



# June 5-8, 2018 Rome, Italy

## **International Conference on Deep Foundations and Ground Improvement**

**Urbanization and Infrastructure  
Development: Future Challenges**

## **PROGRAM & SCHEDULE**



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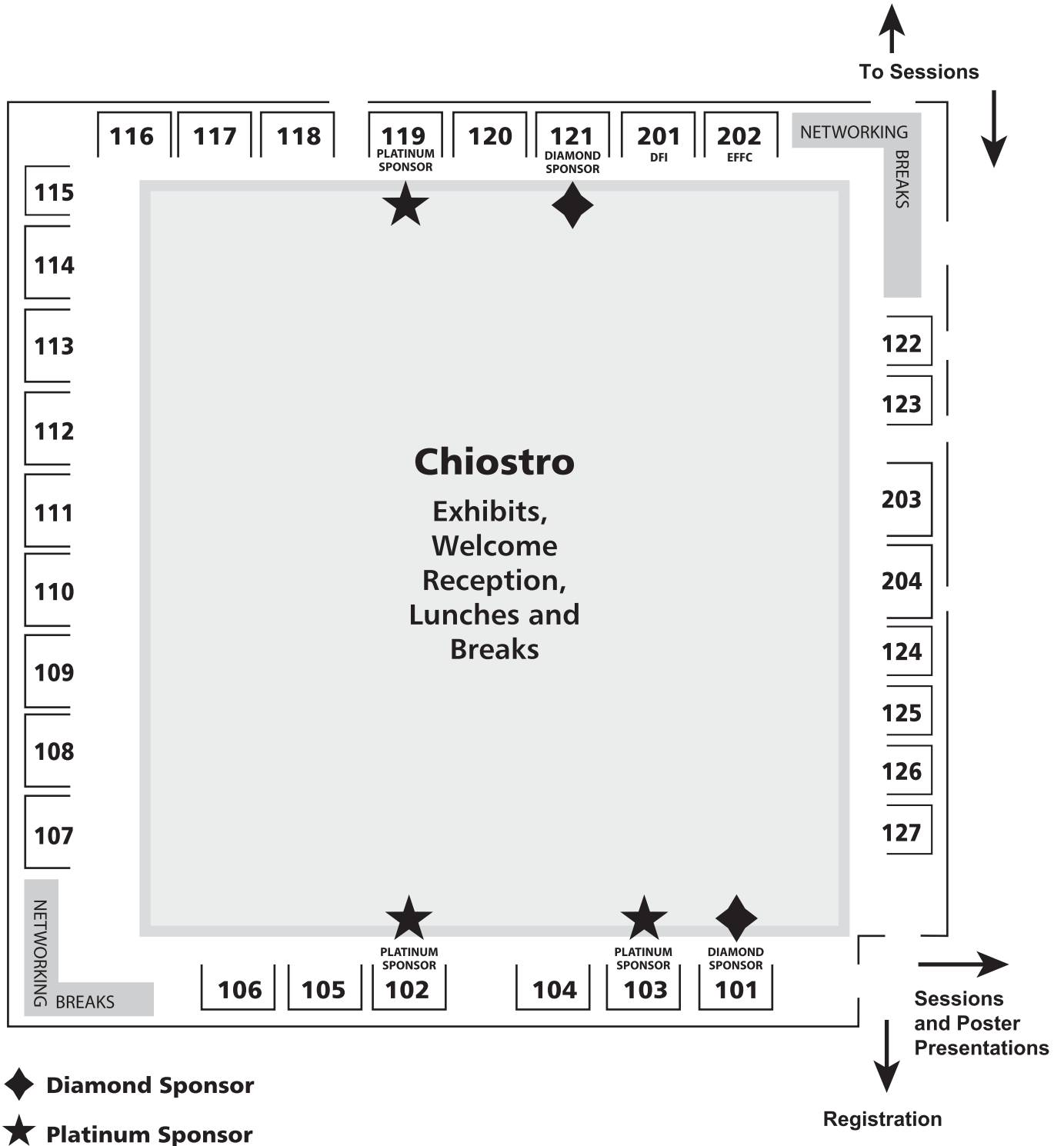
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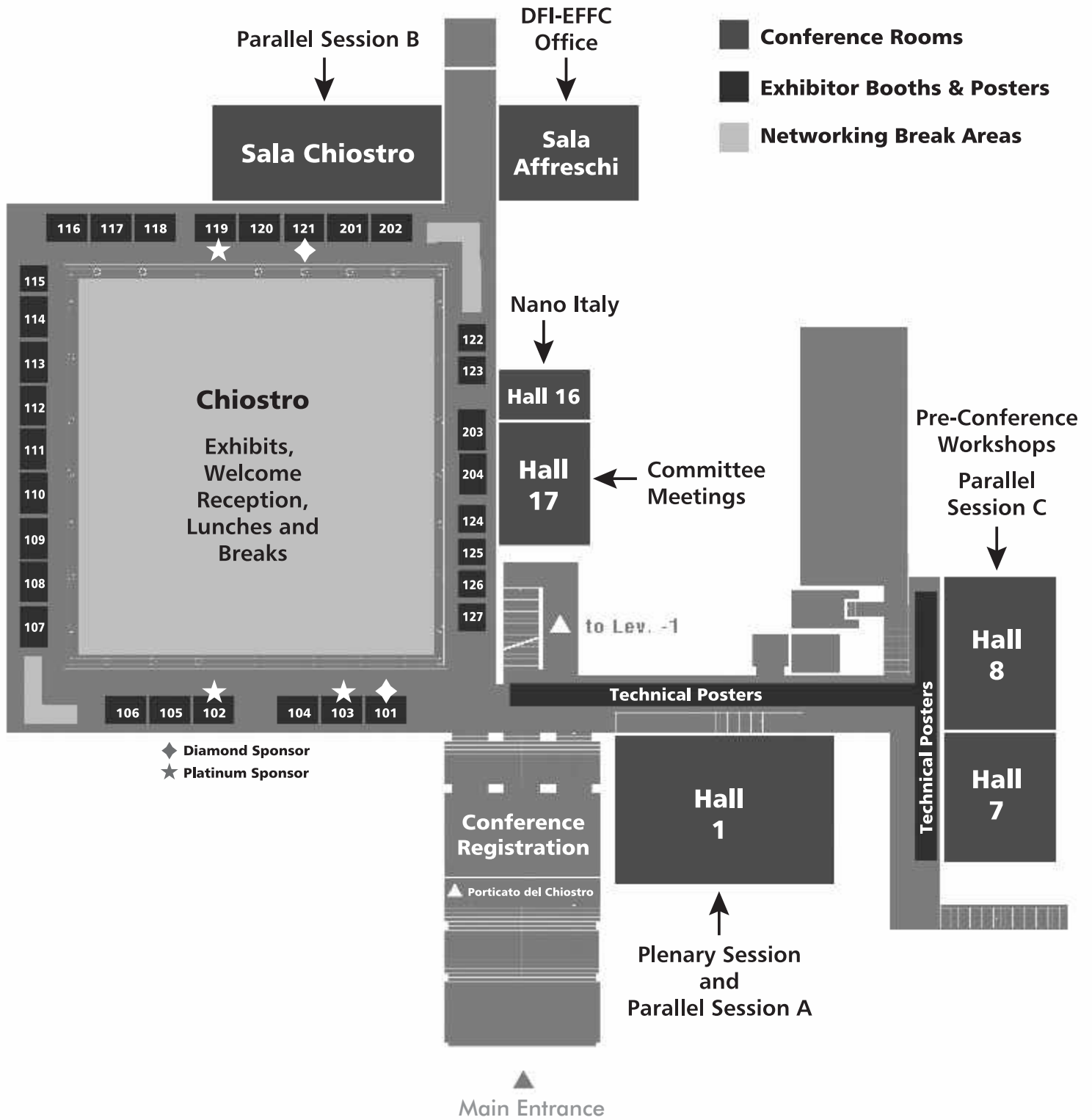




