



ISRM

50TH  
ANNIVERSARY

**EUROCK 2012**  
**ISRM International Symposium**  
**28-30 May 2012**  
**Stockholm, Sweden**

# **Rock Engineering & Technology for Sustainable Underground Construction**



Organised by Swedish National Group of ISRM &  
BeFo – Swedish Rock Engineering Research Foundation



## EUROCK2012 SPONSORS

### PREMIUM SPONSOR:



### GOLD SPONSOR:



Svensk Kärnbränslehantering AB

### SILVER SPONSOR:



## WELCOME TO EUROCK 2012 IN STOCKHOLM

The Swedish National Group of ISRM, together with the Swedish Rock Engineering Foundation BeFo, is pleased to invite you to Stockholm and the EUROCK 2012 International Symposium "Rock Engineering and Technology for Sustainable Underground Construction". The event will also mark the 50th anniversary of the ISRM.

The Symposium will be held at the Elite Hotel Marina Tower in Stockholm, 26-31 May 2012. Stockholm is one of the most beautiful cities in Europe, and is situated on 14 islands in an archipelago comprising no less than 24,000 islands and islets. The city offers wonderful opportunities for sightseeing, either on foot or by boat around the centre, or further afield.

As part of EUROCK 2012, unforgettable excursions will be arranged in Stockholm and the surrounding area, and also to other parts of Sweden – Norrbotten, Dannemora and Äspö. Also included in the Symposium programme is a Gala Dinner at the Vasa Museum.

*Mikael Hellsten, Chairman Organizing Committee*





## REGISTRATION & FEES

Online registration will be opened on the Symposium website from 15 November 2011. For payment procedure, please check the website.

	ISRM member	Non-member	Student	Accompanying person	Workshop May 28
Delegates /Authors	6, 400 SEK	8, 000 SEK	3, 200 SEK	Fee according to chosen activities (pls look for Accompanying Persons Programme on the website)	1, 000 SEK

## SYMPOSIUM VENUE

The Elite Hotel Marina Tower is a large, ultra-modern conference centre at the finest location in Stockholm. From the hotel's beautiful and harmonic waterside location, the city centre is easily accessible by boat, the Saltsjöbanan rail line and bus, or why not stroll along the waterfront into the city centre.



## ACCOMMODATION

Elite Hotel Marina Tower offers 186 tastefully decorated rooms and suites, with contemporary furnishings, wooden floors and flat-screen cable TVs. Free wi-fi and spa are available to all guests. From the hotel's terrace there is a magnificent view of the bay and Djurgården Island. Stockholm city centre is a 10-minute bus ride away and there is a bus stop just 50 metres from the hotel. The vibrant Södermalm district is a 5-minute walk away.

Other hotels in Stockholm offer accommodation during the Symposium, and these are listed on the symposium website [www.eurock2012.com](http://www.eurock2012.com)

## TRAVEL ARRANGEMENTS

Participants requiring a visa to Sweden should contact the Organiser for a letter of invitation. Swedish currency is called the krona (SEK). More information about travel to Stockholm can be found at [www.eurock2012.com](http://www.eurock2012.com)



Thursday May 24	Friday May 25	Saturday May 26	Sunday May 27	Monday May 28	Tuesday May 29	Wednesday May 30	Thursday May 31
Field Trip	Field Trip	ISRM Board	Comission meetings	Comission meetings	Opening Ceremony	Keynote lecture 3	Technical Tours
		LUNCH	LUNCH	LUNCH	Keynote lecture 1	Keynote lecture 4	
					Keynote lecture 2		
					Technical Sessions	Technical Sessions	
		ISRM Board	ISRM Council	Technical Sessions	Technical Sessions	Technical Sessions	
			Workshop	Special theme Business Workshop - Going Underground	Technical Sessions	Poster Sessions	
			Workshop		Technical Sessions	Technical Sessions	
			Separate registration & fee		Technical Sessions	Technical Sessions	
				European Council Meeting			
			Welcome reception 19.30-22.00		19.30 Banquet Dinner Vasa Museum		

## SYMPOSIUM THEMES:

- Design Methods
- Laboratory Testing
- Material Models
- Rock Excavation
- Rock Support
- Mining Rock Mechanics
- Environmental Aspects
- Site Characterisation
- Geohydrology & Grouting
- Maintenance, LCC & Risk Management

## KEYNOTE PRESENTERS:

**Dr. Johan Andersson**, JA Streamflow AB, Sweden - Geological Site Characterisation  
**Dr. Robert Sturk**, Skanska-Vinci, Sweden – Environmental Aspects  
**Prof. Håkan Stille**, Royal Institute of Technology, Sweden – Rock Grouting  
**Prof. Roger Flanagan**, School of Construction Management and Engineering University of Reading, UK – Risk Management

## EUROCK AWARD

Eurock 2012 will continue the tradition started at Eurock 2010 in Lausanne, Switzerland, by awarding a prize, the Eurock Award for “Best Paper by Young Scientist and Engineer”. The nominees will be selected by an Award Committee, and the winner will receive the prize in recognition of an outstanding paper on rock mechanics and rock engineering presented at the Eurock symposium.





## SYMPOSIUM WORKSHOPS:

### DESIGN STANDARD PRACTICE

– 27 May 2012

Chair: Wulff Schubert, Graz University, Austria & Håkan Stille, Royal Institute of Technology, Stockholm, Sweden.

