

Swiss Tunnel Congress 2014 Lucerne Culture and Convention Centre

Programme

Swiss Tunnel Colloquium: Wednesday, 11 June 2014

Swiss Tunnel Congress: Thursday, 12 June 2014

Excursions: Friday, 13 June 2014

Translation from French and English to German (only 12.6)
Translation from German to English (11.6 and 12.6)

Simultaneous translation from German to French (only 12.6)

Swiss Tunnel Congress 2014

The Swiss Tunnelling Society (STS) hosts the annual Swiss Tunnel Congress (STC) in the Lucerne Culture and Convention Centre (KKL Lucerne). In recent years this congress, which originally developed from the AlpTransit Conferences, has become a leading event for tunnelling engineers.

Over the previous year's 800 participants from 14 countries attended the congress. The congress includes high level presentations and the traditional excursions to major construction sites in Switzerland.

STC 2014 is organised by the Steering Committee of the Swiss Tunnelling Society:

Martin Bosshard, Dipl. Ing.
 Luzi R. Gruber, Dipl. Ing.
 Gian Luca Lardi, Dipl. Ing.
 Georg Anagnostou, Prof. Dr.
 François Bertholet, Dipl. Ing.
 President STS
 Vice-President STS
 Swiss Tunnel Congress
 Swiss Tunnel Colloquium
 Swiss Tunnel Colloquium

Advisory Board

The Advisory Board has selected interesting projects and suggested to invite top-quality speakers from abroad. It endeavours to maintain a high quality of presentation.

The Advisory Board comprises the following members:

- Miguel Fernández-Bollo Martinez, AETOS
- Robert Galler, Prof. Dr., ITA Austria
- Roland Leucker, Dr., STUVA/DAUB
- Jean Philippe, AFTES



A Warm Welcome



The Swiss Tunnelling Society (STS), welcomes you to this year's Swiss Tunnel Congress 2014 (STC) held once again at the Culture and Convention Centre (KKL) Lucerne.

The STC conducted by the STS will take place from 11 to 13 June 2014; the STC has grown in recent years and now welcomes about 800 participants.

The STC has become the most important Swiss platform for topics around tunnel construction and offers owners, consulting

engineers, contractors, suppliers and entrepreneurs the extraordinary opportunity to view developments in chosen tunnel projects in Switzerland and abroad in the form of lectures, through personal contacts or via interesting excursions to various sites to complete the extensive programme.

The Congress is opened by Mr. Markus Geyer, Director of Projects and Executive Member of the SBB (Swiss Federal Railways) infrastructure, with a lecture titled «tunnels as a challenge for the SBB», which wins even more importance with the recent very positive result on rail transport finance (FABI) and the virtually simultaneous opening of the new Zurich Cross Rail Tunnel.

The Colloquium is dedicated this year to the theme of «anchorage in tunnelling focusing on face anchors». A special treat is certainly the comparison between the design philosophy and implementation experience in the countries of Italy, France and Switzerland.

The day of presentations, held this year in the KKL concert hall, deals in the morning with Swiss projects, renovation, new tunnelling, case histories of railway, road and caverns. The afternoon is then devoted to foreign projects. As usual with the STC, there are hand-picked pearls of tunnelling, mostly involving Swiss know-how.

For the STC 2014, we have some innovations to make congress and exhibition even more attractive: the whole KKL is available to the STC, the presentations at the congress have a new venue in the concert hall and stands for the exhibition have a much greater area on the ground floor utilising the Luzerner Foyer and Hall facilities.

I welcome you to Lucerne and hope you enjoy the conference.

Swiss Tunnelling Society

M. Luliad

Martin Bosshard, President

Swiss Tunnel Colloquium 2014

Face anchors provide in many cases an extremely effective means of controlling the face and often allow the excavation of even larger cross sections. On the other hand, the use of anchors in the working face area due to the mutual interference with the tunnelling operation is time-consuming and costly. Careful planning taking into account the geotechnical, technical performance and material-technology as well as adequate contractual arrangements are very important. In this year's Colloquium, speakers from academia, planning, execution and industry will report on these aspects. The Colloquium is aimed both at students and young engineers as well as experienced practitioners.