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# Schedule At-a-Glance\*

## Tuesday, 5 June (Optional/Included in Registration Fees)

Registration - Porticato del Chiostro  
Workshop on Safe Working Platforms - Hall 8  
Panel Discussion on CFA and DD Piles in Europe and North America - Hall 8  
Panel Discussion on Tremie Concrete Research and Guideline Revisions - Hall 8  
Project Information Management Systems (PIMS) Committee Meeting - Hall 17  
Exhibit/Poster Set-Up - Chiostro/Outside of Halls 1 and 8  
Welcome Reception in Exhibit Area - Chiostro

## Wednesday, 6 June (Full-Day)

Networking Breakfasts and Breaks in Exhibit Area - Chiostro  
Accompanying Persons Program - Meet for Departure at Registration Area  
Opening Introductions from DFI, EFFC and ISSMGE - Hall 1  
Megaproject Presentations by Clients - Hall 1  
International Panel Discussion on Geotechnical, Contractual and Communication Risks - Hall 1  
Networking Lunch in Exhibit Area - Chiostro  
Three Parallel Technical Sessions - Hall 1, Sala Chiostro, Hall 8  
Conference Reception and Banquet at Palazzo Brancaccio - Separate Ticket Required

## Thursday, 7 June (Full-Day)

Networking Breakfasts and Breaks in Exhibit Area - Chiostro  
DFI John Mitchell Lecture - Hall 1  
Invited Lectures and Discussion on Water Infrastructure Challenges in Italy and the World - Hall 1  
Young Professionals and Students Mentoring Forum - Hall 1  
Three Parallel Technical Sessions - Hall 8  
Exhibit/Poster Breakdown - Chiostro/Outside of Halls 1 and 8

## Friday, 8 June (Optional Half-Day & Full-Day Tours/Technical Site Visits)

All Tours Depart from the Welcome/Registration Area  
Half-Day Visit to View Foundations of Roman Catacombs - Separate Fee Required  
Half-Day Technical Site Visit to Rome Metro C - Separate Fee Required

