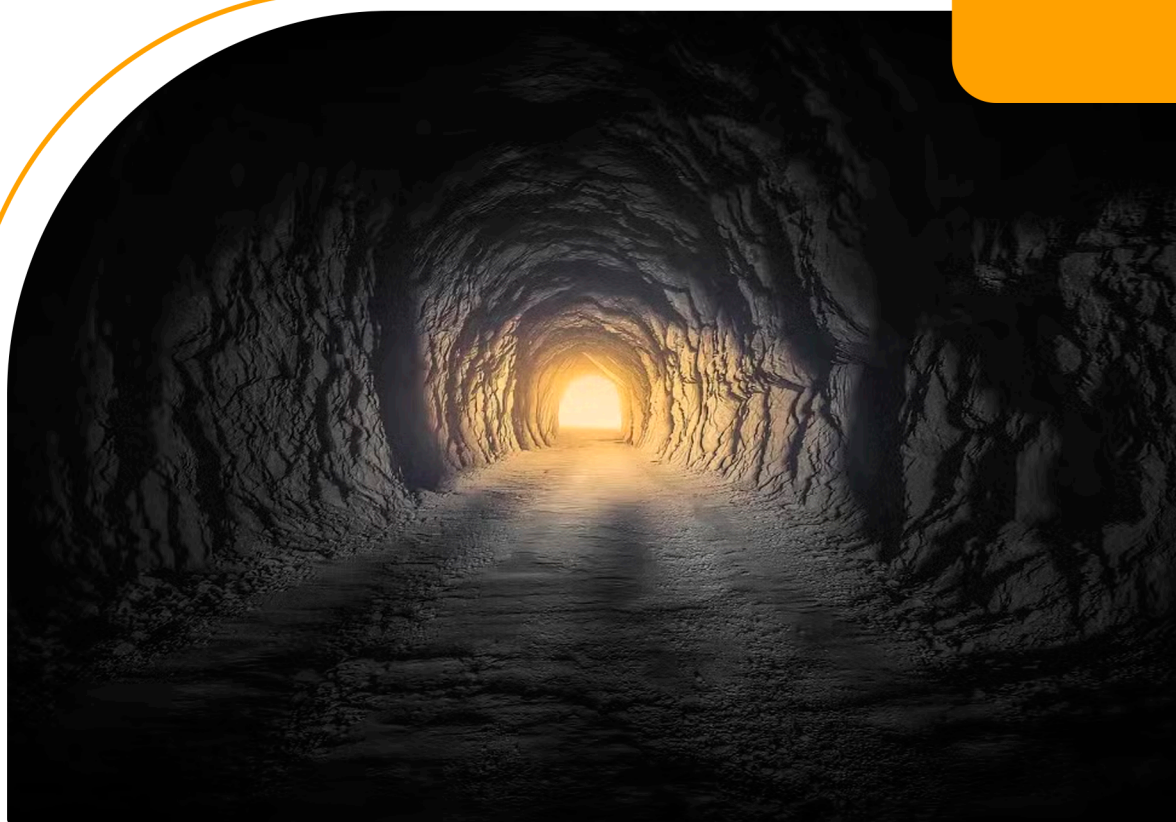


**Nepal Tunnelling Association and ITACET Foundation**

**Jointly Organize**

**Two Days Training Program on**

# **“Conventional Tunnelling and Recent Innovations”**



**4<sup>th</sup> and 5<sup>th</sup> September 2025**

**The Everest Hotel, Kathmandu, Nepal**

# INTRODUCTION

**Nepal Tunnelling Association (NTA)** and the **ITACET Foundation** are jointly organizing a **two-day training program** on **4th and 5th September 2025**, with the theme: **“Conventional Tunnelling and Recent Innovations.”**

This training will be a valuable opportunity to share international experiences on the principles of conventional tunnelling, design parameters, and geotechnical and structural design in both hard rock and soft ground. Furthermore, there will be engaging sessions on recent innovations in drilling and blasting technology, shotcrete and concrete materials, as well as advancements in underground construction information systems, monitoring technologies, and tunnel maintenance and repair.

The **first day** of the training will focus on the **design aspects of conventional tunnelling**, while the **second day** will feature presentations on **innovations in tunnelling**. Selected lecturers from the ITACET Foundation, particularly international experts, will conduct these sessions. To conclude the training, a **round-table discussion** will be organized among delegates from various sectors under the theme **“Tunnelling Towards 2030”**, aiming to summarize the key learnings and insights.

Your participation, especially through the academic institutions, industries, research institutions, governmental institutions will significantly contribute to the success of this program. The organizers warmly invite all engineers, geologists, and professionals involved in the underground construction industry to enhance their understanding and actively participate in this important training event.

