

-inal Invitation

### 19<sup>th</sup> Congress of IABSE Stockholm, Sweden September 21–23, 2016

Challenges in Design and Construction of an Innovative and Sustainable Built Environment



### Message from the President



Our autumn conference is often regarded as the high point in the IABSE calendar since it provides an opportunity for members and their friends and associates to gather together for a few days to learn, discuss, reflect and, generally, to immerse ourselves in our passion for Structural Engineering to the exclusion of all else. If that event can also provide the opportunity to visit interesting, historic, beautiful and exciting locations then it should prove to be irresistible.

www.iabse.org/stockholm2016

This September we are delighted to be in Stockholm, one of Europe's most attractive and historic cities. Moreover, by venturing to the Nordic

region we will also be recognizing the very substantial contributions made to IABSE over many years by individuals from that part of the world. I know that our Swedish hosts have studied the example of Geneva last year, where IABSE introduced several innovations in the planning, content, style and running of the autumn conference and look forward to seeing how they will further develop this opportunity.

Leave the day job behind for a few days, make your plans and enjoy renewing established friendships, making new contacts, learning something more of Structural Engineering and absorbing some Swedish sunshine.

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David A. Nethercot President of IABSE

## Message from the Organisers

On behalf of the Organising Committee and the Scientific Committee we would like to welcome you all to the 19<sup>th</sup> Congress of IABSE in Stockholm. We do anticipate a very interesting congress with a lot of exciting presentations. We have received over 500 abstracts and the review of full papers is ongoing.

There will be parallel scientific sessions as well as both technical sessions and industrial sessions. We will also have poster sessions presented in a modern electronic way.



The main theme "Challenges in Design and Construction of an Innovative and Sustainable Built Environment" is presently a highly topical theme. The economic growth of the global community in combination with the increasing population worldwide results in a higher consumption of all kinds of resources. During the last year we have also witnessed an increasing number of refugees which leaves both society and infrastructure with an enormous challenge.

At the same time we must not forget the global communities' challenge to reduce the use of resources and reach a sustainable development and create an environmentally friendly way of living.

As structural and civil engineers we have an important role to play in confronting these great challenges and what better way could there be to prepare taking these challenges on board than joining our union of structural engineers and come together in Stockholm.

We very much welcome you to an interesting and exciting congress in a warm and friendly Stockholm!

On behalf of the Organising Committee

Mats Karlsson Chair of the Organising Committee **Lennart Elfgren** Chair of the Scientific Committee

#### 19th Congress of IABSE

#### www.iabse.org/stockholm2016

# About IABSE

IABSE is a fellowship of structural engineers operating on a worldwide basis, with interests in all types of structures, in all materials. It acts to improve our knowledge and understanding of the performance of structures. Its members represent structural engineers of all ages, employed in design, academia, construction, regulation and renewal. Many IABSE members occupy senior roles based on a history of personal achievement. The mission of IABSE is to exchange knowledge and to advance the practice of structural engineering worldwide in the service of the profession and society.

### IABSE's Objectives are:

- ► to promote cooperation and understanding among all those concerned with structural engineering and related fields by a worldwide exchange of knowledge and experience
- to encourage awareness and responsibility of structural engineers towards the needs of society
- to encourage actions necessary for progress in structural engineering
- to improve and foster cooperation and understanding between organisations having similar objectives

To fulfil its mission, IABSE organises conferences, publishes a high quality journal, *Structural Engineering International* (SEI), publishes books reflecting the work of its Technical Groups, creates Working Groups as required by new needs and technological progress, offers activities within the National Groups of IABSE, supports engineers at the beginning of their careers with a Young Engineers programme, and presents annual Awards in recognition of outstanding contributions in the field of structural engineering.

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Quick facts Where: City Conference Centre (CCC), Stockholm, Sweden

When: September 21-23, 2016

Number of participants: Approx. 600

#### Delegate breakdown:

Practising engineers and architects, researchers, consultants, constructors, students and anyone engaged in the design, construction and maintenance of bridges and structures.

#### Host

The 19<sup>th</sup> Congress of IABSE will be hosted by the Swedish Group of IABSE in cooperation with the Swedish Transport Administration and The Swedish Professionals for the Built Environment.