## Pre-Conference Day Schedule: Tuesday, June 5, 2018

09:30 - 17:30	Welcome/Registration - Porticato del Chiostro
11:00 - 12:00	<b>Workshop on Safe Working Platforms - Hall 8:</b> Jim De Waele, Managing Director of Keller, will lead this workshop on safe working platforms for tracked plant. This working session is aimed at improving the design, installation, and maintenance of temporary working platforms for deep foundations projects. Topics will include rig loading, platform design, installation and testing, inspection, maintenance, allocation of responsibility, enforcement, and training and awareness. Procedures in global regions will be discussed, and recommended practices will be highlighted. Matt Meyer, P.E., D.GE, Langan Engineering and Environmental Services, DFI Trustee, will present results of DFI's survey on the current design and execution approaches and allocation of responsibility for working platform construction, maintenance and safety being used to prepare a state-of-practice study on working platform stability for cranes and drilling equipment used to install deep foundations and ground improvement systems.
12:00 - 13:30	Lunch on Own
13:30 - 15:30	<b>Continuous Flight Auger Piles and Drilled Displacement Piles Panel Discussion: European and North American Practices - Hall 8:</b> This session will cover the state-of-practice for CFA piles in Europe and North America, including pile systems used, regional practices, typical soils conditions, equipment, innovations and advancements, and case histories. Following regional presentations, Matt Meyer, P.E., D.GE, Langan Engineering and Environmental Services, DFI Trustee, will facilitate a discussion on CFA-related codes, load testing, contractual practices, and contractual vehicles. Presenters: Europe - Maurice Bottiau, Deputy General Manager, Franki Foundations Belgium   North America - W. Morgan NeSmith, P.E., Director of Engineering, Berkel and Company Contractors.
13:30 - 17:30	Exhibit / Poster Set-Up - Chiostro/Outside of Halls 1 and 8
15:30 - 17:30	<b>DFI Project Information Management Systems (PIMS) Committee Meeting - Hall 17:</b> This committee's mandate is to collect and track trends in owner specifications, methods, and technologies that feature information management applications applied to deep foundation projects. Their initial goals include the authorship of one or more White Papers or Guidance Documents available to DFI members that assist in navigating these trends. Non-members are welcome to attend this meeting.
15:30 - 16:00	Free Time
16:00 - 17:30	<b>Tremie Concrete for Deep Foundations Workshop (EFFC-DFI) - Hall 8:</b> This workshop session will include brief presentations on current EFFC-DFI tremie and slurry fluid studies followed by discussion. Chris Harnan, Ceecom Consult, Chair EFFC Concrete Task Force, and Dan Brown, Ph.D., P.E., D.GE, Dan Brown and Associates, DFI President, will facilitate an in-depth question/answer session following the presentations. Presenters: Tremie Concrete Study - Karsten Beckhaus, Ph.D., BAUER Spezialtiefbau; Support Fluids Study - Sabine Darson, Ph.D., Head of Materials Department, Soletanche Bachy; Numerical Modeling of Concrete Flow - Bartho Admiraal, Technology and Development, Volker Staal en Funderingen; Laboratory Research & Development - Thomas Kränkel, Head of Research Concrete Technology, Technical University of Munich
17:30 - 18:30	Free Time
18:30 - 20:30	Welcome Reception in the Exhibit Area - Chiostro

## To Access Online Proceedings

- 1) To access the online proceedings, go to [www.dfi.org](http://www.dfi.org) and login to MyDFI using your email address and password.
- 2) If you don't know your password or have never logged in before, choose "forgot password" and you'll receive an email with the information needed.
- 3) Once logged in choose "my online proceedings" from the left-side menu.
- 4) Select "2018 DFI-EFFC International Conference on Deep Foundations and Ground Improvement".
- 5) Click "Program" on left side to view Presentations and click "Proceedings" to view papers.



# Conference Day 1 Schedule: Wednesday, June 6, 2018

07:30 - 08:30	<b>Speakers Preparation</b> - Hall 1, Sala Chiostro and Hall 8
08:30 - 18:50	<b>Registration</b> - Porticato del Chiostro
08:30 - 09:00	<b>Breakfast</b> - Chiostro
	<b>OPENING PLENARY SESSION 1</b> - Hall 1
09:00 - 09:20	<b>Opening Statements and Conference Introduction</b> Theresa Engler, DFI Executive Director; Prof. Massimo Grisolia, Conference Chair, and Antonio D'Andrea, Dean of Sapienza University
09:20 - 09:40	<b>Welcome and Introduction of Sponsoring Associations</b> José Candela, Terratest, EFFC President and Dr. Dan Brown, Ph.D., P.E., D.GE, Dan Brown and Associates, DFI President and Frank Haehnig, Dipl.-Ing., BAUER Spezialtiefbau, DFI Europe President
09:40 - 09:50	<b>ISSMGE European President Welcome</b> Prof. Mario Manassero
09:50 - 10:20	<b>The Evolution of an Industry</b> Stefano Trevisani, P.Eng., CEO, TREVI, Italy
10:20 - 10:50	<b>Megaproject 1: The Development Program of the Subway Network in Rome: A Geotechnical Challenge and a Cultural Opportunity</b> Pasquale Cialdini, P.E., Sole Administrator, and Andrea Sciotti, P.E., Project Manager, Roma Metropolitane, Italy
10:50 - 11:10	<b>Coffee Break in Exhibit Area</b> - Chiostro
11:10 - 11:40	<b>Megaproject 2: The Thames Tideway Tunnel Project</b> Roger Bailey, Asset Management Director, Bazalgette Tunnel Limited, U.K.
11:40 - 12:10	<b>Megaproject 3: The Fehmarnbelt Fixed Link – Connecting Europe</b> Henrik Christensen, Technical Director, Femern A/S, Denmark
12:10 - 12:40	<b>Megaproject 4: Chennai Metro Rail Project</b> Rajeev Narayan Dwivedi, Director (Projects), Chennai Metro Rail Limited, India
12:40 - 13:40	<b>International Panel Discussion on Geotechnical, Contractual and Communication Risks</b> Moderator: Maurice Bottiau, Deputy General Manager, Franki Foundations Belgium Panelists: Pasquale Cialdini, P.E., Roma Metropolitane; Roger Bailey, Asset Management Director, Bazalgette Tunnel Limited; Henrik Christensen, Technical Director, Femern A/S; Rajeev Narayan Dwivedi, Director (Projects), Chennai Metro Rail Limited; Stefano Trevisani, P.Eng., CEO, TREVI; Pat Morgan, Director USACE Dam Safety Production Center; and Dan Brown, Ph.D., P.E., D.GE, Dan Brown and Associates, DFI President
13:40 - 14:40	<b>Networking Lunch in Exhibit Area</b> - Chiostro

