



2014 STOCKHOLM SWEDEN
International Conference on
Piling & Deep Foundations

Piles - Deep Mixing - Walls
21-23 May 2014

Global Perspective on Sustainable Execution of Deep Foundation Works



Photo: Yanan Li

Conference Managers:



Partner Organization:



STOCKHOLM SWEDEN



Photo: Erik G Svensson



Photo: Yanan Li

www.dfi-effc2014.org

General Information

The European foundation community has spent many years and millions of euros developing design and execution codes for foundation works. These codes are a remarkable industry contribution that promotes standardization and harmonization of execution procedures throughout Europe. Recognizing the significant resources dedicated to code writing and implementation efforts, this conference will explore the impact of execution codes on foundation practice. International foundation industry specialists at the DFI-EFFC International Conference on Piling & Deep Foundations will discuss and debate these questions.

This conference will be presented in English.

Who Should Attend

This conference will provide a unique opportunity for knowledge dissemination and technical exchange between contractors, project owners, authorities, equipment manufacturers, material suppliers and researchers working with different aspects of deep foundations.



Photo: Erik G Svensson

Stockholm

Stockholm, one of the most beautiful capitals in the world, is built on 14 islands connected by 57 bridges. The beautiful buildings, the greenery, the fresh air and the proximity to the water are distinctive traits of this city. The Royal National City Park, (the first national city park in the world), is a green space that breathes for the city, and a constant presence in the crush of the city.

With its 750 year history and rich cultural life, Stockholm offers a wide selection of world-class museums and attractions. Most of the city's attractions can be reached on foot, and there's a good chance of experiencing many sights in a short time. Experience big-city life, the history of civilization and natural scenery — all in the course of the same day!

Visit www.visitstockholm.com to discover more.

Attendee Registration Rates*

Includes Technical Sessions, Exhibit Hall Attendance, Electronic Poster Presentation Forum, Video Session or Site Visit, Icebreaker Reception, Lunches, Breaks and Proceedings. Banquet Tickets must be purchased separately.

Early Member (before March 1, 2014)	€600
Early Non-Member (before March 1, 2014)	€700
Late Member (after March 1, 2014)	€700
Late Non-Member (after March 1, 2014)	€800
Young Engineer/Gov't Employee	€350
Single Day	€350
Student	€175

Special Event Rates*

Companions' Program	€350
Icebreaker Reception	€100
Banquet	€100
Exhibit and Sponsor Options (see page 7)	

Register at www.dfi-effc2014.org

*Prices do not include VAT. See website for VAT rates and refund details.

Venue

Stockholmsmässan, Mässvägen 1
Älvsjö, Stockholm, Sweden
www.stockholmsmassan.se

The conference will be held at Stockholm Fair (www.stockholmsmassan.se), conveniently located near to the commuter train from Stockholm City. A technical exhibition will be held where equipment manufacturers and material suppliers, contractors and consultants will display products and services.

Hotel Accommodations

A block of rooms* are available at **Rica Talk Hotel** connected to the conference venue and the **Rica Hotel Kungsgatan** located in the city center for May 21-23, 2014. Make reservations via email at reservations@rica.se or by phone +46 (0)8 723 72 72.

Rates and reservation codes for each are as follows:

Rica Talk; Mässvägen 2, 125 80 Stockholm, Älvsjö [Rates: single room 1595 SEK; double room 1795 SEK]
Code: OMNB140521T

Rica Hotel Kungsgatan; Kungsgatan 47, 111 56 Stockholm [Rates: single room 2095 SEK; double room 2395 SEK]
Code: OMNB140521K

*Space is limited and subject to availability.
Cut-off date is March 20, 2014.

Other Recommended Hotels:

Connect Hotel Stockholm
Götalandsvägen 216, 125 44 Älvsjö
(walking distance to Stockholm Fair)
www.connecthotels.se or
phone +46 (0)8 749 61 60

2kronor Hotel C.I.T.Y.
Kammakargatan 62, 111 24 Stockholm
(close to Stockholm Central Station)
www.2kronorhotel.se or
phone +46 (0)8 517 616 46

Visit visitstockholm.com for more options.