#### Contact

#### IABSE Congress 2016 Stockholm

MCI Nordics I Stockholm Office Attn: IABSE 2016 P.O. Box 6911 102 39 Stockholm Sweden



T: +46 8 5465 1500 **MCI** E: confirmation@mci-group.com W: www.iabse.org/stockholm2016

### Scientific programme

### **Congress topics**

The congress theme is "Challenges in Design and Construction of an Innovative and Sustainable Built Environment". Topics are related to both fundamentals and applications in a global theme context. Example topics could be, but are not limited to:

- Flexible, human friendly and traffic efficient structures
- Cost efficiency in design and construction
- Contracts and the procurement process
- Digitalisation as an enabler in the construction industry
- Low-intrusive construction and maintenance
- Safety of temporary structures
- Strengthening and retrofitting of aging infrastructure

- Confidence in implementing innovations
- Practical use of multi-criteria decision making through big data
- Structural safety and risk assessment; systems in different countries
- Product Category Rules (PCR) as a base for Environmental Product Declarations (EPD)
- General or other challenges in design and construction
- Forensic engineering



### Programme at a glance

Date/Time	Tuesday September 20	Wednesday September 21	Thursday September 22	Friday September 23
08:30-10:00		Opening ceremony and Keynote lecture	Keynote lecture	Parallel sessions*
10:00-10:30		Coffee break in exhibition area		
10:30-12:00		Parallel sessions*	Parallel sessions*	Parallel sessions*
12:00-13:30		Lunch		
13:30-15:00		Parallel sessions*	Parallel sessions*	Parallel sessions*
15:00-15:30		Coffee break in exhibition area		
15:30-17:00		Parallel sessions*	Parallel sessions*	Keynote lecture and Closing ceremony
17:00-18:00		Keynote lecture	Parallel sessions*	
Evening activities	Registration open 17:00-20:00	Welcome reception 18:30-20:00	Gala dinner 19:30 until late	

\*Parallel sessions = scientific, technical and industrial sessions.

### **Congress report**

All delegates will receive a USB-stick with all congress papers, together with their name badge, upon arrival at the congress.

#### www.iabse.org/stockholm2016



# General information

### **Destination and venue**

The City of Stockholm is built on 14 islands connected by 57 bridges. The beautiful preserved buildings of the Old Town, the greenery, the fresh air and the proximity to water are distinctive traits of this city.

With its 750-year history and rich cultural life, Stockholm offers a wide selection of world class museums and attractions. The 19<sup>th</sup> Congress of IABSE will take place at the City Conference Centre (CCC), Stockholm, Sweden.

City Conference Center is located only 800 metres from Centralstationen (Central Station). The nearest underground station is T-centralen (Vasagatan exit) or Hötorget (Olof Palmes gata exit). A walk from Centralstationen/T-centralen takes about 10 minutes, or 4 minutes from Hötorget.



### Travel

Stockholm City is easy accessible by plane from different parts of Europe and the rest of the world. Stockholm's main airport - Arlanda International Airport (ARN) is served by over sixty major airlines including British Airways, Finnair, KLM and SAS. The airport is located 40 kilometers (25 miles) north of the city centre and can be reached by both buses and fast train.

#### To and from the airport

*Arlanda Express,* the high-speed train service, *www.arlandaexpress.com* The platform is easily accessible, underneath the arrival terminals. Departure is every 15 minutes (for most of the day). Travel time is around 20 minutes.

MCI Nordics has an agreement with Arlanda Express which means that you can purchase a return ticket at a discounted price during the registration process.

### *Flygbussarna Airport Coaches, www.flygbussarna.se*

Departs every 10-15 minutes between Arlanda Airport and the City Terminal (located next to the Central Station). Travel time is between 35-45 minutes. You can buy tickets online or buy them from the ticket machines at the airport.

#### Taxi

Stockholm's biggest taxi companies are Taxi Stockholm, *www.taxistockholm.se* Taxi Kurir, *www.taxiburir.se* and Taxi 020, *www.taxi020.se*. All licensed taxis are required to have big yellow unit price tags on their rear door windows and on the dash board. We would recommend that you use one of the three taxi companies mentioned above. If you take a taxi from the airport we recommend that you agree on a fixed price before you start your trip.

#### In Stockholm

SL - Stockholm Public Transport, www.sl.se.

Stockholm's extensive public transportation system makes the city and its surroundings particularly accessible. SL is responsible for buses, underground trains, commuter trains, trams and certain ferry lines within Stockholm County. You can buy tickets and passes at SL counters, ticket machines at metro stations, and Pressbyrå kiosks. Tickets cannot be bought on buses. Refillable SL travel cards can be loaded with single-trip or unlimited-travel credit.