## Parallel Session A1 - Hall 1

## Parallel Session B1 - Sala Chiostro

## Parallel Session C1 - Hall 8

	<b>Deep Foundations Technologies: Pile Construction</b> Moderators: Franz-Werner Gerressen, Dipl.-Ing., BAUER Maschinen, Germany, and Gerardo Marote, Grupo Terratest, Spain	<b>Design and Modeling Criteria: Deep Foundations Executed with Excavation</b> Moderators: Rolf Katzenbach, Dr. Eng., Technische Universität   Darmstadt, Germany and Giovanni Vacigo, Studio Geotecnico Italiano, Italy	<b>Ground Modification Technologies: Soil Mixing</b> Moderators: Noel Huybrechts, Dr. Ir., BBRI, Belgium, and Paolo Marzano, Dott. Ing., Sapienza Università di Roma, Italy
14:40 - 15:10	<b>KEYNOTE LECTURE - Codes, New Technologies and Quality in Deep Foundations</b> Maurice Bottiau, Franki Foundations Belgium	<b>KEYNOTE LECTURE - Scientific Approach to Pile Design</b> Alessandro Mandolini, Ph.D., Università degli Studi della Campania, Italy	<b>KEYNOTE LECTURE - The Role of Experimental Research and Advanced Monitoring in QC and Reliability Based Design of Deep Foundations and GI Techniques</b> Noel Huybrechts, Dr. Ir., Belgian Building Research Institute, Belgium
15:10 - 15:25	<b>A Major Infrastructure Project and the Formation of the UK's Largest Rotary Pile Under Polymer Support Fluid</b> Stephan Jefferis, Ph.D., Environmental Geotechnics, U.K. and Yue Ouyang, Ph.D., Cementation Skanska, U.K.	<b>Performance and Analysis of Braced Secant Pile Wall for a Multi-Story Building in Manhattan, NY</b> James Maniscalco, Underpinning & Foundation Skanska, U.S.	<b>Strength Design of Cement-Treated Piles Subjected to Lateral Flow of Liquefied Ground</b> Hidenori Takahashi, Port and Airport Research Institute, Japan
15:25 - 15:40	<b>Threaded Rotary Bored Piles at Paddington New Yard</b> David Hard, Bachy Soletanche, U.K.	<b>Innovative Design and Quality Control During Installation of Single Stage High Pressure Injection Micropiles</b> Floris Schokking, Dr. Ir., GeoConsult, The Netherlands	<b>Applications of Cement Stabilization for Mitigating Earthquake Disaster</b> Masaki Kitazume, Tokyo Institute of Technology, Japan
15:40 - 15:55	<b>Extraction of Precast Driven and Secant Piles up to 27m Deep</b> Thomas George, Wagstaff Piling, Australia	<b>An Approach for Optimization of Drilled Shaft Design in Dubai</b> Emad Sharif, GTC, U.A.E.	<b>Unconfined Compression Tests of Cement-Treated Soil Containing Unmixed Soil</b> Tsutomu Namikawa, Shibaura Institute of Technology, Japan
15:55 - 16:10	<b>Brunnholen Bridge - Norway - Design and Supervision of Foundation Works</b> Vetle Stene and Arne Simonsen, MRIF, Multiconsult Norge, Norway	<b>A Call for Code Revisions for High Capacity Micropiles</b> John McKinnon and Tony Barila, Hub Foundations Co, U.S., Lawrence Johnsen GZA GeoEnvironmental, U.S.	<b>Cutter Soil Mixing as Ground Improvement Technology in Under-Consolidated Clays</b> Joao H. Nunes, Bouygues Travaux Public/Intrafor Hong Kong, China
16:10 - 16:25	<b>Micropiling in Urban Infrastructure: Advantages, Experience and Challenges</b> Freddy Lopez, Friedr. Ischebeck, Germany	<b>Diaphragm Walls and Ground Improvement on the Open-Cut Excavation of Bologna's New High Speed Railway Station</b> Luca Utzeri, Italferr, Italy	<b>A New Quantitative Approach in the Evaluation of Homogeneity in Deep Mixing</b> Paolo Fania, BAUER Spezialtiefbau, Germany
16:25 - 16:40	<b>Recent Innovations to Facilitate the Construction of Large Diameter Piles in London</b> Yue Ouyang, Ph.D., Cementation Skanska U.K.	<b>Pile Foundations of Trieste's New Logistic Platform</b> Dario Fedrigo, ALPE Progetti, Italy	<b>Innovative Soil Mixing Solution to Underpin Existing Buildings Affected by Differential Settlements</b> Ignazio Paolo Marzano, Ph.D., Sapienza University of Rome, Italy

