



Alexander Kluckner

GEOTECHNICAL ENGINEER AND PASSIONATE RUNNER, BORN IN TIROL

Bartholomäberg, AUSTRIA

alexanderkluckner | Alexander-Kluckner

Education

Graz University of Technology

PH.D. IN ENGINEERING SCIENCES, CIVIL ENGINEERING

Graz, Austria

08/2013–02/2023

- Thesis title: Tunnelling at greater depths: Study on the ground and system behaviour when passing a stiff rock block in a weak zone
- <https://doi.org/10.3217/74t5y-8xe19>

Graz University of Technology

M.Sc. IN CIVIL ENGINEERING SCIENCES, GEOTECHNICS AND HYDRAULICS

Graz, Austria

10/2009–10/2012

- Thesis at the Institute of Rock Mechanics and Tunnelling: Aspects of Rock Mass Characterization in Tunnelling (thesis is written in German)
- <https://doi.org/10.3217/mzrda-ftz07>

Graz University of Technology

B.Sc. IN ENGINEERING SCIENCES, ENVIRONMENT AND CONSTRUCTION MANAGEMENT

Graz, Austria

10/2006–10/2009

- Thesis at the Institute of Structural Analysis: Analysis of a Historical Roof Truss (thesis is written in German)

Work Experience

illwerke vkw AG

GEOTECHNICAL ENGINEER

Rodund, Austria

11/2024–present

SKAVA consulting ZT-GmbH

PROJECT ENGINEER

Salzburg, Austria

07/2023–10/2024

Graz University of Technology, Institute of Rock Mechanics and Tunnelling

RESEARCH AND TEACHING ASSOCIATE, PROJECT ASSISTANT, FROM 10/2018 RESEARCH COORDINATOR OF THE INSTITUTE

Graz, Austria

10/2012–10/2022

Austrian Society for Geomechanics

ASSISTANT: ORGANISATION OF CONFERENCES (E.G., EUROCK2015, ISRM2023) AND WORKSHOPS, EDITING PUBLICATIONS, PROMOTION, IT

Salzburg, Austria

10/2012–PRESENT

Graz University of Technology, Institute of Rock Mechanics and Tunnelling

STUDENT ASSISTANT

Graz, Austria

10/2009–07/2010, 10/2010–09/2011

ILF Beratende Ingenieure ZT GmbH

PRACTICAL TRAINEE

Rum, Austria

09/2010–10/2010

IGT Geotechnik und Tunnelbau ZT GmbH

TECHNICAL WORKER: PFÄNDER TUNNEL, SITE INSPECTION

Hörbranz, Austria

07/2010–09/2010

Schimetta Consult ZT GmbH

DESIGN ENGINEER

Vienna, Austria

07/2008–10/2009

Graz University of Technology, Institute of Steel Structures

STUDENT ASSISTANT

Graz, Austria

01/2008–07/2008

Publications

”Interlocking strength” in tunneling – an attempt at classification

Metzler et al., 2024

AUTHORS: METZLER, I., KLUCKNER, A., LIU, Q., HOLZER, R. AND MARCHER, T.

02/2024

- Geomechanics and Tunnelling, Vol. 17, Nr. 1, pp. 17–28, <https://doi.org/10.1002/geot.202300046>

Back-analysis of rock mass parameters at the Semmering Base Tunnel based on the convergence confinement method

Martin et al., 2023

AUTHORS: MARTIN, J.W.B., KLUCKNER, A., LENZ, G. AND MARCHER, T.

10/2023

- Proceedings of the ISRM 15th International Congress on Rock Mechanics and Rock Engineering and 72nd Geomechanics Colloquium – Challenges in Rock Mechanics and Rock Engineering, Schubert, W. and Kluckner, A. (eds), Salzburg, Austria, 9.–14. October 2023, pp. 2400–2405

Evaluation of trends in tunnel lining utilization with regard to the moment of ring closure

Shringi et al., 2023

AUTHORS: SHRINGI, V., WINKLER, M.B., KLUCKNER, A. AND MARCHER, T.

10/2023

- Proceedings of the ISRM 15th International Congress on Rock Mechanics and Rock Engineering and 72nd Geomechanics Colloquium – Challenges in Rock Mechanics and Rock Engineering, Schubert, W. and Kluckner, A. (eds), Salzburg, Austria, 9.–14. October 2023, pp. 2043–2048

Rock Fall Risk – Modular Risk Management Process

Kienreich et al., 2023

AUTHORS: KIENREICH, R., KLUCKNER, A. AND MARCHER, T.