### Other useful information

#### Currency

The currency in Sweden is Swedish Krona (SEK).

#### **Electrical appliances**

The normal electric current in Sweden is 220 volts AC in 50 cycles, and plugs and sockets may differ from those in other parts of the world, so travellers should bring adapters or transformers for electrical appliances such as hairdryers and shavers.

#### Internet

Complimentary Wi-Fi is provided at the venue for all delegates attending the congress.

### Commercial exhibition

A commercial exhibition will be held in conjunction with the congress and will be open from the morning of Wednesday 21 until Friday 23 September. The exhibition will be conveniently located just outside the main session hall. This area will be utilised for serving refreshments during the official coffee breaks in order to maximise the amount of time the delegates can spend with the exhibitors.

#### Language

The official language at the congress will be English and no simultaneous interpretation will be provided.

### **Time difference**

Sweden conforms to Central European Time, which is one hour ahead of GTM (standard time).

### Weather

Despite its northern location, Stockholm has fairly mild temperatures throughout the year. Average temperature in September ranges from 9–15 °C.

The exhibition offers an excellent opportunity for delegates to interact with the structural engineering industry and to familiarise themselves with the latest advances within this field. Our delegates increasingly welcome the chance to tap into the expertise provided by exhibitors, who answer questions and provide hands-on product demonstrations.

### Sponsorship opportunities

Sponsoring the 19<sup>th</sup> Congress of IABSE in Stockholm offers you a great opportunity to present your organisation to an international audience of practising engineers and architects, researchers, consultants, constructors, students and anyone engaged in the design, construction and maintenance of bridges and structures. The congress also provides you with the opportunity to demonstrate your support and commitment to the field of structural engineering. Full details including the Exhibition and Sponsorship Opportunities Prospectus are available on the website *www.iabse.org/stockholm2016*. For enquiries regarding sponsor opportunities or booking of an exhibition space, please contact Lisa Persson on *lisa.persson@mci-group.com*.

# Registration

To register for the 19<sup>th</sup> Congress of IABSE, please visit the congress website *www.iabse.org/stockholm2016*. Registration can only be made online. If you are a **member of the IABSE**, please have your Member ID ready as you need to enter this during the registration process to qualify for the member's fee. You are eligible for the **Young participant fee** if you are born in 1982, or after.

Registration fees	Early bird fee on or before June 15	Standard fee June 16 – September 6	Late fee September 7 - September 23
IABSE Member	SEK 9,375	SEK 10,625	SEK 11,875
Non-member*	SEK 11,250	SEK 12,500	SEK 13,750
Young participant (age 34 or younger)	SEK 5,625	SEK 6,375	SEK 7,125
Accompanying person fee	SEK 2,775	SEK 3,100	SEK 4,000

\*Apply for IABSE Membership: www.iabse.org/join

All prices are shown in Swedish Kronor (SEK). According to Swedish tax legislation, 25% VAT is included in all registration fees. For a refund of VAT please turn to your own country's tax authorities.



### Delegate registration fee includes:

- Badge with access to all scientific sessions
- Access to exhibition
- Lunch & coffee breaks
- Congress bag and programme
- Welcome reception, Wednesday, September 21
- ▶ VAT at 25%

### Accompanying person fee includes:

- Opening & Closing Ceremony
- Access to exhibition
- Welcome reception, Wednesday, September 21
- Stockholm City walking tour
- ► VAT at 25%

### Young participants

In order to encourage active participation of young engineers at the congress, the Organising Committee offer a series of benefits to participants born in 1982 or later.

- A Young participant reduced registration fee
- The OC and Fellows of IABSE are offering two prizes of CHF 2000 each for the outstanding contributions, either oral or poster, authored and presented by a young engineer. The prize will be presented at the Closing ceremony of the congress.
- Free IABSE Membership for the year 2017, including one year subscription to journal 'Structural Engineering International' (SEI).

### Payment methods and payment terms

Available payment options are credit card (VISA, MasterCard, American Express - 3D secure identification) and bank transfer until August 21 (invoice with 10 days payment terms).

### Registration cancellation terms and conditions

Full cancellation of your registration must be emailed to IABSE Congress 2016 Stockholm - MCI Nordics: *confirmation@mci-group.com*.