Transportation Information

Stockholm central to/from conference facility in Älvsjö

A commuter train runs directly from Stockholm Central Station to Älvsjö station. The train takes 10 minutes and leaves 6 times per hour, days and evenings. Älvsjö station is 350 m (380 yards) from/to the conference centre. The Rica hotel in Stockholm is a 5 to 10 minute walk from the Central Station, 850 m (930 yards).

Stockholm to/from Arlanda International Airport

The same commuter train from Älvsjö goes to Stockholm's international airport, Arlanda, via Stockholm and takes 50 minutes. It departs two times per hour. From Arlanda, the Arlanda Express is an option to central Stockholm, with a journey time to Stockholm central of 20 minutes; leaving at least four times per hour.

For questions or assistance with travel plans, contact Lennart Stark: lennart.stark@omnium.se

Keynote Speakers



Roger Frank, president of ISSMGE, will present the Introductory Lecture on *The Need for Standardization for Piles* (execution, tests, design, etc.), important aspects of Eurocode 7 and the experience gained in France and encompassed in the recent standard for the application of Eurocode 7.

Dr. Frank is a professor of geotechnical engineering at ENPC (National School for Bridges and Highways of France). After 20 years with LCPC (Central Laboratory of the French Highway Administration), he was the director of CERMES (ENPC-LCPC), a teaching and research centre in soil mechanics, from 1993 to 2002. His main field of expertise is in-situ testing and foundation engineering. He carries out theoretical and experimental research, as well as consulting work for civil engineering projects. He has authored or co-authored 220 papers and he has delivered numerous invited lectures in many countries. From 1998 to 2004, he was the chairman of the European committee in charge of Eurocode 7 on Geotechnical Design. He was the vice president for Europe of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) for the period 2005 to 2009, an appointed member on the Board of ISSMGE for the period 2009 to 2013 and he is now the president of ISSMGE for the period 2013-2017.



Maurice J. M. Bottiau, deputy general manager of Franki Foundations Belgium, will speak on *Installation Parameters and Pile Performance*. The lecture will analyze how systems, equipment and pile production monitoring and testing can influence the pile performance, and if/how this influence could be translated in adapted safety factors. This analysis will run through different categories

of piles: driven, bored, augercast and displacement auger piles.

Throughout his career Bottiau has been associated with piling products, and with a broad range of deep foundations, including slurry walls, anchors and soil improvement. He has authored or co-authored numerous papers on deep foundations and presented at many international conferences. He is the chairman of the Belgian Society for Soil Mechanics and Geotechnical Engineering and past president of the Belgian Federation of Foundation Contractors ABEF. In 2004, he was appointed chairman of the European Technical Committee 3 (Deep Foundations) of the ISSMGE. He is trustee of the Deep Foundations Institute (DFI) and a founding member of the DFI Europe.



Photo: Staffan Eliasson

Donald Bruce, Ph.D., D. GE., C. Eng., L.G., L.E.G., president of Geosystems L.P., will present a keynote lecture on wet and dry methods of deep mixing titled, *Deep Mixing in the United States: Milestones in Evolution*. DMM has been used, in its current forms, in the U.S. since 1986. Early developments were Japanese influenced, with Nordic countries and Western European countries following suit in the later 1990s. The lecture traces the development of DMM in the U.S. through a number of major case histories, from transportation and dam-related projects.



Dr. Bruce was educated in Scotland and has practiced as a contractor, researcher, educator and consultant for over 40 years. He has worked on projects on every continent and, for the last 18 years, has been president of Geosystems, L.P., a specialty construction consultancy based in Pittsburgh, PA and Phoenix, AZ. He has published almost 300 technical papers and three textbooks, the most recent dealing with dam and levee remediation.

Frits van Tol, professor of Foundation Engineering at TUD and member of scientific board of Deltares and **Eric Halpin, P.E.**, special assistant for Dam and Levee Safety for the US Army Corps of Engineers will present a keynote lecture on *New Developments to Improve the Reliability of D-walls*. The lecture will provide case histories and lessons learned on in-situ and pre-formed wall projects from the U.S. and Europe.



