable information and therefore ensures greater safety and efficiency for infrastructure, mining and industry projects. GeoData already has completed over 500 projects successfully worldwide and is at the moment involved in different underground and infrastructure projects: HEPP Alto Maipo (Chile), Metro Sydney (Australia), 32 km long highspeed railway Koralmtunnel in Austria and many more.



Mag. Dr. rer. nat. Franz Weichenberger studied Geology at the University of Salzburg from 1993 to 2001 (MSc) and science from 2005 to 2008 (PhD in science). He worked as freelance geologist for the Austrian Geological Service until 1999. In 2000 he stayed for a year as GIS expert at GISCAD until he joined the civil engineering consultant Dr. FÜRLINGER in 2001. He worked in all fields of engineering geology and hydrogeology in the function of a geologist and later as a project manager and senior geologist. Already 2003 he started to develop a digital information system for geological tunnel documentation called TUGIS.NET. This software has been used at many tunnel sites in Austria, Germany and at a tunnel in Argentina. This developing works were the base of his dissertation in the fields of Geology and Geoinformatics

Since 2017, he is senior geologist, software developer and project manager at GEOCONSULT in Salzburg, Austria. His main focuses are developing software products for geological tunnel documentation, the planning and execution of investigation campaigns for subsurface infrastructure projects, tunnels, tunnel prediction, but also for roads or hydro power plants. Besides that, he does some hydrogeological modelling and consulting during excavation works. He worked for tunnel projects in Europe and South America, among them Semmering Base Tunnel, Brenner Base Tunnel, Pfändertunnel, Tauerntunnel, Koralm Base Tunnel and in La Rioja, Argentina. Mr. Weichenberger is based at main office of GEOCONSULT in Salzburg, but travels frequently to the United Arab Emirates and other destinations. In parallel to more than 15 years of engineering and geological work, he participated with about 10 publications, oral presentations and posters. He attends to the yearly WTC and other conferences.

GEOCONSULT is a globally operating civil engineering company in the fields of Engineering and Geology and can offer to leadthe projects of their customers to success. Geoconsult has a well-educated and trained staff of specialists with years of practice.



Mag. Alexander Radinger, MBA graduated in Geophysics from the University of Vienna in 1994. In 2016 he obtained his MBA in Generic Management at the MontanUniversity of Leoben. From 1998 until 2018 he worked for Pöyry an international engineering and consulting company. He was project manager, geophysical expert and managing director.

Since this year he is managing director and engineering consultant for geophysics at GeoData. He is specialised in engineering geophysics and geophysical consulting for tunnels, road constructions, hydro power plants and dams. He covers the full range of engineering geophysical exploration (Seismic, Geoelectric, Gravity, GeoRadar etc.) for determination of soil and rock mechanical parameter andNon Destructive Testing. He provided project management and project steering for relevant infrastructure and energy projects (tunnelling, rail & road, gas pipelines, chemical & plant industry, hydro power projects) over the years and worked on tactical & strategical development of products, departments and companies on a global level.

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Dr. Florian Krenn graduated in Civil Engineering from the Technical University Graz in 1999. He obtained a Ph.D. in Mining Engineering at the University of Leoben in 2004. In 2004 he joined GEOCONSULT where he worked on different aspects of heavy construction engineering with emphasis on tunnel design in all phases of a project. His project references comprise the preliminary design of the Brenner base tunnel, geotechnical construction supervision of soft ground and hard rock tunnel drives in the Inn valley and at the Koralm Tunnel exploratory drive. Since 2009 he is Managing Director of GEOCONSULT India Pvt. Ltd. The projects Geoconsult India has successfully completed are the oil storage caverns in Vizag and Padur, the NATM implementation at the Jorethang Loop HEP and consultancy services in Delhi Metro Phase 3. Geoconsult is involved in different underground projects in India, namely the Qazigund - Banihal Road tunnel, Metro Lucknow, Metro Mumbai and a number of railway tunnels in the Northeast as well as urban and highway tunnels.



DI Johann Golser graduated in Electronic & Communication Technics from the Technical University Graz. From 1984 until 1993 he was self-employed and was responsible for the development of measuring systems at the Institute for Geomechanics, Tunneling and Heavy Construction Engineering at Montan University Leoben. Since 1998 he has been teaching at the University of Leoben and gives the lecture "Experimental Engineering and Metrology in Geomechanics".