12.00	Registration in Conference Secretariat
	(in the Foyer of the Conference Room)

13.00 Welcome by the Chairmans of the Colloquium

Georg Anagnostou, Prof. Dr.

Institute of Geotechnical Engineering, ETH Hönggerberg, Zurich

François Bertholet, Dipl. Bau-Ing. HTL Marti Tunnelbau AG, Moosseedorf

ANCHORING IN TUNNEL CONSTRUCTION FOCUS ON FACE ANCHORS

13.05 Static functioning and design of face anchors

Marco Ramoni, Dr. sc. Dipl. Bau-Ing. ETH/SIA

Basler & Hofmann AG, Zürich

Georg Anagnostou, Prof. Dr.

Institute of Geotechnical Engineering, ETH Hönggerberg, Zurich

13.50 Face Reinforcement – Execution Aspects

and Experiences from Italy

Daniele Peila, Prof. Dr. Politecnico di Torino (IT)

14.35 Anchoring in Tunnel construction –

the available methods

Alberto Belloli, Dr. sc. Dipl. Masch-Ing. ETH

Belloli SA, Grono

15.00-15.30 Coffee break

15.30 Anchors in squeezing rock (Tavetscher intermediate







Colloquium Programme, 11 June 2014

		massif North) – the designer's view
(36)		Andreas Theiler, Dipl. Bau-Ing. ETH/SIA Lombardi AG, Luzern
	15.45	Anchors in squeezing rock (Tavetscher inter- mediate massif North) – the contractor's view
		Benno Schwegler, Dipl. Bau-Ing. ETH/SIA Kraftwerke Oberhasli AG, Innertkirchen
	16.00	Soutènement du front par ancrage
		Expériences de la pratique
		Gilles Lequertier, Ingénieur Ecole Centrale Paris Infra Tunnel SA, Marin
36		
9	16.15	Securing the working face during full excavation in loose rock, the tunnel bypass's Bazenheid and Visp
		Simon Tanner, Dipl. Bau-Ing. ETH/SIA Rothpletz, Lienhard + Cie AG, Olten
	16.30	Long face anchors in loose rock Experience from the Tunnel de Court
		Simon Bertholet, Dipl. Bau-Ing. ETH Marti Tunnelbau AG, Moosseedorf
	16.45	Glass Fiber for Underground Projects Recent Applications
		Emanuele Natoli, BSc Geol. UNIMI Sireg S.p.A., Milano (IT)
	17.00	Closing remarks followed by aperitif in the exhibition hall

Swiss Tunnel Congress 2014

08.30 Registration in Conference Secretariat (in the Foyer of the Conference Room)

08.30 Welcome coffee

INTRODUCTION

09.30 Official opening and welcome

Martin Bosshard, Dipl. Bau-Ing. ETH/SIA

President, Swiss Tunnelling Society

09.40 Tunnels as a challenge for the SBB

Markus Geyer, Director of Projects and Executive Member of the SBB infrastructure Bern (Swiss Federal Railways)