# Conference Day 1 Schedule: Wednesday, June 6, 2018 (continued)

16:40 - 17:00 Coffee Break in Exhibit Area - Chiostro

	Parallel Session A2 - Hall 1	Parallel Session B2 - Sala Chiostro	Parallel Session C2 - Hall 8
	<b>Deep Foundations Technologies: New Developments and Innovative Techniques</b> Moderators: Karsten Beckhaus, Ph.D., BAUER Spezialtiefbau, Germany, and Serge Borel, Soletanche Bachy, France	<b>Design and Modeling Criteria: Deep Foundations Executed without Excavation</b> Moderator: Adriaan Van Setters, Fugro Geoservices, The Netherlands	<b>Ground Modification Technologies: Other Techniques</b> Moderators: Daniele Vanni, TREVI, Italy and Giovanna Cassani, Tre Esse Engineering-Rocksoil, Italy
17:00 - 17:15	<b>Ventilation Shafts and Drifts for the Metro Line 6 Project in Naples, Italy.</b> Vittorio Manassero, Underground Consulting, Italy	<b>Vibration Monitoring as a New Method of Quality Control for Jet Grouting</b> Nikolaus Schneider, Dipl.-Ing., GuD Consult, Germany	<b>Ground Improvement Instead of Piling - Effective Design Solutions for Heavily Loaded Structure</b> Michal Topolnicki, Ph.D., Keller Polska, Poland
17:15 - 17:30	<b>Conventional Excavation Under Freezing Conditions in C13 Station - Metro Warsaw Line 2</b> Marco Aurelio Piangatelli, Cipa, Italy	<b>Non Linear and Plastic Hardening Modelling of Vertically Loaded Piles</b> Maurizio Lenzi, P.E., and Paola Campana, ACMAR, Italy	<b>Secant Piles Shafts and Directional Drilling for a Modular Drainage System</b> Marco Angelici, TREVI, Italy
17:30 - 17:45	<b>Slope Stabilization with Multiple Anchors Monitored by Glass Fibre Technique</b> Dominik Gaechter, Keller Grundbau, Austria	<b>Laterally Loaded Piles in an Embankment of Dry Sand</b> Roel Brouwer, Geobest, The Netherlands	<b>Mega Soil Improvement Project: Improvement of Port Said Soft Soils Using Prefabricated Vertical Drains</b> Robert Thurner, Keller Grundbau, Austria
17:45 - 18:00	<b>Why Using an Air-Entrainment to Increase Workability is Not a Great Idea for Deep Foundations</b> Dimitri Feys, Ph.D., Missouri University of Science and Technology, U.S.	<b>About Influence of Time on the Bearing Characteristics of Precast Driven Piles</b> Peter Wardinghus, Aarsleff Grundbau, Germany	<b>Dynamic Compaction of Rockfill on Land and Under Water at Stockholm Norvik Port</b> Sölve Hov, GeoMind, Sweden
18:00 - 18:15	<b>Advances in Resonant Pile Driving and Applications</b> Matthew Janes, P.E., MBA, Resonance Technology Intl, Canada	<b>The Normalized Bearing Graph and Dynamic Reduction Function Concepts in Pile Acceptance</b> Julian Seidel, Foundation Specialists Group, Australia	<b>Vacuum Preloading with Drain-to-Drain Method for the Construction of the New International Airport of Mexico City</b> Valeriano Pastore, Studio Geotecnico Italiano - Milan, Italy
18:15 - 18:30	<b>Innovative Pile Extraction Technique of CFA Piles for the New Harbor Bridge Project</b> Tracy Brettman, A.H. Beck Foundation Company, U.S.	<b>The Mechanism of Grouting Action Under the Base of Bored Pile</b> Adam Krasinski and Mateusz Wiszniewski, Ph.D., Gdansk University of Technology, Poland	<b>Assessing the Effectiveness of RDC Technique for Deep Fill Compaction Application</b> Omar Maalej, Trevi Ground Engineering, U.A.E.
18:30 - 18:50	Panel Discussion / Q&A	Panel Discussion / Q&A	Panel Discussion / Q&A
18:50 - 20:15	Free Time		
20:00 - 20:45	Conference Reception at Palazzo Brancaccio (Separate Ticket Required)		
20:45 - 23:00	Banquet at Palazzo Brancaccio and Entertainment (Separate Ticket Required)		



# Conference Day 2 Schedule: Thursday, June 7, 2018

- 07:30 - 08:30**     **Speakers Preparation** - Hall 1, Sala Chiostro and Hall 8
- 08:30 - 17:45**     **Registration** - Porticato del Chiostro
- 08:30 - 09:00**     **Breakfast** - Chiostro
- OPENING PLENARY SESSION 2** - Hall 1
- 09:00 - 09:10**     **Introduction and Presentation**  
Theresa Engler, DFI Executive Director and Prof. Massimo Grisolia, Conference Chair
- 09:10 - 09:40**     **DFI John Mitchell Lecture: Geophysics for Geotechnical Design**  
Prof. Michele Jamiolkowski, Politecnico di Torino, Italy
- 09:40 - 10:10**     **Invited Lecture: Water Infrastructure Challenges in Italy**  
Giovanni Ruggeri, Dr. Ing., ICOLD Italy
- 10:10 - 10:40**     **Invited Lecture: USACE Mega Challenge - Dams and Levee Rehabilitation World Wide**  
David B. Paul, P.E., Lead Civil Engineer, U.S. Army Corps of Engineers
- 10:40 - 11:00**     **Q&A Panel and Open Discussion**
- 11:00 - 11:30**     **Young Professionals and Students Mentoring Forum - All Attendees Welcome**  
Moderator: Mary Ellen Large, P.E., D.GE, Director of Technical Activities, DFI, U.S.  
Panelists: Allison Bennett, Isherwood Associates, Canada; Swetha Chennu, Hub Foundations, U.S.; Lorenzo Melegari, Trevi, Italy; Thomas Wulleman, Franki Foundations Belgium
- 11:30 - 11:50**     **Coffee Break in Exhibitor's Area** - Chiostro