Professor van Tol is full professor of Foundation Engineering at TUD and member of the scientific board of Deltares. van Tol has more than 30 years of experience in geotechnical engineering and has been a part-time professor since 1993. His main research topics are earth retaining structures, sheet piling, ground improvement, compensation grouting, rapid pile load testing, modeling of pile installation, CFA-piles and displacement piles and the application of artificial intelligence in geotechnics. At present he is head of the section of Geo-Engineering at TUD.

Halpin holds degrees in Civil Engineering from Clemson University (BSCE) and Oklahoma State University (MSCE) and has been a registered Professional Engineer since 1988. As the Special Assistant for Dam and Levee Safety, he leads those safety programs for the agency and is the senior advisor to leadership on all dam and levee safety issues and decisions. He is the primary agency safety representative on interagency, congressional and international safety organizations. His primary emphasis has been on incorporating concepts of engineering risk into all facets of safety programs. He is also the vice chair of the National Committee on Levee Safety.





Special Events

Thursday, May 22:

Site Visit and Presentation -

The Söderströmtunneln project by Züblin Spezialtiefbau GmbH. Site tour is included in the attendee registration rate.

Companions' Program

Wednesday, May 21:

Guided Tour of Old Town and the Central City - Get to know the true Stockholm with a local guide sharing tales of Stockholm's exciting past and of how the people and royalties once lived here. Stroll the medieval cobblestone streets and absorb the atmosphere of Old Town's historical buildings. The area has sights such as the Cathedral, Nobel Museum and the Royal Palace as well as boutiques and restaurants. When you feel tired of walking, your guide can recommend one of the many charming cafés where you can stop to have lunch or relax with a cup of coffee.

Thursday, May 22:

Boat Tour to the Royal Palace of Drottningholm and Lunch - Enjoy a pleasant boat trip on Lake Mälaren arriving at the Royal Palace of Drottningholm, the home or a secondary home for Royal families since the 17th century and still is today. You will learn about the well preserved interiors as well as the surrounding parks and gardens. The wealth and beauty of a glorious past unfolds before your eyes during this exploration!

Day 1 Morning

- 8:00 – 9:00 Registration at the Stockholm Fair, Älvsjö
Opening of the Conference Exhibition
- 9:00 – 9:20 Opening statements by Conference Chairman Sikko Doornbos, with DFI President Robert Bittner and EFFC President, Chris Primett
- 9:20 – 12:45 **Session 1: Harmonization of Execution Standards**
Session Chair: K. Rainer Massarsch, Geo Risk & Vibration Scandinavia AB
- Keynote Lecture: Roger Frank, ISSMGE President
 - Overview Standardization Europe, EC7 and NAD: Adriaan van Seters, Fugro Geoservices bv
 - Overview Standardization Europe, CEN and Euronorms/Execution Codes: Christian Gilbert, Consultant
 - Overview Standardization North America, FHWA/AASHTO: Silas Nichols, FHWA
 - Overview Standardization North America, DFI Guidance/IBC: Rudy Frizzi, Langan Engineering and Environmental Services
 - Overview Standardization Far East: Masaki Kitazume, Tokyo Institute of Technology
 - Panel Discussion
- 12:45 – 13:30 LUNCH

Day 1 Afternoon

- 13:30 – 17:30 **Session 2: Bored and Driven Piles**
Session Chairs: Maurice Bottiau, Franki Foundations Belgium and Dan Brown, Dan Brown & Associates
- Keynote Lecture: Maurice Bottiau, Franki Foundations Belgium
 - Technical Presentations
 - Panel Discussion
- 17:30 Icebreaker Reception in Exhibit Hall



Electronic Poster Presentation Forum

This new web-based forum is a great opportunity for attendees to access presentations of the papers submitted for the conference that are not being presented during sessions. The Electronic Poster Presentations will be available for download from the conference website to encourage discussion between participants and authors before, during and after the conference.

Visit www.dfi-effc2014.org for guidelines and submission details.