## Contact for registration

### CONTACT AND RSVP

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**Mrs. Michaela Daguzan**

Executive In charge of Training, ITACET Foundation  
(michaela.daguzan@itacet.org)

## Day 1: 4th September 2025

(Conventional Tunnelling)

### Session 1: Introduction and Site investigation

08.30 – 09.00:	Welcome and Opening:	ITA and concerned country representative (NTA)
09.00 – 09.45:	Brief on Himalayan Geology and Tunnelling	Ram Hari Sharma & Kangada Prasai, NTA
09.45 – 10.30:	Principles of Conventional Tunnelling	Robert Galler
10.30 – 11.00:	Coffee break	
11.00 – 11.45:	Site Investigation (Nepal & Abroad)	Gyanendra Lal Shrestha and Subash C. Sunuwar, NTA & Giorgio Höfer-Öllinger *
11.45 – 12.30:	Design Parameters	Robert Galler
12.30 – 14.00:	Lunch	

### Session 2: Design aspects

14.00 – 14.45:	Layout Conception and Design Stages	Robert Galler
14.45 – 15.30:	Possible Hazards and Counter Actions in Soft Ground	Kurt Zeidler*
15.30 – 16.00:	Coffee Break	
16.00 – 16.45:	Possible Hazards and Counter Actions in Rock	Etienne Garin*
16.45 – 17.30:	Geotechnical and Structural Design Steps	Robert Galler
17.30 – 18.00:	Questions and Answers	

## Day 2: 5th September 2025

(Innovation in Tunnelling)

### Session 3: Materials

9.00-9.45:	Innovations in Drilling and Blast Technology	Mark Ganster
09.45-10.30:	Innovations in Shotcrete, Concrete Material	Roland Mayr*
10.30-11.00:	Coffee break	

### Session 4: Processes

11.00-11.45:	Innovations in Monitoring and Monitoring Data Processing	Klaus Chmelina *
11.45-12.30:	Conventional Tunnelling Solutions for Small Cross Sections –	Andreas Wimmer
12.30-14.00:	Lunch	
14.00-14.45:	Logistics and Worksite Management – Health & Safety- New Tools	Michael Halwachs*
14.45-15.30:	New ITA Guidelines for BIM in Conventional Tunnelling	Vojtech E. Gall & Wojcieh Mleczo*
15.30-16.00:	Coffee Break	

### Session 5: Maintenance and repair

16.00-16.45:	Future Developments and Asset Management	Gorka Santamaria & Martina Puglia*
16.45-17.30:	Round table discussion “Tunnelling towards 2030”	
17.30-18.00:	Summary and Closing of the course	
18:00 Onwards	Dinner	

\*Live Online

## REGISTRATION AND FEE

- NRs. 15,000 per person for Organization/official registration from Nepal
- NRs. 12,000 per person for individuals
- NRs. 8,000 per person for NTA Life members and Students
- US\$ 150 per person from SAARC Countries
- US\$ 200 per person from other countries

These cover registration, tea/coffee, lunches and a dinner only.

## SPONSORS CATEGORY

### Main Sponsor

**NRs. 1,000,000.00**

(One Million Nepalese Rupees)

or

**US\$ 7500**

(Seven Thousand and Five Hundred US Dollar)

**Presentation,**

promotion facilities and Six Free Participants

### Sponsors

**NRs. 500,000.00**

(Five Hundred Thousand Nepalese Rupees)

or

**US\$ 4000**

(Four Thousand US Dollar)

**Presentation,**

promotion facilities and Four Free Participants

### Co-Sponsors

**NRs. 250,000.00**

(Two Hundred Fifty Thousand Nepalese Rupees)

or

**US\$ 2000**

(Two Thousand US Dollar)

**Presentation,**

promotion facilities and Two Free Participants

\* The names and logos of all sponsors will be displayed prominently on Symposium banners.

## MODE OF PAYMENT

**Payment can be made either in cash or by bank transfer to NTA:**

Account Name	Nepal Tunnelling Association	Bank Name	Machhapuchchhre Bank Limited, Putalisadak Branch
Account Number	5101524426899018	Swift Code	MBLNNPKA

# Speakers

## Prof. Dr. Robert Galler

(Univ.-Prof. Dipl.-Ing. Dr.mont.)



After completing his HTL (Higher Technical College) in Civil Engineering, **Prof. Dr. Robert Galler** studied mining engineering at the University of Leoben, specializing in geomechanics, tunneling, and structural civil engineering. In 1997, he received his doctorate.