### Cancellation deadlines registration

- On or before July 19, 2016
  Full refund less a SEK 500 administration fee
- ► After July 19, 2016 No refunds

### Letter of invitation

Participants requiring a visa for entry to Sweden are strongly advised to make their application in their home country at least two months before the intended date of travel. Please contact your nearest Swedish/Schengen Embassy/Consulate or your travel agency for more information. Those who do not fly directly to Sweden should note that you may need a transit visa for some countries in order to continue your travel to Sweden. The letter of invitation does not represent a commitment on the part of the organisers to provide financial support.

To assist with the visa application process, we can provide you with an IABSE Congress 2016 Stockholm letter of invitation. The letter is requested during the registration process and will be sent by email once the payment for the registration fee, and hotel costs (if applicable) has been received by the IABSE Congress 2016 Stockholm secretariat. 19th Congress of IABSE



### Accommodation

Accommodation is not included in the registration fee. MCI Nordics have prereserved rooms at hotels close to the IABSE Congress venue for your convenience. All prices include breakfast, city tax and 12% VAT. You can make a reservation at any of the hotels below during the registration process (subject to availability). The price below is per room, per night.

### **Clarion Hotel Sign**

(5 min. walk to venue) Clarion Hotel Sign is, with 558 double rooms, the largest hotel in Stockholm focusing on Scandinavian architecture and design. The spectacular hotel building is located at Norra Bantorget in the city centre, close to public transport, shopping, theatres and restaurants. American Table Brasserie and Bar, the in house restaurant, serves American food with high quality Swedish ingredients. Selma City Spa+ offers spa, sauna, gym, personal training, sun terraces and a heated outdoor pool on one of the roof terraces. All with a spectacular panoramic view over Stockholm.

Standard room 1 person SEK 2,195 Standard room 2 persons SEK 2,395

#### Scandic Haymarket

(10 min. walk to venue) The classic PUB-building at Hötorget in Stockholm has now been transformed into a new, iconic hotel destination. The hotel combines classic touches with an unexpected modern twist. The hotel offers 405 rooms, Event suites with roof top area, restaurant, café, bar and a gym. Located in the middle of Stockholm city centre you are close to cinemas, shopping and public transportation. Free and easy Wifi-access is offered to all guests. This brand new hotel will open in spring 2016.

Superior twin 1 personSEK 2,490Superior twin 2 personsSEK 2,590

### Scandic Klara

(10 min. walk to venue) The Scandic Klara Hotel is centrally located within 5 minutes' walk of Stockholm Central Station. The central location gives you close access to a selection of shopping, restaurants and entertainment. The Scandic Klara Hotel has four-star rating, Svanen environmental certification, is fully non-smoking and offers free Wifi to all guests. Please note these rooms can only be booked for single use.

Standard single room SEK 1,690

### Scandic Norra Bantorget

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(5 min. walk to venue) The Scandic Norra Bantorget hotel has a central location on a side street of Drottninggatan, in the heart of the city centre of Stockholm. You are only a seven minute walk from Stockholm Central Station and the Arlanda Express trains. All rooms are non-smoking and free Wifi is offered to all guests.

Standard single roomSEK 1,890Standard Queen 1 personSEK 1,890Standard Queen 2 personsSEK 1,990Standard Twin 1 personSEK 1,890Standard Twin 2 personsSEK 1,990

### Hotel cancellation terms and conditions

Full cancellation of your reservation must be emailed to the IABSE Congress secretariat, MCI Nordics by email, *confirmation@mci-group.com*.

### Cancellation deadlines accommodation

- On or before July 19, 2016 Full refund less a SEK 300 administration fee per cancelled/changed room night
- After July 19, 2016 No refunds

### Social Programme

Attend the Networking events and take opportunity to meet with friends and colleagues from around the world in a relaxed atmosphere. Registration for the Networking events are made during the registration process.

### Welcome reception

Wednesday, September 21, at 18:30

Cost: Included for all participants All registered participants are invited to the Welcome reception which will take place at the congress venue. This is a great opportunity to meet with old friends and colleagues from around the world over a glass of wine and some nibbles.

#### Gala dinner

Thursday, September 22, at 19:30 Cost: SEK 1,500 per person incl. VAT. Welcome to a magic night in one of Stockholm's oldest and still one of the most popular gala venues, the Grand Ballroom at Berns. The evening contains welcome drinks followed by a sit-down dinner and entertainment. Prepare for an evening for all your senses!