Photo: Nicho Sodling

Conference Program: Thursday, May 22 and Friday, May 23 - Day 2 and Day 3

Day 2 Morning

- 9:00 – 12:45 **Session 3:** Deep Mixing – Wet and Dry Methods
Session Chairs: George Burke, Hayward Baker Inc. and Noel Huybrechts
Wetenschappelijk Centrum v/h Bouwbedrijf WTCB
- Keynote Lecture: Donald Bruce, Ph.D., D.GE, C. Eng., L.G., Geosystems L.P.
 - Technical Presentations
 - Panel Discussion
- 12:45 – 13:30 LUNCH

Day 2 Afternoon

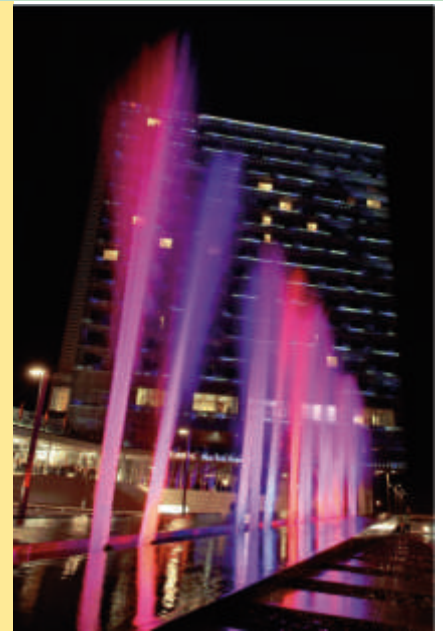
- 13:30 – 14:30 Presentation of the Söderströmtunneln Project:
Kjell-Åke Averstad, Project Manager, Trafikverket
- 14:30 - 16:30 Site Visit of the Söderströmtunneln project by Züblin Spezialtiefbau GmbH *or*
Technical Video Presentation Session
- 19:00 – 22:00 Banquet at the Operakällaren (separate ticket required)

Day 3 Morning

- 9:00 – 12:45 **Session 4:** Walls – In-situ and Pre-formed
Session Chairs: Bartho Admiraal, Volker Staal en Funderingen bv and
Dwight Metcalf, Kiewit Infrastructure Co.
- Keynote Lecture: Frits van Tol, Delft University of Technology and Deltares,
and Eric Halpin, P.E., US Army Corps of Engineers
 - Technical Presentations
 - Panel Discussion
- 12:45 – 13:30 LUNCH

Day 3 Afternoon

- 13:30 – 17:00 **Session 5:** New Trends in Foundation Practice
Session Chairs: Chris Harnan, Ceecom Limited and Theresa Rappaport,
DFI Executive Director
- DFI Europe Monitoring and Instrumentation Committee Presentation:
Rob van Dorp, Allnamics Pile Testing Experts bv
 - DFI Sustainability Committee Presentation on the Carbon Calculator:
Marine Lasne, Soletanche-Freyssinet
 - Collaborative Alliances: A Sustainable Way Forward for Construction:
Stefano Trevisani, Trevi S.p.A.
 - Questions and Discussions
 - John Mitchell Lecture: Bengt H. Fellenius
 - Swedish Heritage Lecture: Stefan Aronsson, ÅF Infrastructure
and K. Rainer Massarsch, Geo Risk & Vibration Scandinavia AB
 - Closing of Conference: Sikko Doornbos, Conference Chairman



Technical Video Session

An exciting feature of the conference is the Technical Video Session on the afternoon of Day 2. The session features a series of 15-minute project and technology presentations highlighting innovative foundation works. Each presentation includes an introduction by the author, a 10-minute video and a short Q&A. Conference participants are encouraged to submit a video for consideration by February 17, 2014.

Visit www.dfi-effc2014.org for submission details.

Technical Presentations for each session will be chosen from more than 150 submitted papers



Photo: Erik G Svensson

For More Details Visit www.dfi-effc2014.org

Technical Committee

Co-chairs:

K. Rainer Massarsch
Geo Risk & Vibration Scandinavia AB

Stefan Aronsson
ÅF Infrastructure

Session Chairs:

Maurice Bottiau
Franki Foundations Belgium

Dan Brown
Dan Brown & Associates

George Burke
Hayward Baker Inc.