10/2023

- Proceedings of the ISRM 15th International Congress on Rock Mechanics and Rock Engineering and 72nd Geomechanics Colloquium – Challenges in Rock Mechanics and Rock Engineering, Schubert, W. and Kluckner, A. (eds), Salzburg, Austria, 9.–14. October 2023, pp. 1043–1048

Projekt Steinschlagrisiko STEIRIS

Kienreich and Kluckner, 2022

AUTHORS: KIENREICH, R. AND KLUCKNER, A.

12/2022

- Proceedings of the Symposium on Rock Fall (Steinschlagsymposium): STEINSCHLAG: Risikoeinschätzung und Maßnahmen aus Sicht kommunaler Verantwortlicher, Schladming, Austria, 1. December 2022, pp. 1–15

Direct and distributed strain measurements inside a shotcrete lining: Concept and realisation

Wagner et al., 2020

AUTHORS: WAGNER, L., KLUCKNER, A., MONSBERGER, C.M., WOLF, P., PRALL, K., SCHUBERT, W. AND LIENHART, W.

02/2020

- Rock Mechanics and Rock Engineering, Vol. 53, pp. 641–652, <https://doi.org/10.1007/s00603-019-01923-4>

Study on the anisotropic displacement pattern at a conventional tunnel drive

Kluckner and Schubert, 2019

AUTHORS: KLUCKNER, A. AND SCHUBERT, W.

12/2019

- Proceedings of the 5th ISRM Young Scholars’ Symposium on Rock Mechanics and International Symposium on Rock Engineering for Innovative Future (YSRM2019 and REIF2019), Okinawa, Japan, 1.–4. December 2019, pp. 1–6

In-situ assessment of distributed strain and curvature characteristics in shotcrete tunnel linings based on fiber optic strain sensing

Monsberger et al., 2019

AUTHORS: MONSBERGER, C.M., LIENHART, W., KLUCKNER, A. AND SCHUBERT, W.

09/2019

- Proceedings of the 14th International Congress on Rock Mechanics and Rock Engineering, Foz do Iguaçu, Brazil, 13.–18. September 2019, pp. 1–8

Continuous strain measurements in a shotcrete tunnel lining using distributed fibre optic sensing

Monsberger et al., 2018

AUTHORS: MONSBERGER, C.M., LIENHART, W., KLUCKNER, A., WAGNER, L. AND SCHUBERT, W.

07/2018

- Proceedings of the 9th European Workshop on Structural Health Monitoring, Manchester, United Kingdom, 10.–13. July 2018, pp. 1–13

Short-term prediction of shotcrete utilization based on observations during tunnelling

Entfellner et al., 2018

AUTHORS: ENTFELLNER, M., KLUCKNER, A., LENZ, G., POISEL, A. AND SCHUBERT, W.

06/2018

- Geomechanics and Tunnelling, Vol. 11, Nr. 3, pp. 214–225, <https://doi.org/10.1002/geot.201800013>

Prediction of fault zones based on geological and geotechnical observations during tunnel construction

Lenz et al., 2017

AUTHORS: LENZ, G., KLUCKNER, A., HOLZER, R., STADLMANN, T., SCHACHINGER, T. AND GOBIET, G.

08/2017

- Geomechanics and Tunnelling, Vol. 10, Nr. 4, pp. 366–379, <https://doi.org/10.1002/geot.201700014>
- first published in: Proceedings of the Workshop "Tunnelling in Fault Zones – A Challenge", Schubert, W. and Kluckner, A. (eds), Graz, Austria, 25. November 2016

Investigations on telescope yielding elements with porous filling

Verient et al., 2015

AUTHORS: VERIENT, M., KLUCKNER, A., RADONČIĆ, N. AND SCHUBERT, W.

10/2015

- Proceedings of the ISRM Regional Symposium EUROCK 2015 and 64th Geomechanics Colloquium – Future Development of Rock Mechanics, Schubert, W. and Kluckner, A. (eds), Salzburg, Austria, 7.–10. October 2015, pp. 1169–1174

Suggestion for a documentation of unexpected standstills in TBM-tunnelling

Hofer et al., 2015

AUTHORS: HOFER, K., KLUCKNER, A. AND SCHUBERT, W.