He is expert in all aspects of geotechnical instrumentation and monitoring and is responsible for research and development of geotechnichal instrumentation systems at Geodata. GeoData is a globally operating monitoring & instrumentation company group that provides its customers with valuable information and therfore ensures greater safety and efficiency for infrastructure, mining and industry projects. GeoData already has completed over 500 projects successfully worldwide and is at the moment involved in different underground and infrastructure projects HEPP Alto Maipo (Chile), Metro Sydney (Australia), 32 km long highspeed railway Koralmtunnel in Austria and many more.



Dr. Harald Golser graduated in Civil Engineering at the Technical University Graz in 1996. He obtained a doctor degree in technical sciences (Dr. techn.) in 2001 and a MBA degree at the Mining University Leoben. Further he is a "Chartered Engineer" for civil Engineering. He worked as engineer in the design and site supervision in various tunneLling projects in Singapur such as DTSS and Metro. Further in IndiaatDelhi Metro (Chawri Bazar) and as project principal of the PirPanjal Rail Tunnel.





Since 2004 he is Managing Director of GEOCONSULT in AUSTRIA and since 2008 he is CEO and owner of the GEOCONSULT Group

Workshop on **OBSERVATIONAL APPROACH IN TUNNELLING : EVOLVEMENT, ISSUES AND CHALLENGES**

29 - 30 October 2018, New Delhi



Organised by



Information Bulletin

In association with



Geoconsult Group

INTRODUCTION

Constructing tunnels and caverns in the techtonically active Himalayas is full of challenges and uncertainties. Experience has shown that construction of tunnels and caverns in Himalayas requires a good understanding of geology, adequate site investigation, proper tunnel design and selection of suitable construction methods and technologies. What is the limit of adequate investigation to reduce uncertainty is the question being asked by many professionals; whether it is possible to do complete geological investigation before D&C stage; What is the way out to reduce uncertainties creating problem during execution of work. These issues are of importance for design and construction of tunnel and underground works, design and selection of suitable construction methods based on geological conditions are important for hydropower, road transport, rail network to remote regions of continent size country besides development of infrastructure projects like Metro etc. A proper understanding of all these issues can definitely help in reducing cost and time over run.

To focus on the various issues and challenges being faced for the design and construction of the tunnels on soft and hard rock, it is proposed to organize a Workshop on Observational Approach in Tunnelling : Evolvement, Issues and Challenges' on 29-30 October 2018 in the Conference Hall of CBIP at New Delhi.

OBJECTIVES

The objective of this workshop is to update the knowledge of tunnelling professionals, i.e., Civil Engineers, Geologists and tunnel technician in the field of tunnel and underground works by conventional and mechanised method (including necessary site investigations, design construction, monitoring and contractual aspects) and the technologies, including the risk management process through out a project cycle with specific focus for owners and decision makers consulting engineers, contractor and other with an interest in risk management principles.

WORKSHOP BENEFITS

The Workshop will introduce to the participants, the latest tunnelling techniques and will help them to develop their skills so as to:

- Select suitable investigation techniques for tunnelling;
- Analyze ground conditions for tunnelling;
- Assist in tunnel & tunnel shaft construction methods and tunnel linking selection;
- Select and specify the most suitable equipment for tunnelling;
- Develop a better understanding of the application and use of micro-tunnelling techniques;
- Develop techniques to mitigate anticipated and unanticipated tunnelling problems;
- Develop tunnel construction schedules more accurately;
- Manage tunnel construction projects more successfully and safely;
- Develop an awareness for the latest tunnelling techniques and future trends in the industry.

WHO SHOULD ATTEND

The Workshop is designed for professionals working in public or private sector organizations dealing with the design and construction of tunnel and underground works. The workshop is of interest to tunnel designer and operators, construction and project managers, engineers (both field and design office), construction supervisory personnel, construction cost estimators, geotechnical engineers and individuals in the construction industry wanting a better grounding in modern tunnelling techniques and practices, geologists, regulatory bodies. Government Departments, Tunnel Building Contractors & Consultants. Suppliers of Products & Services for Tunnelling Construction. Fire Authorities dealing with Infrastructure Tunnels, Technical and Research Institutes, Universities dealing with Tunnelling. Organization & associations active in the Tunnelling World and Funding Agencies.