Noel Huybrechts
Wetenschappelijk Centrum v/h
Bouwbedrijf WTCB

Bartho Admiraal
Volker Staal en Funderingen bv

Dwight Metcalf
Kiewit Infrastructure Co.

Chris Harnan
Ceecom Limited

Theresa Rappaport, Executive Director
Deep Foundations Institute

DFI Liaison:

Mary Ellen Bruce

Organizing Committee

Conference Chair:

Sikko Doornbos
Terracon International B.V.

Conference Manager:

Theresa Rappaport
Deep Foundations Institute

Technical Committee Liaison:

K. Rainer Massarsch
Geo Risk & Vibration Scandinavia AB

Local Coordinator:

Håkan Garin
GeoVerkstan

EFFC Liaison:

Maurice Bottiau
Franki Foundations Belgium

DFI Europe Liaison:

Henk de Koning

John Mitchell Lecture



Bengt H. Fellenius, P.Eng., is the tenth John Mitchell Lecturer. He will speak on *Design of Piled Foundations as Reflected in Codes and Standards*.

Dr. Fellenius, a former professor of Civil Engineering at the University of Ottawa, is an internationally recognized foundation engineering consultant and the author of more than 300 technical publications. His professional experience comes from a wide variety of assignments at home and abroad encompassing foundation design for industrial plants, water and sewage treatment facilities, bridges and highway projects, marine structures, and urban area development, as well as participation in special investigations and instrumented field tests. Dr. Fellenius has given lectures and courses to several universities and international conferences throughout the Americas, Europe, and South-East Asia. He currently lives in Sidney, BC, Canada. He is a charter member of DFI, and was an original member of the DFI Board of Trustees, recipient of the institute's Distinguished Service Award in 1993, the Hal Hunt Lecturer in 1999 and the Osterberg Lecturer in 2010.

Swedish Heritage Lecture



Conference technical committee chairs **Stefan Aronsson, ÅF Infrastructure** and **K. Rainer Massarsch, Geo Risk & Vibration Scandinavia AB**, will present the Swedish Heritage Lecture, *Swedish Contributions to Foundation Engineering*. The lecture will cover the long tradition of geotechnical engineering due to the presence of soft soils and sensitive clay deposits in the region.



Stefan Aronsson is the head of the geotechnical department at ÅF Infrastructure and is a consultant in geotechnical engineering, an expert in piling/tie back anchor systems (especially injected and bored piles/anchors), working on assignments mostly in Sweden. He has been working in the geotechnical field since 1994 and has been involved in a large variety of assignments – from early planning stages for various municipalities to detailed design of foundations for roads, bridges, railways and buildings. Since 1994, Aronsson has been a member of the Swedish Geotechnical Society, the head of the Swedish Geotechnical Society's local department in the Eastern Region, head of the Foundation Day Committee and as president of the Swedish Geotechnical Society between 2008-2012, where collaboration between the Nordic countries as well as within the International Geotechnical Society (ISSMGE) in various questions (standardization works among others) was one of the tasks.

He has been a co-author to a report for the Swedish Commission on Pile Research (Report 102 “Bored and Injected Piles – design, execution and control”), was invited speaker for the Grout 2003 in New Orleans (about execution of Bored and Injected Piles and Tie-back Anchors) and was invited speaker for the Swedish Foundation Day 2009 (about an interesting new key in Stockholm).

Dr. K Rainer Massarsch is consultant in geotechnical and earthquake engineering, as well as soil dynamics. During his professional career as an academic, researcher, consultant and contractor, he became involved in many aspects of geotechnical and foundation engineering. He was responsible for the design and execution of major foundation projects in Europe, the Middle East, Far East, Australia, South and North America. Dr. Massarsch is the author of over 180 scientific and technical publications and has lectured at conferences and symposia in more than 40 countries.