10/2015

- Proceedings of the ISRM Regional Symposium EUROCK 2015 and 64th Geomechanics Colloquium – Future Development of Rock Mechanics, Schubert, W. and Kluckner, A. (eds), Salzburg, Austria, 7.–10. October 2015, pp. 1145–1150

Estimation of the in situ block size in jointed rock masses using three-dimensional block simulations and discontinuity measurements

Kluckner et al., 2015

AUTHORS: KLUCKNER, A., SÖLLNER, P., SCHUBERT, W. AND PÖTSCH, M.

05/2015

- Proceedings of the 13th ISRM International Congress of Rock Mechanics – Innovations in Applied and Theoretical Rock Mechanics, Montreal, Canada, 11.–13. May 2015, paper #771, p. 11

Applying the observational approach for tunnel design

Davila Mendez et al., 2013

AUTHORS: DAVILA MENDEZ, J.M., KLUCKNER, A. AND SCHUBERT, W.

06/2013

- Proceedings of the 3rd ISRM Symposium on Rock Mechanics – Rock Characterisation, Modelling and Engineering Design Methods, Feng, X.T., Hudson, J.A. and Tan, F. (eds), Shanghai, China, 18.–20. June 2013, pp. 691–696

Presentations

Projektvorstellung: STEIRIS – STEinschlagRISiko

Schladming, Austria

PRESENTER: KLUCKNER, A. AND KIENREICH, R.; SPEECH LANGUAGE: GERMAN

01.012.2022

- Event: Symposium on Rock Fall (Steinschlagsymposium)

Characterisation of geomaterials for tunnel projects

Graz, Austria; online

PRESENTER: KLUCKNER, A.; SPEECH LANGUAGE: ENGLISH

22.08.2020

- Event: Online Short Course "Geomechanical design principles for tunnels"
- with Moscow School of Management SKOLKOVO (organiser; Russia) and participants from Mosproekt Group of Companies (Russia)

ShapeMetriX: 3D imaging and assessment technology

Selangor, Malaysia

PRESENTER: KLUCKNER, A.; SPEECH LANGUAGE: ENGLISH

11.12.2019

- Event: Short Course "Underground Tunnelling for Substation Construction"
- with Universiti Tenaga Nasional (organiser; Malaysia) and participants from Malaysian universities, companies, and societies

Prediction of fault zones based on geological and geotechnical observations during tunnel construction

Graz, Austria

PRESENTER: KLUCKNER, A. AND LENZ, G.; SPEECH LANGUAGE: GERMAN

25.11.2016

- Event: Workshop "Tunnelling in Fault Zones – A Challenge"

Estimation of the in situ block size in jointed rock masses using three-dimensional block simulations and discontinuity measurements

Montreal, Canada

PRESENTER: KLUCKNER, A.; SPEECH LANGUAGE: ENGLISH

13.05.2015

- Event: 13th ISRM International Congress of Rock Mechanics

Results of Laboratory Tests on Artificial Block-in-Matrix Rocks

Vigo, Spain

PRESENTER: KLUCKNER, A.; SPEECH LANGUAGE: ENGLISH

28.05.2014

- Event: ISRM European Rock Mechanics Symposium (EUROCK 2014)

Applying the observational approach for tunnel design

Shanghai, China

PRESENTER: DAVILA MENDEZ, J.M. AND KLUCKNER, A.; SPEECH LANGUAGE: ENGLISH

20.06.2013

- Event: 3rd ISRM Symposium on Rock Mechanics

Lectures at Graz University of Technology

Discrete Element Method (DEM)

LEVEL: GRADUATE STUDENTS; SPEECH LANGUAGE: ENGLISH

- Course: Numerical Methods in Rock Mechanics and Tunnelling

Graz, Austria

10/2015, 11/2016

Use laboratory data with caution!