PROGRAMME SCHEDULE	OGRAMME SCHEI	DULE
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Monday : 29th October 2018	Topics
09:00 – 09:30 hrs.	Registration
09:30 – 10:00 hrs.	Inaugural Session
10:00 – 13:00 hrs.	Session 1: The New Austrian Tunnelling Method (NATM)
	• The NATM History, background, principles, Observational Approach, Development with time
	Geological and geotechnical investigations
	Rock Mass Classification
14:00 – 15:30 hrs.	Session 2: Tunnel Design Aspects
	Design Philosophies
	Design Stages in NATM Tunnelling
16.00 – 17:30 hrs.	Session 3: Contract Documents, Tender and Award
	Contract Forms
	Tender Documents
	Contract Award

Tuesday : 30th October 2018	Topics
09:30 – 11:00 hrs.	Session 4: Risk Management, Observational Approach
	• What are the risks?
	Observational Approach in NATM
	Observational Approach in TBM
	Instrumentation, Data Management
11:30 – 13:00 hrs.	Session 5: Tools to Handle Problems, Documentation
	Advance Protection Tools
	Geological and Geotechnical Documentation
14:00 – 15:30 hrs.	Session 6: Case Studies
	Case Studies: European projects
	Case Studies: Indian projects
16:00 – 17:30 hrs.	Session 7: Panel Discussion

Morning Tea/Coffee Break: 11:00–11:30 hrs. Lunch: 13:00–14:00 hrs. Evening Tea/Coffee Break: 15:30–16:00 hrs.

VENUE

The workshop will be held in the Conference Hall of Central Board of Irrigation and Power, Malcha Marg, Chanakyapuri, New Delhi - 110021

OFFICIAL LANGUAGE

The official language of the workshop will be English only.

REGISTRATION FEE

The registration fee for participation in the workshop is Rs.15,000/- plus GST 18% per participant by cash/cheque at par/demand draft drawn in favour of "Adhering Committee of International Tunnelling Association (India)", payable at New Delhi. 10% discount in the registration fee will be extended to the members of TAI and CBIP.

The registration fee includes working lunch, tea/coffee during the workshop. Registration fee does not include payment for hotel accommodation or meals except those specifically indicated in the Workshop Programme. Registration fee once paid will not be refunded.

SPONSORSHIP

Scope exists for organizations to be the Sponsor on lampsum payment with following benefits:

Sponsor - Rs. 2,00,000/-

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A limited space will be made available on first-come-firstserved basis, for coloured advertisement to the organizations, involved in the concerned field, in the proceedings volume

You may arrange the payment by bank demand draft/cheque, payable at par in New Delhi, drawn in favour of "Adhering Committee of International Tunnelling Association (India)" or by bank transfer to the following account:

- Name of Bank: Canara Bank, Delhi Diplomatic Enclave, 7/48, Malcha Marg, Chanakyapuri, New Delhi 110021
- Account No. 0157101031496
- MICR Code No. 110015007

of the Conference. The interested organizations are required to send the CD of the advertisement material, in A4 size i.e., Pdf, JPEG or Coreldraw format along with payments as detailed below by 20th October 2018.

Inner Pages	US\$ 500 / INR 30,000*
2 nd & 3 rd Cover	US\$ 1000 / INR 50,000*
Back Cover	US\$ 1500 / INR 75,000*

*GST @ 18% shall be charged extra.

PAYMENT

- Account Holder Name: "ADHERING COMM OF ITA"
- IFSC Code: CNRB0000157
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WORKSHOP SECRETARIAT

Tunnelling Association of India

C/o Central Board of Irrigation and Power

- Plot No. 4. Institutional Area
- Malcha Marg, Chanakyapuri, New Delhi 110 021, India
- Tel: 91-11-26115984/26116567/26111294 Extn: 113
- Fax: 91-11-26116347 E-mail : sunil@cbip.org
- cbip@cbip.org; Website : http://www.cbip.org

CONTACT PERSON

Mr. Sunil Sharma, Chief Manager – Tech. M : 9811299136 **NOTES:**

- 1. Participants will have to make their own arrangement for travel, boarding and lodging, etc.
- 2. Last date for receipt of Registration Form is 25th October 2018. Spot registration facility will also be available, provided prior information is received.