Chairman of the Morning Session

Gian Luca Lardi, Dipl. Bau-Ing. ETH/SIA, Member of the Executive Board STS

MORNING LECTURES

10.00 Simplon tunnel, safety measures and repair of a 100-year-old tunnel

Werner Kradolfer, Dipl. Bau-Ing. ETH/SIA

Rothpletz, Lienhard + Cie AG, Olten

10.20 Galgenbucktunnel

Tunnel construction in an urban environment

Erich Suter, Dipl. Bau-Ing. HTL Implenia Schweiz AG, Wallisellen

10.40 - 11.10 Coffee break







Congress Programme, 12 June 2014



A STATE OF THE PARTY OF THE PAR		
	11.10	Tunnel Rosshäusern The challenge and first experiences
0.00		Stefan Müller, Dipl. Bau-Ing. HTL
		Frutiger AG, Thun
	11.30	Logistics shaft in Sedrun
		The key to success!
		Markus Keller, Dipl. Bau-Ing. ETH
rect		Implenia Schweiz AG, Wallisellen
	11.50	Tunnel Riedberg
		Its colourful past!
		Martin Hutter, Dipl. Baumeister
		Chief of the Office of National Roads of Canton Valais, Glis
	12.10	Excavating the large caverns of Nant-de-Drance,
		a success story
TIL AND THE STATE OF THE STATE		Etienne Garin, Dipl. Bau-Ing. ETH/SIA
		BG Beratende Ingenieure, Lausanne
	12.30	Roveredo by-pass
		Tunnel San Fedele
		Nicolas Pagani, Dipl. Bau-Ing EPFL/SIA
The state of the s		CSC Bauunternehmung AG, Lugano
A. A.	12.50	Discussion
and the same of th	13.00 – 14.30	Lunch in the Lucerne Culture and
		Convention Centre
-		

Swiss Tunnel Congress 2014

Chairman of the Afternoon Session

Stefan Maurhofer, Dipl. Bau-Ing. FH, Member of the Executive Board STS

AFTERNOON LECTURES

14.30 Le nouvel aménagement hydroélectrique de Romanche-Gavet (FR)

Paul Gaudron, Ingénieur génie-civil

EDF-DPIH-Centre d'Ingénierie Hydraulique, Livet et Gavet (FR)

14.50 Koralmtunnel (AT) Logistically complex construction management of the major construction lot KAT2 in the stressfield of the building contract

Wolfgang Lehner, Ing.

STRABAG AG, Wien (AT)

15.10 Tunnel Sants – La Sagrera, Barcelona (ES)
Undercrossing Gaudi's Sagrada Familia

Eduardo Alonso, Prof.

Universitat Politècnica de Catalunya, Barcelona (ES)

15.30 Semmering Basistunnel new (AT)

The Project

Franz Bauer, Dipl.-Ing.

ÖBB-Infrastruktur AG, Wien (AT)

15.50 - 16.10 Coffee break







Congress Programme, 12 June 2014



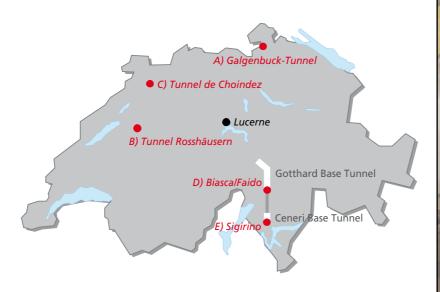
		16.10	U5-Berlin (DE) – Construction of an underground railway under geotechnically sophisticated boundary conditions Paul Erdmann, DiplIng. Amberg Engineering AG, Regensdorf
		16.30	Lake Mead Intake Tunnel No. 3 (US) A step beyond the limits Antonio Nicola, Dott. Ing., MSc Salini-Impregilo S.p.A., Milano (IT)
6		16.50	Istanbul Strait Road Tunnel (TR) Project challenges and TBM solutions Werner Burger, DiplIng.
		17.10	Herrenknecht AG, Schwanau (DE) Solbakk-Tunnel (NO) Longest fjord crossing under construction Andreas Reber, Dipl. Bau-Ing. FH
		17.30	Marti Tunnelbau AG, Moosseedorf Discussion
	6	17.50	Closing remarks Martin Bosshard, Dipl. Bau-Ing. ETH/SIA
		18.00	President, Swiss Tunnelling Society Followed by aperitif at the Lucerne Culture and Convention Centre

Swiss Tunnel Excursions 2014

The Swiss Tunnelling Society organises annually the Swiss Tunnel Congress held in the Lucerne Culture and Convention Centre, with excursions on the following day. This year's excursions, lead to the construction sites Galgenbuck Tunnel, Tunnel Rosshäusern, Tunnel de Choindez and the projects of the Alp Transit

This year the participants can choose from the following five excursions:

- A) Galgenbuck-Tunnel (SH)
- B) Tunnel Rosshäusern (BE)
- C) Tunnel de Choindez (JU)
- D) AlpTransit Gotthard Rail Technology Biasca/Faido (TI)
- E) AlpTransit Ceneri Base Tunnel Sigirino (TI)





The municipality Neuhausen Rhine Falls is heavily overloaded by traffic and must be relieved. The Galgenbuck tunnel as a two-lane road tunnel solves this problem. The construction is carried out through highly changeable geology. This excursion allows an inspection at the face of the work to the main drive.