The objective is to discuss the experience of verification of rock mechanical design by calculations, adaptation of prescript measures and observation methods according to the new Eurocode for future development and implementation.

**Registration through**  
**[www.eurock2012.com](http://www.eurock2012.com).**

### ROCK MECHANICS IN DEEP UNDERGROUND EXCAVATION

– 27 May 2012

Chair: Rolf Christiansson, Swedish Nuclear Fuel and Waste Management (SKB), Sweden and Derek Martin, University of Alberta, Canada.

The objective is to help identify the rock mechanics design issues for excavations at depth, compared to the design requirements for shallow excavations (typically

infrastructure tunnels). Focus for the panel discussion will be on the experiences of the application of index methods (e.g. GSI, Q, RMR) for deep excavations.

**Registration through**  
**[www.eurock2012.com](http://www.eurock2012.com).**

### SPECIAL WORKSHOP: GOING UNDERGROUND

– 28 May 2012

The workshop will open with presentations from leading debaters from politics, business and economic development, infrastructure clients and rock engineering. The individual presentations will be followed by an internal discussion. Journalists and members of the audience will be invited to ask questions.

This workshop welcomes Symposium delegates as part of the Eurock 2012 programme. It is also available as a stand-alone event for those who would like to attend only this workshop.

**Registration through**  
**[www.eurock2012.com](http://www.eurock2012.com).**

## SOCIAL PROGRAMME

### WELCOME RECEPTION

– Sunday 27 May

On the evening of 27 May we invite all delegates to a 'mingle' event, where drinks and snacks will be served in the hotel lobby, to the accompaniment of live music.

**Registration through [www.eurock2012.com](http://www.eurock2012.com).**

### GALA DINNER

– 29 May

All symposium and workshop participants and accompanying persons are invited to the Gala Dinner at the Vasa Museum. Before dinner, guests will be given a guided tour of the museum where they will hear the remarkable story of the Vasa warship, built in 1627.

**Registration through**  
**[www.eurock2012.com](http://www.eurock2012.com).**



## ACCOMPANYING PERSONS PROGRAMME

Various half-day and longer tours in the Stockholm area will be available. Accompanying persons will also be able to register for all technical tours, the Welcome Reception event and the Gala Dinner.

**Guests can register for tours and events through the symposium website.**





## PRE-SYMPOSIUM TOUR:

### FIELD TRIP TO NORTHERN SWEDEN

– 24-25 May 2012

A field trip for 50 participants to Gällivare and the Boliden Aitik Mine, visiting Malmberget and Dundret. LKAB will be hosting a dinner in Kiruna on the Thursday evening. On Friday morning we will enjoy a guided tour through the Kiruna mine, followed by lunch and a visit to the Esrange Space Center in the afternoon, before returning to Stockholm on Friday evening.

**Registration through [www.eurock2012.com](http://www.eurock2012.com).**

## POST-SYMPOSIUM TECHNICAL TOURS:

### THE ÄSPÖ HARD ROCK LABORATORY (HRL)

– 31 May 2012

Much of the research on the final repository for spent nuclear fuel is carried out at the Swedish Nuclear Fuel and Waste Management Company's (SKB) underground hard rock laboratory on the island of Äspö. The Äspö Hard Rock Laboratory (HRL) is a unique research facility where series of experiments and demonstrations of deposition technologies are performed down to a depth of 500 metres. The HRL is also opening up for other types of research projects that can benefit from access to the unique in-situ conditions and the available infrastructure underground for in-situ experiments. **Registration through [www.eurock2012.com](http://www.eurock2012.com).**

### DANNEMORA MINE

– 31 May 2012

The Dannemora mine is situated in the northeastern part of the historically important Bergslagen mining province in central Sweden. The first records of iron ore mining at Dannemora date from 1481. The mine was closed in 1992 due to the falling price of iron. In 2005, Dannemora Mineral AB was founded with the aim of resuming operations. By 2010, 3 million cubic meters of water had been pumped up from the water-filled mine and the main levels at 350 and 460 meters were again accessible. On this technical tour, Dannemora Mineral will be describing the process of reopening the mine. Results from an ongoing research project, where seismic reflection techniques are used for indicating deep ore bodies, will be presented. **Registration through [www.eurock2012.com](http://www.eurock2012.com).**



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Charlie Li, Norwegian University of Science and Technology  
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Jonny Sjöberg, Itasca Consultants

### ORGANIZING COMMITTEE

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Ove Stephansson, Berlin, Germany  
Graham Swan, Rock Mechanics & Mine Design, Canada  
Ernesto Villaescusa, Curtin University, Australia

### **IMPORTANT DATES**

- Submission of papers: **1 December 2011** (deadline extended)
- Review comments to authors and presentation mode (oral/poster): **20 January 2012** (deadline extended)
- Submission of final paper (reviewed/accepted): **28 February 2012**

All papers will be peer reviewed by the Scientific Committee and a Review Committee. Authors must be prepared to present their papers or posters in person.

### **SYMPOSIUM LANGUAGE:**

The language of the Symposium will be English.

### **EXHIBITION AND SPONSORSHIP:**

For exhibition area, exhibition space and sponsorship matters, please contact Mikael Hellsten, Chairman of Organising Committee.

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