## Accompanying persons' programme

City walking tour, Stockholm Old Town Wednesday, September 21, at 14:00 Cost: Included for all Accompanying persons

#### More tours

Stockholm offers high quality restaurants and shopping with international standard. We are known to be at the forefront when it comes to fashion and design and our products are sold worldwide. Why not visit one of the many museums while you are here? The Fotografiska museum offers amazing photos combined with generous opening hours until 01.00 am three nights a week. After the exhibition tour you can take a drink in the bar overlooking the city, maybe you are able to match your visit with a live performance from an upcoming band?

If you are longing for an outdoor experience, the Old Town offers a unique experience with buildings dating back to the 13th century. The Royal Castle holds a lot of attractions, why not visit the Treasury where the monarchy's most important symbols are kept - here you can see Gustav Vasa's sword of state, Erik XIV's crown, sceptre and orb and Lovisa Ulrika's crown. Several of The Princes and Princesses' crowns are also on view as well as the silver baptismal font from 1696, which is still used at royal baptisms.

Additional guided tours can be arranged by the local operator Strömma. They have several tours to choose from – why not go on a boat tour in Stockholm city and guided tour of the ABBA museum, have dinner in the archipelago or go on a cruise to Drottningholm Palace, the private residence of the Swedish Royal Family. All Strömma tours can be booked online via *www.stromma.se/en.* Strömma will also be selling tickets onsite at the registration desk on Wednesday, September 21, 10:00–12:00. MCI staff at the registration desk will also be happy to help you with any Stockholm queries you may have and Stockholm maps will be also be available here.

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### **Technical tours**

IABSE Congress 2016 Stockholm will offer 2-3 technical tours during the congress. Below you will find example of tours that may be offered:

- Citybanan (Commuter train tunnel, central Stockholm)
- Förbifart Stockholm (Stockholm bypass)
- Hagastaden (Haga city a new vibrant inner city district with 5,000 new homes and 50,000 workplaces)
- Henriksdals reningsverk (Henriksdal's sewage treatment plant)
- Årstabron (The Årsta bridge)

# **IABSE** Annual Meetings

Annual Meetings are scheduled prior to the congress on September 19–20, 2016. Further details will be sent to those concerned prior to the meetings. Annual Meetings will be held at the congress venue.

Please note that below schedule may be subject to change. IABSE Desk will be open at 07:30.

SEPTEMBER 19 (MONDAY)				
08:00-11:00	Administrative Committee			
	WC 1 Structural Performance, Safety and Analysis*			
	WC 2 Steel, Timber and Composite Structures*			
	WC 3 Concrete Structures*			
	WC 4 Conservation of Structures*			
	WC 5 Design Methods and Processes*			
	WC 6 Engineering Software and Information Modelling*			
	WC 7 Sustainable Engineering*			
	WC 8 FRP (Fibre Reinforced Polymer) Structures*			
	SEI Editorial Board			
11:00-14:00	WG 1 Glass Structures*			
	WG 5 Bearings and Joints*			
	WG 7 Earthquake Resistant Structures*			
	WG 8 Forensic Structural Engineering*			
	WG 9 Construction History			
	SEI Correspondents			
14:00-18:30	Technical Committee			
	Chairs National Groups			
	Foundation Council			
19:30	Reception of the President of IABSE			
SEPTEMBER 20 (TUESDAY)				
	Executive Committee			
08:00-12:00	OStrA Committee			
	SED Editorial Board			
	YEP Board*			
	E-Learning Board			
	SC Stockholm 2016			
	SC Vancouver 2017			
	SC Nantes 2018			
12:00-13:30	Lunch of the President of IABSE			
14:00-17:00	Permanent Committee			
19:00-20:30	Reception of the Chair of the Swedish Group of IABSE			

\* Guests are welcome with approval from chair of the group.

### IABSE Congress 2016 Stockholm

MCI Nordics I Stockholm Office Attn: IABSE 2016 P.O. Box 6911 102 39 Stockholm Sweden T: +46 8 5465 1500 E: confirmation@mci-group.com W: www.iabse.org/stockholm2016

### **Organising Committee**

Chair: Mr Mats Karlsson Swedish Transport Administration E: mats.d.karlsson@trafikverket.se

Secretary: Ms Lahja Rydberg Forssbeck Swedish Transport Administration E: lahja.rydberg-forssbeck@trafikverket.se

#### **Scientific Committee**

Chair: Prof Lennart Elfgren Luleå University of Technology E: lennart.elfgren@ltu.se

Secretary: Dr Johan Jonsson Swedish Transport Administration E: sciabse2016stockholm@trafikverket.se