07.40 Meeting at car park Inseli (behind KKL Luzern)

07.45 Departure from Lucerne (Bus)

09.30 Arrival Engi Galgenbuck tunnel

- Presentation of the project

- Tour of the site (in groups)

11.30 Lunch

13.30 Return to Lucerne (Bus)

15.15 Arrival in Lucerne

- Jackets and helmets provided. Shoes or boots suitable for construction site are adequate for the visit.
- There is no parking facility. Journey is only possible with the bus.
- The number of participants is limited.





B) Tunnel Rosshäusern (BE)

The tunnel site Rosshäusern offers exciting and interesting aspects for a site visit. For one, the aggregates are prepared on site and subsequently processed using an on-site plant for spray and in-situ concrete. Additionally, the tunnel is driven by means of blasting with top heading, bench and invert. Along with this, depending on geological conditions, zones are managed using tunnel screens.

07.25 N	Meeting time at car	park Inseli	(behind KKL Luzern)
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- 07.30 Departure from Lucerne (Bus)
- 09.30 Arrival installation area, tunnel Rosshäusern, lot 4.0
 - Welcome with coffee and croissants
 - Presentation of the project
- 10.20 Division into groups, equipment with protective clothing
- 10.30 Tour of the site
 - Installation area
 - Drilling and blasting in the tunnel
 - Portal cut West and East
- 12.00 Lunch
- 14.00 Return to Lucerne (Bus)
- 16.00 Arrival in Lucerne
- Jackets and helmets provided. Shoes or boots suitable for construction site are adequate for the visit.
- The number of participants is limited.







With its 3,288 meters, the Tunnel de Choindez is the third longest tunnel on the A16. It was the last tunnel to be built in the canton of Jura. The alternating limestone and marl layers and the long loose rock stretch in the northern sector were driven with different methods and by repeated switching of the tunneling method. With the timely break through on 8 April 2013 an important milestone was reached. At present, the no less complex interior work can be seen with the breakout, sealing and concreting of base invert, laying and filling of prefabricated elements, the concreting of the arch and the false ceiling and the creation of the side banquets. Additionally the construction of the 460 m long north cut and cover section and the underground ventilation cavern to the south.

07.00	Meeting at car park Inseli (behind KKL Luzern)
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07.05	Departure	Lucerne	(Bus)
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- 09.00 Arrival installation site north, Info Pavilion A16
- 09.10 Presentation of the project in the information pavilion A16
- 10.10 Coffee break in the canteen
- 10.30 Division into groups, equipment with protective clothing
- 10.40 Site visit in groups.
 - Installation site north
 - Cut and cover north
 - Interior fitting out Tunnel north
 - Ventilation cavern south
- 13.00 Lunch in the cafeteria
- 14.30 Return journey
- 16.30 Arrival in Lucerne
- Jackets and helmets provided. Shoes or boots suitable for construction site are adequate for the visit.
- The number of participants is limited.







D) AlpTransit Gotthard Rail Technology South – Biasca/Faido (TI)

In the West tunnel of the Gotthard Base Tunnel, between Biasca and Faido, all railway installations such as track, catenary, power, telecommunications and security systems are installed. 2016, the Gotthard Base Tunnel will be ready for the timetabled train operation.

After entering the tunnel sections of the railway, installations, crossings and the Faido multifunction station can be visited as part of the excursion.