From 1997 to 2007, he worked at GEOCONSULT Consulting Engineers as leading position in projects such as Deutsche Bahn Frankfurt–Cologne high-speed line, the tender planning (2002) for the Semmering Base Tunnel, and the submission, tender, and execution plans for several construction lots of the 40 km long tunnel section of the new High Speed Railway Line from Innsbruck in direction to Munich. From 2004 to 2007, Prof. Galler was the overall project manager of the JV for the Brenner Base Tunnel.

Since 2007, Prof. Galler has been a professor of Subsurface Engineering at the Technical University of Leoben. Since 2000, he has been a member of the board of the Austrian Society for Geomechanics, and since 2005, he has represented Austria in the ITA – International Tunnelling Association. In September 2013, Prof. Galler was elected Chairman of ITA-CET (International Tunnelling Association – Committee for Education and Training) in London, which offers specialized training in geotechnics and tunneling for working engineers worldwide. Since July 2016, Prof. Galler has been Department Head of MRE – Mineral Resources Engineering and, since 2024, Head of the ZaB-Zentrum am Berg research center, formerly Department ZaB. In October 2023, he was elected President of the Austrian Society for Geomechanics.

## Andreas Wimmer

(Mechanical/Tunnel Construction Engineer)



After attending the lower secondary school level, **Mr. Andreas Wimmer** completed his training as a mechanical engineer at Tuluva Salzburg in 2000. He continued his education at McGill University with a certificate course in management from 2001 to 2004. From 2005 to 2007, he completed a master's degree in training and development at the Salzburg Business School of the University of Salzburg and from 2015 to 2017, he was trained as a tunnel construction engineer with a focus on the New Austrian Tunneling Method (NATM) at the Montanuniversität Leoben and the Graz University of Technology. He is currently working as CEO in Wimmer Hartstahl GmbHCoKG und Wimmer Felstechnik GmbH since 2010.

# Etienne Garin

(Civil Engineer, M.Sc.)



**Mr. Etienne Garin** graduated in Civil Engineering from Swiss Federal Institute of Technology in Lausanne in 1996. He benefits from vast experience in the field of underground construction and hydroelectric scheme. Since he joined WSP-BG, he has actively participated in the design and construction of major tunnels in Switzerland and abroad, as well as hydroelectric power schemes. During his career, he has carried out calculations at detailed and final design stage, been responsible for site supervision, and has managed projects from preliminary design to client delivery.

He is Deputy Head of the WSP Underground Works Team in Western Switzerland and also animator of the ITA WG 19 “Conventional Tunnelling” Since 2023. He is lecturer at the Swiss Federal Institute of Technology, Technical University of Applied Sciences Western Switzerland and Ecole des Mines of Nancy.

# Klaus Chmelina

(Dr. Dipl.-Ing.)



**Dr. Klaus Chmelina** studied at the Technical University of Vienna and graduated doctorate in 2002 on the topic of AI supported tunnel displacement data interpretation.

Since 2002 he works for Geodata ZT GmbH as the Area manager of branch office Vienna and R&D Coordinator of Geodata Group, Senior Researcher.

His main areas of research are geotechnical and geodetic monitoring and measuring systems for tunnelling, tunnel databases and information systems, tunnel data visualization, interpretation and analysis, AI, XR and robotics for tunnel monitoring.

# Dr. Giorgio Höfer

(Geologist/Chartered Engineer)



**Dr. Giorgio Höfer**-Öllinger studied geology at University of Salzburg, Austria from 1993 to 2000 and tunnelling at Mining University of Leoben (Austria) and Technical University of Graz from 2009 to 2011. Since 2005, he is Chartered Engineer and since 2020 he is a Court Expert. He defended the doctor thesis at Freie Universität Berlin, Germany.

He worked as freelance geologist for different companies until he joined Geoconsult in 2002. From 2005-2023, he was head of Geological Department of Geoconsult and Managing Director. In 2023, Giorgio created his own enterprise, Dr. Giorgio Höfer ZT GmbH. His main focuses are investigation campaigns for tunnel projects, tunnel prediction, hydrogeological modelling and consulting during excavation works.

He worked for tunnel projects in South and Central America, Europe and Asia, among them Pir Panjal Railway Tunnel, Brenner Base Tunnel, Agua Negra Tunnel and Koralm Base Tunnel; and for large scale HEPP like GKI, SKW Kühtai and PSW Forbach. From 2008-2024, he gave lectures at Freie Universität Berlin, Germany, regularly, and spontaneously at different other universities.