Dr. Massarsch has been involved in the design, implementation and supervision of many major foundation projects, such as earth dams, airports, and harbours, tunnels and industrial projects. He was responsible for the development and standardization of several ground improvement methods, such as vibratory compaction, deep mixing and vertical drainage. He is an honorary member of the Swedish Geotechnical Society, past chairman of ISSMGE Technical Committee 10, Geophysical Testing, the Swedish Committee on Ground Vibrations and two European Standardisation Committees (CEN/TC 288) on Deep Soil Mixing (WG 10) and Vertical Drainage (WG 11).

Exhibitor & Sponsor Opportunities*

Partner Sponsor – €17,000 (limit 3)

- Double booth 6x2 meter (18'x6')
- Logo in ALL marketing materials
- 5 minutes on the podium as a session host
- 5 minutes own program point at Banquet (Contest, interview, etc.)
- 5 conference delegates
- 5 delegates at banquet
- Personal reserved table at the banquet
- Logo on flash drive proceedings cover
- (Optional) 5 delegates at 50% discount
- Logo on conference signage

Banquet Package Sponsor – €10,000 (limit 2)

- 5 seats at the banquet
- Collaboration with the Social Committee regarding entertainment
- Marketing at the banquet
- Logo on conference signage

Exhibitor Package – €4,000 (limit 40)

- 1 - 3x2 meter (9'x6') booth includes hard walls, spotlight, selection of furniture, 1 - 230V electrical outlet, cleaning
- Logo on website and in printed program
- 2 conference delegates
- Logo on title page of flash drive proceedings
- (Optional) 2 additional conference delegates at 25% discount
- Logo on conference signage

Optional Commercial Video Presentation - €500 (For exhibitors)

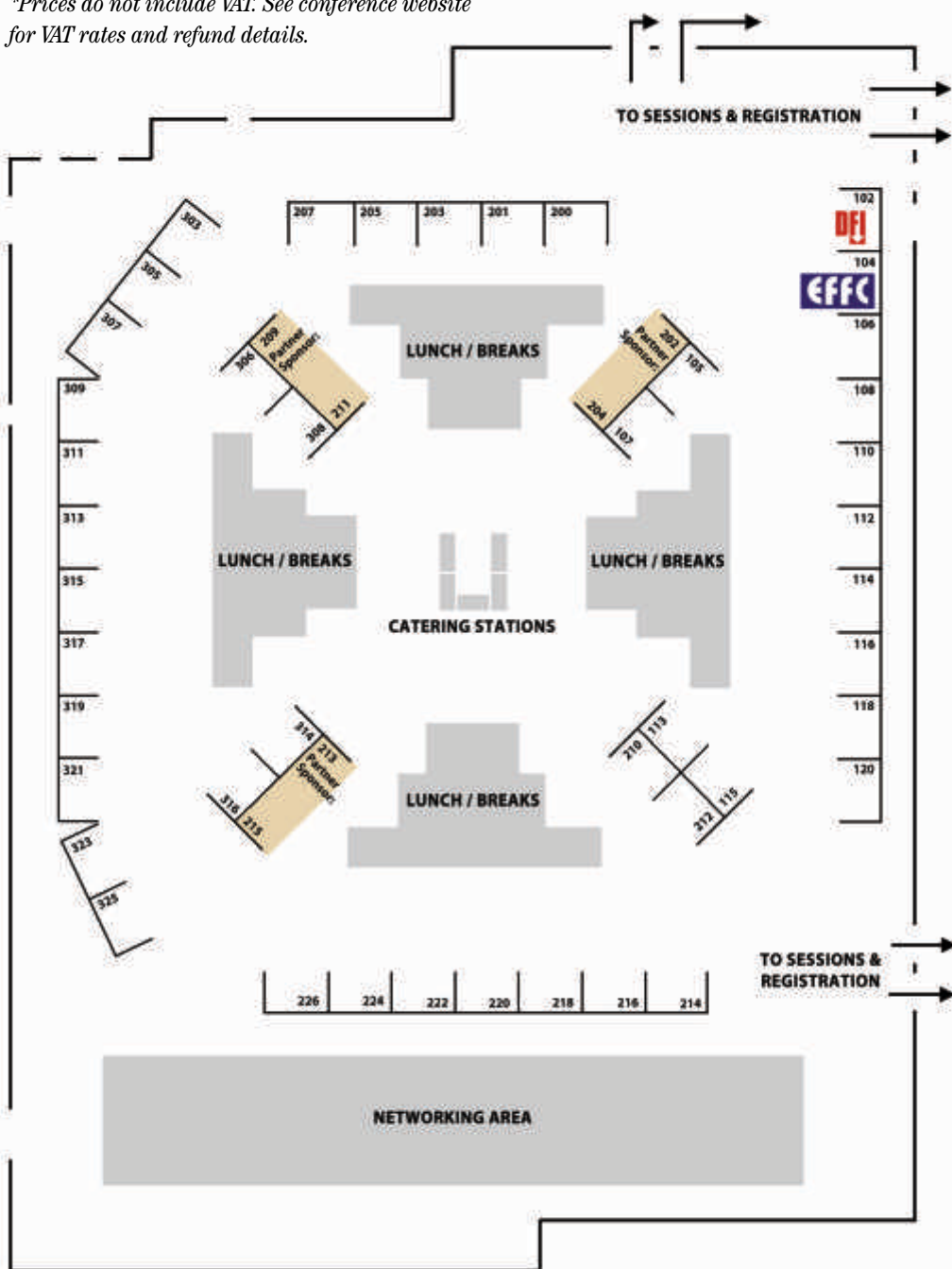
General Sponsor – €750 (no limit)