- 07.25 Meeting at car park Inseli (behind KKL Luzern)
- 07.30 Departure Lucerne (Bus)
- 09.15 Arrival Info centre Pollegio. Coffee and croissant
- 09.30 Transfer to the installation site Biasca
 - Equipped with protective clothing
 - Entrance in the tunnel by train (west tunnel)
 - Visit crossway
 - Continue until the end of the test track
 - Walk to Faido multifunction station
 - Exit with the bus
- 13.00 Lunch at Faido
- 14.45 Return by bus to Lucerne
- 16.30 Arrival at car park Inseli (behind KKL Luzern)
- Jackets and helmets provided. Shoes or boots suitable for construction site are adequate for the visit.
- For motorists, at the information point only a limited number of parking spaces are available. It is the recommended to travel by bus.
- The number of participants is limited.







E) AlpTransit Ceneri Basistunnel - Sigirino (TI)

Tour of the installation above and below ground, in particular material management and disposal. From the intermediate station Sigirino you drive with a minibus in the tunnels and explore on foot one of the four main headings. Divided into two groups, this is followed by a visit to the construction sites in the portal area North (Camorino / Vigana) or South (Vezia). With a length of 15.4 km between the North portal Vigana at Camorino and the South portal at Vezia the Ceneri base tunnel is the second largest tunnel project, after the Gotthard Base Tunnel, in Switzerland.

- 07.10 Meeting at car park Inseli (behind KKL Lucerne)
- 07.15 Departure Lucerne (Bus)
- 09.30 Arrival at the ATG site in Sigirino
 - 2 groups, (25 people) by minibus.
 - Project presentation / progress of work
 - Tour of the installation
 - Entry through the 2.3 km long access tunnel and tour of the underground site (intermediate station Sigirino)
- 12.00 Lunch in the canteen of the construction site in the village Sigirino
- 13.30 Departure by minibus to the portal construction site Camorino / Vigana or Vezia
- 13.45 Arrival construction site Camorino / Vigana or Vezia then return to Sigirino by minibus
- 14.45 Return to Lucerne, tranport at Bellinzona railway station, if required
- 17.00 Arrival at carpark Inseli (behind KKL Luzern)
- Jackets and helmets provided. Shoes or boots suitable for construction site are adequate for the visit.
- For motorists, at the information point there are only a limited number parking spaces are available. It is recommended to travel by bus.
- The number of participants is limited.



Programme Swiss Tunnel Congress 2014



Evening Event, 12 June 2014



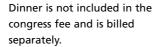
After the presentations the Swiss Tunnelling Society is offering an aperitif in the Foyer of the Lucerne Culture and Convention Centre.





Later, in the banqueting hall of the first class Hotel Schweizerhof ***** you can indulge yourself with some culinary delights.

Opening time 19.45 h Dinner 20.00 h



Costs per person CHF 130.–/ EUR 110.– (incl. 8% VAT), drinks included.



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ARGE Tunnel Weinberg, Zürich-Oerlikon (Implenia, Wayss&Freytag, Bilfinger Construction, PraderLosinger)



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Organisation



Closing date for registration: Friday, 30 April 2014

Please use the enclosed registration form or register online at www.swisstunnel.ch

Your registration is considered to be definite after receipt of your payment by the Swiss Tunnelling Society:

CREDIT SUISSE Baden, Clearing No: 4050, Swift Code: CRESCH ZZ 54 A

Payment in Swiss Francs Account No: 820321-21

IBAN: CH18 0483 5082 0321 2100 0

Payment in Euro

Account No: 820321-22

IBAN: CH81 0483 5082 0321 2200 0

At the beginning of June you will receive the congress documentation as well as confirmation in the form of an invoice (receipt supplied for VAT purposes).

Preliminary Announcement of Swiss Tunnel Congress 2015

The Swiss Tunnel Congress will be held next year from 10 to the 12 June 2015 in the KKI Lucerne.