## Parallel Session A3 - Hall 1

## Parallel Session B3 - Sala Chiostro

## Parallel Session C3 - Hall 8

	<b>Deep Foundations Technologies: Diaphragm Walls</b> Moderators: Federico Pagliacci, P.Eng., Soilmec North America, Italy and Maurice Bottiau, Franki Foundations Belgium	<b>Design and Modeling Criteria: Other Techniques</b> Moderators: Alessandro Mandolini, Ph.D., Second University of Naples, Italy, and Piergiorgio Grasso, GEODATA Engineering, Italy	<b>Ground Modification Technologies: Grouting</b> Moderator: Clemens Kummerer, Ph.D., Keller Holding, Germany
<b>11:50 - 12:20</b>	<b>KEYNOTE LECTURE - Artificial Ground Freezing in Underground Construction: Engineering Challenges and Research</b> Giulia Viggiani, Ph.D., Cambridge University, U.K.	<b>KEYNOTE LECTURE - The Sochi Case: The First Real Comparison Between NATM and ADECO-RS</b> Giovanna Cassani, Tre Esse Engineering-Rocksoil, Italy	<b>KEYNOTE LECTURE - Challenges in the Design of Jet Grouted Structures</b> Alessandro Flora, Ph.D., University of Napoli Federico II, Italy
<b>12:20 - 12:35</b>	<b>Recommended Junctions Between Diaphragm Wall Panels for Deep Excavations</b> Paul Vidil, Soletanche Bachy, France	<b>Finite Element Numerical Analysis to Evaluate the Lateral Behavior of Three Pile Group Configurations</b> Murad Abu-Farsakh, Ph.D., P.E., Louisiana State University, U.S.	<b>Compaction Grouting Intervention for the Mitigation of Soil Liquefaction Risk Within the Earthquake-Stricken Area of Emilia in 2012</b> Federico Fanti, TREVI, Italy
<b>12:35 - 12:50</b>	<b>EFFC/DFI Guide to Tremie Concrete for Deep Foundations</b> Karsten Beckhaus, Ph.D., BAUER Spezialtiefbau GmbH, Germany	<b>Pile Groups with Negative Skin Friction</b> Francesco Basile, Ph.D., Geomarc, Italy	<b>Foundation Shaft Executed with Jet Grouting</b> Giuseppe Modoni, Ph.D., Università di Cassino and Southern Lazio, Italy
<b>12:50 - 13:05</b>	<b>EFFC/DFI Support Fluids Guide</b> Sabine Darson, Ph.D., Soletanche Bachy, France	<b>Seismic Performance of A Piled Raft Foundation with Grid-Form DMWs Considering Softening of Stabilized Soil</b> Yoshimasa Shigeno, P.E., Takenaka Corporation, Japan	<b>Study on the Quality of MultiFan Shaped Jet Grouting</b> Takashi Shinsaka, Ph.D., P.E., Sanshin Corporation, Japan
<b>13:05 - 13:20</b>	<b>Positive Cut-Off Wall in Indian Dam - A New Technique for Difficult Geology</b> Steni Stefani, Ricerca e Sviluppo, Cantieri e Gestioni, Italy and Sanjay Dave, Hindustan Construction Company, India		
<b>13:20 - 13:35</b>	<b>TTMJ – The New System for Slurry (Diaphragm) Wall Joints</b> Maurizio Siepi, TREVI, Italy and John Coupland, CCMJ Systems, U.K.	<b>Panel Discussion / Q&amp;A</b>	<b>Panel Discussion / Q&amp;A</b>