Mr. Höfer-Öllinger is based at in Salzburg but travels frequently to South America and other destinations. In parallel to 25 years of consulting in more than 20 nations, he participated with about 110 publications, oral or poster presentations. He takes part with different working groups at ITA and Austrian Association of Geomechanics and frequently leads sessions at geological conferences

# Mark Ganster

(Msc. in Applied Geosciences)



**Mr. Mark Ganster** received a multidisciplinary education at a higher technical college in Mechanical Engineering. After obtaining a MSc. Diploma in Applied Geosciences from the Mining University of Leoben/Austria he joined RHI-company as a mine geologist. During his time at University, he was working for several tunnelling companies in foreign countries as a blasting engineer. He also supported seismic projects for geophysical exploration of gas and water. Since 2004, he is with Austin Powder International. Until 2014 he was responsible for the Drilling and Blasting Operations in Austria as well as for global technical assistance. From 2015 to 2023 he was in the role of "Chief Technology Officer Europe" for Austin Europe. Since 1st of January 2024, he held the position as Managing Director Austin Powder Austria GmbH.

# Dr. Michael Halwachs

## (Chemical Engineer)



**Dr. Michael Halwachs** holds a PhD. in Chemical Engineering and a master's degree in risk prevention and disaster management and has been working as a trainer for disaster management and contingency planning for response capabilities and authorities on various national and international levels in order to enhance capacity building and increase resilience for communities on district and provincial levels. He is an experienced infrastructure expert with over 15 years of specific experience in emergency response, preparedness and prevention.

He has been employed as Corporate Health & Safety Manager Tunnelling Division at PORR Bau GmbH since 2016, where his responsibilities include overseeing the health, safety and security of all underground construction sites in Norway, the United Kingdom, Germany, Switzerland, Austria, Poland, Romania and the UAE.

He deals regularly with infrastructure related training and preparedness for first responders on a national level and designs systematic solutions for liaison between first responders and governmental authorities during and after emergencies. He also has worked as a HSE manager for underground and open pit mining operations, and he is experienced in response training for mine and tunnel rescue and in operational continuity.

# Roland Mayr

## (Mining/Geotech Engineer)



**Mr. Roland Mayr** Graduated 1989 at University of Leoben (Austria), Mining Engineering with the specialization in tunnelling and subsurface engineering. He worked till 2001 with Geoconsult (Salzburg) in various international and Austrian tunnelling and underground construction projects. He worked as Geotech engineer, designer and site supervision in Saudi Arabia, Malaysia, Turkey, France and Austria. He joined Masterbuilders Solutions in 2001 as regional technical support and sales for Austria and later also Germany for underground construction and tunnelling projects. Since 2016, he is in the position as global technical manager for sprayed concrete. He is dealing now all sprayed concrete related technical aspects like R&D, performance optimization, production and site support.

# Gorka Santamaria

(BSc in Geomatics)



**Mr. Gorka Santamaria** is Head of Infrastructure Management at Amberg Engineering, where he leads the introduction of digital services for the maintenance of built structures. With over 15 years of experience as Product Manager, Gorka has built a strong track record in surveying and inspection technologies. Prior to joining Amberg, Gorka worked at Leica Geosystems and Proceq, where he led the development and brought to the market several innovative products and systems in the fields of reality capture and non-destructive imaging. Gorka is particularly passionate about driving innovation at the intersection of technology and infrastructure. He holds a BSc in Geomatics from the University of the Basque Country in Spain. Outside of work, Gorka enjoys long walks, cooking, history, literature and progressive rock.

# Wojciech Mleczko

(Chartered Civil Engineer)



**Mr. Wojciech Mleczko** is a Chartered Civil Engineer based in Poland, working at Jacobs as a Bridge and Tunnel Engineer / BIM and Design Automation Lead. He holds a master's degree in civil engineering from Cracow University of Technology. He is also Polish Representative in ITA Working Group 22: Information Modelling in Tunnelling.

# Martina Puglia

(Civil Engineer)



**Ms. Martina Puglia** is a seasoned civil engineer with 16 years of experience at Amberg Engineering. She graduated from the University of Applied Sciences in Eastern Switzerland and is specialized in structural maintenance. With a keen eye for detail and a passion for technology advancements, she holds the technical lead in the areas of tunnel inspection and condition assessment at Amberg. Her expertise also extends to planning and executing underground structures, especially in challenging environments such as ongoing operations or total closures.

# Dr. V.E. Gall

(Geo-technical Engineer)



**Dr. V.E. Gall** is an expert in numerical methods and has over 13 years of experience in the structural and geotechnical analysis of mechanized (TBM) and conventionally constructed tunnels. Through his involvement in a diverse range of projects, such as the construction of the Alto Maipo Hydroelectric Power Plant in Chile, the planned Gateway Project between New York and New Jersey, and the Hampton Roads Bridge-Tunnel expansion project in Virginia, he is experienced in underground construction in diverse geotechnical conditions ranging from alpine environments to densely populated urban centers.