LEVEL: GRADUATE STUDENTS; SPEECH LANGUAGE: ENGLISH

- Course: Advanced rock mechanics and tunnelling

Graz, Austria

05/2013

Failure criteria in rock mechanics

LEVEL: UNDERGRADUATE STUDENTS; SPEECH LANGUAGE: GERMAN

- Course: Basics in geotechnics

Graz, Austria

03/2013, 03/2014

Laboratory and in-situ tests in rock mechanics

LEVEL: UNDERGRADUATE STUDENTS; SPEECH LANGUAGE: GERMAN

- Course: Basics in geotechnics

Graz, Austria

03/2013, 03/2014

Rock block kinematics and stability analysis

LEVEL: UNDERGRADUATE STUDENTS; SPEECH LANGUAGE: GERMAN

- Course: Basics in geotechnics (2013–2014), Basics in soil and rock mechanics (2015), Basics in rock mechanics and tunnelling (2016)

Graz, Austria

03/2013–2015, 10/2015–2016

Rock slope analysis with stereographic projection techniques

LEVEL: UNDERGRADUATE STUDENTS; SPEECH LANGUAGE: GERMAN

- Course: Basics in geotechnics

Graz, Austria

03/2013

Stresses and strains in the three-dimensional continuum

LEVEL: UNDERGRADUATE STUDENTS; SPEECH LANGUAGE: GERMAN

- Course: Basics in geotechnics

Graz, Austria

03/2013, 03/2014

UDEC – A really short introduction

LEVEL: GRADUATE STUDENTS; SPEECH LANGUAGE: ENGLISH

- Course: Advanced rock mechanics and tunnelling

Graz, Austria

05/2012

Practical hints for the determination of rock mass types

LEVEL: GRADUATE STUDENTS; SPEECH LANGUAGE: GERMAN

- Course: Rock mechanics and tunnelling

Graz, Austria

05/2012

Supervision of Master's thesis

2022	Back-analysis of rock mass parameters at the Semmering Base Tunnel based on the convergence confinement method , thesis in English	John MARTIN
2022	Definition und Legitimation der Klassifizierung der "Verbandsfestigkeit" im Tunnelbau , thesis in German	Ines METZLER
2022	Ingenieurgeologische Beurteilung einer Steinschlaggefährdung: Am Beispiel von vier Ereignissen im Bezirk Liezen, Steiermark , thesis in German	Jennifer PEINE
2022	Umgang mit einer Steinschlaggefährdung aus geologisch, geotechnischer Sicht: Erhebung Stand der Technik , thesis in German	Patrick ULBL
2018	Analyses of displacement vectors in the "Haltestelle Eichberg" fault zone at the Semmering Base Tunnel , thesis in English	Christopher STROBL
2017	Prediction of Displacements and Shotcrete Lining Utilization – Decision strategy for a timely application of ductile support systems in conventional tunnelling , thesis in English	Manuel ENTPELLNER
2017	Example of a Determination of the in situ Block Size Distribution based on Borehole Loggings and Surface Mappings , thesis in English	Jonathan KERN
2017	Concept and realisation of a distributed fibre-optic sensing system for direct and continuous strain measurement in a shotcrete lining , thesis in English	Lukas WAGNER
2014	Empfehlung zur Dokumentation von ungeplanten Stillständen im maschinellen Tunnelvortrieb , thesis in German	Katharina HOFER
2014	Determination of the in situ Block Size Distribution as a Parameter for the Rock Mass Characterization based on Measurements and Statistical Methods , thesis in English	Peter SÖLLNER
2014	Investigations on telescope yielding elements with porous filling , thesis in English	Marko VERIENT

Extracurricular Projects

FFG Bridge: Charakterisierung und Modellierung von Übergangsgesteinen unter Berücksichtigung von Anisotropie und Quellfähigkeit

PROJECT PARTNERS: AUSTRIAN FEDERAL RAILWAYS

Funding application

Austria

2022

COST Action: Advancing Machine Learning applications in geotechnical engineering

PROJECT PARTNERS: CLASSIFIED

Funding application

Austria

2021

Risk Assessment of Rock Fall along municipal roads and paths in alpine regions in the province of Styria, Austria

PROJECT PARTNERS: INSTITUTE OF CONSTRUCTION MANAGEMENT AND ECONOMICS (TU GRAZ); INSTITUTE OF CIVIL LAW,

FOREIGN PRIVATE LAW AND PRIVATE INTERNATIONAL LAW (UNIVERSITY OF GRAZ); MUNICIPALITY OF SCHLADMING; RML

REGIONALMANAGEMENT BEZIRK LIEZEN GMBH; OFFICE OF THE STYRIAN STATE GOVERNMENT

Project initiation, conceptional design, and setup

Austria

2021

The use of geothermal heat at the underground constructions of the Brenner Base Tunnel (construction lots at the Austrian side)