- Logo on the website and in printed programs
- Logo on page in proceedings flash drive
- Logo on conference signage

Mentorship Sponsor – €350 (no limit)

- Register 1 delegates under age 30 with 50% discount (2 for the price of 1)
- Register 2 college or university students with a 50% discount
- Logo on conference signage

**Prices do not include VAT. See conference website for VAT rates and refund details.*



Exhibition will be open throughout the program all three days:
Day 1: 08:00-18:30
Day 2: 09:00-14:00
Day 3: 09:00-17:00

Visit www.dfi-efcf2014.org to sign up as an Exhibitor and to view the current floor plan.

International Advisory Committee

Australia: Aramugan Balasubramaniam, Griffith University

Bolivia: Mario Terceros Herrera, INCOTEC S. R. L.

Brazil: Jarbas Milititsky, Milititsky Consultoria Geotécnica

Canada: Bengt H. Fellenius, Consulting Engineer

Finland: Liisa Larkela Turku, University of Applied Sciences

France: Roger Frank, CERMES (ENPC/LCPC)

France: Christian Gilbert, Consultant

Germany: Sebastian Bauer, Bauer Maschinen GmbH

India: Sree Rama Krishna Kalavacharla, Larsen & Touro Ltd.-L&T Geostructure

Italy: Marco Ziller, Trevi

Japan: Masaki Kitazume, Tokyo Institute of Technology

Japan: Masaaki Terashi, Geotechnical Consultant

Mexico: Walter Paniagua, Pilotec

Netherlands: Adriaan van Seters, Fugro Geoservices bv

Norway: Kjell Karlsrud, Norwegian Geotechnical Institute

Portugal: Jose Matos e Silva, Gapres, S.A.

Singapore: Kok-Kwang Phoon, National University of Singapore

Sweden: Christer Hermansson Betongsprutnings AB BESAB

Sweden: Gunilla Franzen, GeoVerkstan

UK: Tony Suckling, Balfour Beatty Ground Engineering

USA: Jean-Louis Briaud, Texas A&M University

Swedish Advisory Committee

Chair: Håkan Garin, GeoVerkstan

Christer Hermansson, Betongsprutnings AB BESAB

Leena Haabma Hintze, Svensk Grundläggning, SAFE, Swedish Association of Foundation Engineering

Lennart Stark, IN SITU - Omnium AB

Gunilla Franzén, GeoVerkstan

Conference Managers:



Partner Organization:



Conference Management

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