Main Sponsors



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Organisation



Fees for Participants Swiss Tunnel Congress 2014

Lectures, Excursion, Proceedings

STS Member	CHF 560	EUR 460
Non-member	CHF 620	EUR 510
Student	CHF 250	EUR 210

Colloquium, Proceedings

STS Member	CHF 175	EUR 145
Non-member	CHF 200	EUR 165
Student	CHF 60	EUR 50

Dinner (drinks included) CHF 130.- EUR 110.-

Excursion, Proceedings

One excursion CHF 250.- EUR 210.-

All prices include 8% VAT

All participants will receive the proceedings at the Swiss Tunnel Congress. The book can be obtained with the supplied voucher at the Conference Secretariat in the Lucerne Culture and Convention Centre. Participants who only take part in an excursion will receive the proceedings using the voucher when they enter the bus.

Cancellation conditions

- In the case of cancellation after the closing registration date and up to one week before the Congress, 50% of the costs will be refunded and the congress proceedings will be sent to you.
- In the case of cancellation within the last week before the Swiss Tunnel Congress, the full payment of the congress fee will be charged and the congress proceedings will be sent to you. Alternatively, you may nominate another person to take your place.

Main Sponsors



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Consorzio TAT, Los 554 Bodio/Los 452 Faido (Implenia, Renaissance Construction, CSC, Hochtief, Salini Impregilo)



CSC Impresa Costruzioni SA, Lugano



EDY TOSCANO AG, Zürich



Emch+Berger AG, Bern

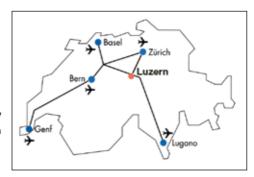


Fischer Rista AG, Reinach

Directions



- From Zurich Airport by train in 1¼ h
- From Geneva Airport by train in 3 h
- The Lucerne Culture and Convention Centre (KKL) is in the immediate vicinity of the Main Railway Station in Lucerne.



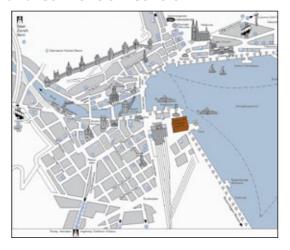
By car

Parking is available in the vicinity of the Lucerne Culture and Convention Centre in several multi-storey car parks.

Lucerne Culture and Convention Centre

PO Box 3570 6002 Lucerne Tel. +41 41 226 70 70 Fax +41 41 226 70 71 www.kkl-luzern.ch

Europaplatz 1



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Hotel Reservation



You can make reservations via: www.luzern.com/de/hotel-unterkunft

Accommodation is not included in the conference package.

Rail connections to Lucerne

	departure	arrival in Lucerne
Aarau	8.14	9.05
Basel	8.04	9.05
Bellinzona	6.36	8.41
Bern	8.00	9.00
Brig	6.49	9.00
Chur	7.16	9.25
Genf	6.11	9.00
Lausanne	6.47	9.00
Locarno	6.04	8.41
Sion	6.25	9.00
St. Gallen	7.05	9.20
Zürich HB	8.04	8.49
ZRH Airport	8.13	9.25

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Application	for Mem	bership d	of STS
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lembership fee	incl. VAT p.a.	
Single Member	CHF 50 /EUR 45	
Collective Member	CHF 500 /EUR 450	
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Senior (pentioners)	CHF 50 /EUR 45	
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Saint-Gobain Weber AG, Baden-Dättwil

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SIREG, I-Arcore (Milano)

Solexperts AG, Mönchaltorf

STS Conference Secretariat

Registration and Information:

Thomi Bräm PR-Beratung + Verlag Felsenstrasse 11

CH-5400 Baden

Tel. +41 56 200 23 33 Fax +41 56 200 23 34 e-mail fgu@thomibraem.ch

Conference Hotline: +41 79 411 73 46 (11.-13.6.2014 only)

Hotel Reservations:

The booking of rooms is the responsibility of participants.

Accommodation is not included in the conference package.

You can make reservations via: www.luzern.com/de/hotel-unterkunft



FGU Fachgruppe für Untertagbau

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