PROJECT PARTNERS: AIT AUSTRIAN INSTITUTE OF TECHNOLOGY; BRENNER BASISTUNNEL BBT SE; GEOLOGICAL SURVEY OF

AUSTRIA; INNSBRUCKER KOMMUNALBETRIEBE AG; UNIVERSITY OF NATURAL RESOURCES AND LIFE SCIENCES VIENNA

Project initiation, conceptional design, and setup

Austria

2019

Installation of a Distributed Fibre Optic Sensing (DFOS) system in the shotcrete liner at the monitoring cross-section at the Semmering Base Tunnel, construction lot SBT 1.1

PROJECT PARTNERS: AUSTRIAN FEDERAL RAILWAYS; CONSTRUCTION JOINT VENTURE SBT 1.1 TUNNEL GLOGGNITZ (IMPLENIA

ÖSTERREICH, HOCHTIEF INFRASTRUCTURE AUSTRIA, THYSSEN SCHACHTBAU); GEOTECHNICAL TEAM UNDERGROUND (AMBERG

ENGINEERING AG, IC CONSULTENTEN ZT GMBH); INSTITUTE OF ENGINEERING GEODESY AND MEASUREMENT SYSTEMS (TU

GRAZ)

Project implementation

Austria

2016

Numerical feasibility study of a continuous excavation of a tunnel through a fault zone

CLIENT: 3G GRUPPE GEOTECHNIK GRAZ ZT GMBH

Project implementation

Austria

2016

Numerical stability analysis of an underground structure for emergency stops

CLIENT: AMBERG ENGINEERING AG

Project implementation

Austria

2015

Numerical back-calculation of a tunnel collapse to determine characteristic ground parameters

CLIENT: 3G GRUPPE GEOTECHNIK GRAZ ZT GMBH

Project implementation

Austria

2014

Numerical stability analysis of an underground shaft head cavern

CLIENT: AMBERG ENGINEERING AG

Project implementation

Austria

2014

Numerical stability analysis of an underground cavern and tunnel system

CLIENT: AMBERG ENGINEERING AG

Project implementation

India

2013

Software used

Coding	GNU R, MATLAB (MathWorks), Microsoft Visual Basic, Python
Numerical analysis 2D	RS2 (roscience), UDEC (Itasca), PLAXIS 2D
Numerical analysis 3D	RS3 (roscience), 3DEC (Itasca), FLAC3D (Itasca), Simulia Abaqus (Dassault Systèmes), SOFISTIK, PLAXIS 3D
Structural analysis	RSTAB (Dlubal), GGU-Stability, GGU-Retain
Desktop publishing software	Microsoft Office, LibreOffice, Scribus, Adobe FrameMaker, Adobe InDesign
Electronic typesetting software	LaTeX
Graphic software	CorelDraw, Inkscape, GNU GIMP, Adobe Illustrator
CAD software	AutoDesk AutoCAD, cadwork, qcad
Languages	German (first language), English

Editorial services

Proceedings of the ISRM 15th International Congress on Rock Mechanics and Rock Engineering and 72nd Geomechanics Colloquium – Challenges in Rock Mechanics and Rock Engineering

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2023

- Publisher: Austria Society for Geomechanics
- pp. 3063, 503 contributions, ISBN: 978-3-9503898-3-8

Proceedings of the Symposium on Rock Fall (Steinschlagsymposium): STEINSCHLAG: Risikoeinschätzung und Maßnahmen aus Sicht kommunaler Verantwortlicher

Schladming, Austria

EDITOR: MARCHER, T., KIENREICH, R. AND KLUCKNER, A.

12/2022

- Publisher: Institute of Rock Mechanics and Tunnelling, Graz University of Technology
- pp. 134, 12 contributions

Proceedings of the Workshop ”Handling of risks in geotechnical engineering”

Salzburg, Austria

EDITOR: GORICKI, A. AND KLUCKNER, A.