**13:35 - 14:40**     **Networking Lunch in Exhibit Area** - Chiostro

**14:40 - 18:30**     **Exhibit/Poster Breakdown**





# Conference Day 2 Schedule: Thursday, June 7, 2018 (continued)

	Parallel Session A4 - Hall 1	Parallel Session B4 - Sala Chiostro	Parallel Session C4 - Hall 8
	<b>Deep Foundations Technologies: Deep Foundations Behavior and Testing</b> Moderators: Stephan A. Jefferis, Ph.D. FICE, Environmental Geotechnics, U.K. and Raffaella Granata, TREVI, Italy	<b>Project Information Management System (PIMS) and BIM</b> Moderators: Jamey Rosen, P.Geo, Geosyntec Consultants, Canada and Jason Boddy, ARUP, U.K.	<b>Contracts and Geotechnical Investigation</b> Moderators: Arthur Tipter, P.E., ZÜBLIN Spezialtiefbau, Germany and Andrea Pigorini, ITALFERR, Italy
14:40 - 14:55	<b>Recent Experience with Tremie Concrete Properties and Testing</b> Duncan Nicholson, Arup, U.K.	<b>KEYNOTE LECTURE</b> <b>Data Management Systems and Project Visualization with Extended Reality Devices and Holographic Projections</b> Massimo Mucci, Bencor Global, U.S.	<b>KEYNOTE LECTURE</b> <b>Specification, Procurement, Quality Control and Certification of Bottom-Feed Stone Columns</b> Giovanni Vaciago, Studio Geotechnico Italiano, Italy
14:55 - 15:10	<b>Design, Construction and Performance of Single Bore Multiple Anchored Diaphragm Wall in Izmir, Turkey</b> Ibrahim Duzceer, Kasktas, Turkey		
15:10 - 15:25	<b>The Development and Application of Fibre Optic Sensor Technology in the Quality Control and Integrity Testing of Deep Foundations</b> Anthony Fisher, Cemention Skanska, U.K.	<b>Deep Foundation Sites of the Future: Digitization and Networking as Major Strategic Factors for Information Management Systems</b> Arno Halbeisen, Liebherr-Werk Nenzing, Austria	<b>Bearing Behaviour of Dubai Sandstone and Dubai Siltstone Due to High-Rise Structures</b> Prof. Rolf Katzenbach, Dr.-Ing., Technische Universitaet Darmstadt, Germany
15:25 - 15:40	<b>Case History: Performance of Foundations in the Town of Fusa (Japan) During the 2011 Tohoku Earthquake</b> Daniel Pradel, Ph.D., P.E., G.E., D. GE, The Ohio State University, U.S.	<b>Electronic Support in Installation of Special Foundation Products - Ensuring Safe Production and Increasing Quality Control</b> Franz-Werner Gerressen, Bauer Maschinen, Germany	<b>Delivering Added Value via Ground Investigations for Deep Shaft Design in Urban Areas</b> Hock Liong Liew, Mott Macdonald, U.K.
15:40 - 15:55	<b>Controlling Ground Movements Due to Pile Installation Adjacent to London Underground Tunnels for the Southbank Place Project</b> Stuart Hardy, C.Eng., Arup, U.K.	<b>Data Management, Analysis, and Reporting for Small Excavations and Barrier Walls</b> Jamey Rosen, P. Geo., Geosyntec Consultants, Canada	<b>Evaluation of Seepage Barrier Wall Design and Performance Using Instrumentation</b> Georgette Hlepas, USACE, U.S.
15:55 - 16:10	<b>Static Load Tests by Bi-Directional Method in the Brazilian Context</b> Felipe Souza Cruz, Geo Estática, Brazil	<b>BIM - A UK Foundation Sub-Contractor's Perspective</b> Mark Pennington and Tracey Fitch, Balfour Beatty Ground Engineering, U.K.	<b>Impact from the Construction of a Working Platform and Girder Lifting Operation on Bridge Pile Foundation in Soft Soil</b> Bosco Poon, GHD Pty Ltd, Australia
16:10 - 16:25	<b>A Study of the Preloading Effect of Equipping Piles with an Expander Base</b> Bengt H. Fellenius, Dr. Tech., P.Eng., Consulting Engineer, Canada	<b>Mosul Dam - Building 2D &amp; 3D Project Information Systems for Construction Monitoring and Risk Assessments</b> Vanessa Bateman, P.G., P.E., USACE, U.S.	<b>Correlation Between Axial Capacity of Driven Pile and Standard Penetration Test Blow Count</b> Jinyuan Liu, Ph.D. P.E., PEng., Ryerson University, Canada
16:25 - 16:40	<b>The Case of a Building Design Review Requiring a Full Foundation Redesign</b> Brendan Atarigiya, University of Ghana, Ghana	<b>BIM in Geotechnics</b> Jim De Waele, FPS, U.K.	<b>Working Platforms for Tracked Plant - Experience from 13 Years of Best Practice</b> Derek Egan, Ph.D., C.Eng., ICE & FPS, U.K.
16:40 - 16:55	<b>Experimental Investigations on the Lateral Bearing Behaviour of Vibratory-Driven Open Steel Pipe Piles</b> Johannes Labenski, Institute for Geotechnical Engineering, University of Stuttgart, Germany	<b>Updates from DFI Europe BIM/Digitalisation and DFI PIMS Committees</b> Jamey Rosen, P.Geo, Geosyntec Consultants, Canada and Jason Boddy, ARUP, U.K.	<b>Civil Engineering Feasibility Study for CERN's Future Circular Collider</b> Joanna Louise Stanyard, CERN, Switzerland
16:55 - 17:25	Panel Discussion / Q&A	Panel Discussion / Q&A	Panel Discussion / Q&A
17:25 - 17:45	Closing Statements		

# Post-Conference Day Schedule: Friday, June 8, 2018

Please meet at Registration Area at 09:00.

09:00 - 13:00 Technical Visit (Foundations of the Roman Catacombs) – Optional; Separate fee required

09:00 - 13:00 Technical Visit (Rome Metro C) – Optional; Separate fee required

\* Schedule subject to change

# Poster Presentations

## PARALLEL SESSION A1 – DEEP FOUNDATION TECHNOLOGIES: PILE CONSTRUCTION

**Design and Construction of a 130.000 sqm Logistic Platform in Trieste's Port, ICOP & LWN: An Organization, Logistic and Powerful Rigs Winning Combination**  
Massimiliano Bringiotti, Geotunnel, Italy

**New York City Landmark Structures - Reconstructing from the Inside Out**  
Amber Vail, P.E., GZA GeoEnvironmental of New York, U.S.

**Steel Sheet Piling in Liquefiable Soils in Maasvlakte, Rotterdam**  
Bruno Pasqualini, TechnipFMC, Italy

## PARALLEL SESSION C1 – GROUND MODIFICATION TECHNOLOGIES: SOIL MIXING

**A Deep Soil Mixing Application for a Road Slip Fast Repair**  
Giuseppe Iorio, Soilmixing, Italy

## PARALLEL SESSION A2 – DEEP FOUNDATION TECHNOLOGIES: NEW DEVELOPMENTS AND INNOVATIVE TECHNIQUES

**Annular Monoblock Bridge Foundations**  
Dario Fedrigo, ALPE Progetti, Italy

**Job Site Reports Related to Deep FDP, Big Diameter CSP and Ring Vibrator Executed at the Limits by the Same LWN Drill Rig**  
Massimiliano Bringiotti, Geotunnel, Italy

**The Field Investigation of Tension Cracks on a Cement Grouted Slender Column During the Thermal Response Test**  
Yue Ouyang, Skanska UK, U.K.