10/2017

- Publisher: Austria Society for Geomechanics
- pp. 44, 8 contributions
- Workshop in the course of the 68th Geomechanics Colloquium

Proceedings of the Workshop ”Grouting”

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2017

- Publisher: Austria Society for Geomechanics
- pp. 60, 8 contributions
- Workshop in the course of the 66th Geomechanics Colloquium

Proceedings of the Workshop ”Rock Mechanics in Eurocode 7”

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2017

- Publisher: Austria Society for Geomechanics
- pp. 40, 5 contributions
- Workshop in the course of the 66th Geomechanics Colloquium

Proceedings of the Workshop ”Tunnelling in Fault Zones – A Challenge”

Graz, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

11/2016

- Publisher: Institute of Rock Mechanics and Tunnelling, Graz University of Technology
- pp. 75, 6 contributions

Proceedings of the ISRM Regional Symposium EUROCK 2015 and 64th Geomechanics Colloquium – Future Development of Rock Mechanics

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2015

- Publisher: Austria Society for Geomechanics
- pp. 1212, 192 contributions, ISBN: 978-3-9503898-1-4

Proceedings of the Workshop ”Contractual Models”

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2015

- Publisher: Austria Society for Geomechanics
- pp. 98, 4 contributions + supplementary material
- Workshop in the course of EUROCK 2015

Proceedings of the Workshop ”Digital Ground Mapping”

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2015

- Publisher: Austria Society for Geomechanics
- pp. 148, 4 contributions + supplementary material
- Workshop in the course of EUROCK 2015

Proceedings of the Workshop ”Design Practices for the 21st Century”

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2015

- Publisher: Austria Society for Geomechanics
- pp. 51, 6 contributions
- Workshop in the course of EUROCK 2015

Proceedings of the Workshop ”Rock Fracture Modelling using FDEM”

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2015

- Publisher: Austria Society for Geomechanics
- pp. 180, supplementary material only
- Workshop in the course of EUROCK 2015

Proceedings of the Workshop "Grouting"

Salzburg, Austria

EDITOR: SCHUBERT, W. AND KLUCKNER, A.

10/2015

- Publisher: Austria Society for Geomechanics
- pp. 96, 10 contributions
- Workshop in the course of EUROCK 2015

Proceedings of the Conference on Southern Austrian Railway Projects

Graz, Austria

EDITOR: SCHUBERT, W., PILGERSTORFER, T., KLUCKNER, A. AND WIESER, P.

12/2011

- Publisher: Institute of Rock Mechanics and Tunnelling, Graz University of Technology
- pp. 118, 14 contributions

Event Management

CONFERENCES

2023	15th ISRM Congress 2023 and 72nd Geomechanics Colloquium incl. Workshops , 7 days, approx. 1,500 participants	Salzburg, Austria
2010–2024	Geomechanics Colloquium and (Austrian Tunnel Day or Workshops) , 4 days (3 conference days, 1 field trip day), approx. 1,000 participants	Salzburg, Austria
2015	ISRM Regional Symposium EUROCK 2015 and 64th Geomechanics Colloquium incl. Workshops , 4 days (3 conference days, 1 field trip day), approx. 1,250 participants, peer-reviewed proceedings	Salzburg, Austria
2011	Conference on Southern Austrian Railway Projects , 2 days (1 conference day, 1 field trip day), approx. 300 participants	Graz, Austria

WORKSHOPS

2021	Workshop Series: Risk Assessment of Waterways: WS 2 , 2 days; lecturers from TU Graz, University of Bundeswehr Munich, Riskconsult GmbH, and UHG Consult Ziviltechniker; participants from Malaysian university, Malaysian energy company, Malaysian National Committee on Large Dams, and Geological Society of Malaysia	Graz, Austria; online
2021	Workshop Series: Risk Assessment of Waterways: WS 1 , 2 days; lecturers from TU Graz, Amberg Engineering AG, and Amberg Technologies AG; participants from Malaysian university and Malaysian energy company	Graz, Austria; online
2020	Short Course Series: CET State of the Art (Central European Tunnelling): Course 1: Geomechanical design principles for tunnels , 1 day; lecturers from TU Graz; participants from Mosproekt Group of Companies (Russia)	Graz, Austria; online
2020	Workshop Series: Advances in geotechnical engineering: WS 1: CPT , 1 day; lecturers and participants from TU Graz and Norwegian Geotechnical Institute	Graz, Austria; online
2016	Tunnelling in Fault Zones – A Challenge , 1 day, approx. 125 participants	Graz, Austria
2012	Design of Support Measures in Tunnelling , 1 day, approx. 80 participants	Graz, Austria
2011	Characterisation and Analysis of Blocky Rock Masses , 1 day, approx. 70 participants	Graz, Austria
2010	Tunnels in Weak Ground , 1 day, approx. 50 participants	Graz, Austria