## PARALLEL SESSION B2 – DESIGN AND MODELING CRITERIA: DEEP FOUNDATIONS EXECUTED WITHOUT EXCAVATION

**Evaluation of Effectiveness of Slope Stabilization Using Monitoring Techniques: An Application in Northern Italy**  
Enrico Mittiga, ANAS, Italy

**The Importance of Energy Evaluation on an Individual Pile Basis**  
Julian Seidel, Foundation Specialists Group, Australia

**The Normalized Bearing Graph and Dynamic Reduction Function Concepts in Pile Acceptance**  
Julian Seidel, Foundation Specialists Group, Australia

## PARALLEL SESSION C2 – GROUND MODIFICATION TECHNOLOGIES: OTHER TECHNIQUES

**Case Studies of Ground Improvement Using Rammed Aggregate Piers in Problematic Soils Allowing for Conventional Foundation**  
Roberto Avendano, GeoPacific Consultants, Canada

**Innovations in Ground Improvement: Creating Composite Ground with Drill Displacement Column™ and Auger Cast Column™**  
Sam Warren, Farrell Design-Build, U.S.

**Long Term Mechanical Property of Cement Treated Loam Used in Road Embankment**  
Yukika Miyashita, Public Works Research Institute, Japan

**Performance of a New Driven Battered Micropiles System in Sand**  
Amirhassan Mehdizadeh, Melbourne University, Australia

**Properties of Ground Improvement Using Low CO2 Emission Cement**  
Takao Kono, Takenaka, Japan

**Underground Car Park in the Ancient "Morelli" Cavern in Naples**  
Marco Autelio Piangatelli, CIPA, Italy

## PARALLEL SESSION A3 – DEEP FOUNDATIONS TECHNOLOGIES: DIAPHRAGM WALLS

**Application of Long-Chain Polymer Slurry as Soil Stabilization in Reverse Circulation Drilling System**  
Goncalo Costa, Ground Engineering Operations, Malaysia

**Challenges Faced in the Construction of 60m Deep Diaphragm Walls, with Hydraulic Grabs in Central London, England**  
Paul Wiltcher, Cemention Skanska, U.K.

**Doha Metro's Flagship Triple Line Interchange Station**  
Cremona Makaginsar, Mott MacDonald, U.K.

**Good Reasons to Swap from Trench Cutter to Hydraulic Grab; Liebherr and Saos, Actual Cases from Florence, Rome and Milan**

Massimiliano Bringiotti, Geotunnel, Italy

**Suez Canal Underpass: 260.000 M<sup>2</sup> of Deep Diaphragm Wall Excavation Experienced with LWN at Almost 360°**  
Massimiliano Bringiotti, Geotunnel, Italy

**The Gaasperdammertunnel - Geotechnical Challenges in Amsterdam**  
Dennis Grotegoed, Ballast Nedam, The Netherlands

**Unveiling the Vision of Soil Stabilization Fluids: The Future**  
Eonio Trindade, GEO - Ground Engineering Operations, Portugal

**X10 Concept to Improve Quality and Durability of Diaphragm Walls**  
Michel Boutz, SGS INTRON, The Netherlands

**Rheology and Bleeding Assessment On Site – New Tests Proposal**  
Sabine Darson, Soletanche Bachy International and FNTP, France

## PARALLEL SESSION B3 – DESIGN AND MODELING CRITERIA: OTHER TECHNIQUES

**Anchor Head Models: Classification, Adaptability & Design**  
Mohamed Ansriou, Franki Foundations, Belgium

**Damaging of the St. Benedetto Tunnel After the Quake of October 30, 2017: Study and Repair**  
Luca Cedrone, ANAS, Italy

**Method for Assessing Damage Induced in Utilities Due to Ground Movements from Major Infrastructure Projects**  
Zeena Farook, Arup, U.K.

## PARALLEL SESSION C3 – GROUND MODIFICATION TECHNOLOGIES

**The Multi-Purpose Bottom Plug (MPBP): An Innovative Solution for the Galataport Project in Istanbul, Turkey**  
Claudio Asioli, TREVI, Italy

**Intervention for Improving Characteristics in Fault Zone in Tunnel Alignment – Consolidation Using Chemical Grouting with Mono and Bi-Component Resins**  
Marco Autelio Piangatelli, CIPA, Italy

**Lattice-Shaped Jet Grouting Configuration to Prevent Soil Induced Liquefaction at Christchurch Town Hall – New Zealand**  
António Cristóvão, JETsj Geotecnia, Portugal

## PARALLEL SESSION A4 – DEEP FOUNDATIONS TECHNOLOGIES: DEEP FOUNDATIONS BEHAVIOR AND TESTING

**The Influence of a Thin Weak Soil Layer on the Pile Bearing Capacity**  
Shilton Rica, University of Luxembourg, Luxembourg

**Study of Effects of Construction Methods on Performance of Drilled Shafts**  
Sajid Iqbal, National Engineering Services Pakistan (NESPAK), Pakistan

**Investigating the Development of a Pile's Capacity Over Time**  
Katie Persons, Civil Solutions Associates, U.S.

**Study on the Bearing Capacity of Bored Piles with Improvement Techniques**  
Ana Beatriz Araújo Nobre Dias, Universidade Federal de Alagoas, Brazil

**Group Effects for Pile Rows Under Passive Lateral Loading**  
Johannes Aschrafi, Institute for Geotechnical Engineering, Germany

**Experimental Studies on the Lateral Load Carrying Capacity of Pier Foundations for Bridges**  
Sukhmander Singh, Santa Clara University, U.S.

**Study on the Resistance of Bored Piles with Rings**  
Leonardo Barros Dantas Brandão, Universidade Federal de Alagoas, Brazil

**Laboratory Evaluation of a Proposed Nondestructive Testing System for Detecting Anomalies Below Drilled Shaft Excavations**  
Joseph Coe, Temple University, U.S.

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