SuperPile’20
Piling Design & Construction Conference

June 18-19, 2020  |   Presented as a Virtual Event

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SuperPile ‘20 | June 18-19, 2020 | Virtual Event

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Conference Introduction
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Geotechnical Baseline Reports
Geotechnical and legal experts will discuss the meaning, benefits, and challenges of using a Geotechnical Baseline Report (GBR) for foundation projects. A GBR is a concise document developed by the design team and the project owner based on geotechnical data reports, previous experience, and engineering judgment. The GBR provides a contractual representation of the anticipated underground conditions for the project and fairly allocates the risk from the subsurface uncertainties between the owner and the contractor. GBRs were developed for and are used mainly for tunneling and underground structures, and this panel will discuss their potential use in preventing or resolving disputes for foundation projects.

All presentations are in Eastern Daylight Time (EDT)

11:00 a.m. - 11:05 a.m.
Conference Introduction
Lyle Simonton, P.E. | Subsurface Constructors Inc.

11:05 a.m. - 12:35 p.m.

12:35 p.m. - 12:50 p.m.
BREAK

12:50 p.m. - 12:55 p.m.
Welcome Back
Paul Axtell, P.E., D.GE | Dan Brown and Associates, PC

12:55 p.m. - 1:00 p.m.
DFI Women in Deep Foundations Committee – New Video Release
Helen Robinson, P.E., D.GE | GEI Consultants, Inc.

1:00 p.m. - 1:30 p.m.
The Incremental Rigidity Method – More-Direct Conversion of Strain to Internal Force in an Instrumented Static Loading Test
Van Komurka, P.E., D.GE, FASCE | GRL Engineers
The Incremental Rigidity (IR) method can be used to determine the relationship between axial rigidity and strain at individual strain gage levels. From this relationship, measured strains can be converted to internal forces without having to know either a deep-foundation element’s elastic modulus or its cross-sectional area. The IR method for converting strain to internal force in an instrumented static loading test is presented, including assumptions, uncertainties, limitations, and best practices highlighted with case histories.

1:30 p.m. - 2:00 p.m.
Pipe Piles in Plastic Soils: Effect of Installation Activities on Side Resistance
Steve Saye, P.E. | Kiewit Infrastructure Engineers
Pile installation methods influence measured side resistance of driven pipe piles bearing in plastic soils. Construction influence factors to modify a SHANSEP-based side resistance method calculation to consider and estimate the influence of specific pile installation actions on the resulting calculated pile capacity are suggested.

2:00 p.m. - 2:30 p.m.
Impact of Heave on Permanently Cased Drilled Shaft Axial Capacity in Sand
Glen Bellew, P.E. | USACE-Kansas City District
Heave occurred during construction of a permanently cased drilled shaft in an alluvial deposit. The shaft was load tested to failure and, as expected, it experienced axial failure at a load significantly lower than the originally predicted ultimate capacity of the shaft. A subsurface investigation was conducted within days of the load test to better understand the impacts of heave on soil conditions in the immediate vicinity of the test shaft and evaluate the apparent effects of heave on the permanently cased shaft.

2:30 p.m. - 2:35 p.m.
Closing Remarks
Theresa Engler | Executive Director, DFI

2:35 p.m. - 3:35 p.m.
Networking Happy Hour with Trivia Game
Hosted by ICE®- International Construction Equipment, Inc.

*Subject to Change
11:00 a.m. - 11:05 a.m.  
Conference Introduction  
Lyle Simonton, P.E. | Subsurface Constructors Inc.

11:05 a.m. - 11:35 p.m.  
Micropiles for Permanent Support Applications in Sedimentary Formations  
Jesús Gómez, Ph.D., P.E., D.GE | GEI Consultants  
Over the past 15 years, hollow bars have been increasingly used for foundation of new structures and underpinning of existing footings. Speed of installation, large geotechnical capacity, and ability to be installed with batter are distinct advantages. This presentation will highlight Type-B micropiles used in granular, sedimentary formations with temporary casing.

11:35 a.m. - 12:05 p.m.  
Reducing Risk and Conservatism in Drilled Shaft Design: A Case Study  
Justin Toney, P.E. | Quanta Subsurface and Brock Wallis | MJ Drilling  
A collaborative, value engineering approach was taken on a new 345 kV transmission line outside downtown Chicago. The foundation designer and contractor worked together with the owner to optimize ten large diameter drilled shaft designs for site-specific conditions and contractor capabilities. This case history highlights how foundation efficiencies can be realized when stakeholders are able to coordinate throughout the design and construction process.

12:05 p.m. - 12:35 p.m.  
Using Thermal Integrity Profiling (TIP) to Monitor Shaft Cooling System for Large Diameter Drilled Shafts  
David Schoen, P.E. | S&ME, Inc.  
Large diameter drilled shafts can meet the criteria for mass concrete, and South Carolina DOT is considering provisions to limit the maximum overall temperature and the maximum differential across these shafts. To meet a project’s requirements, a design-build team developed a cooling system installed in the shafts and used thermal integrity profiling to assess the effectiveness of the cooling system.

12:35 p.m. - 12:50 p.m.  
BREAK

12:55 p.m. - 2:25 p.m.  
Panel Discussion | Moderator: Gerald Verbeek | Allnamics Pile Testing Experts, BV  
Panelists: Ryan Allin, P.E. | Pile Dynamics, Marcel Bielefeld, MSc, MScBA | Allnamics, Erik Loehr, Ph.D., P.E. | University of Missouri, Robert Simpson | Load Testing Consulting, Ltd.  
Horses for Courses - Pile Testing  
A wide range of load and integrity testing methods can be applied for foundation testing. Not every method is suitable for every foundation test. A good understanding of each of these methods allows the appropriate test method(s) to be selected. This panel discussion will explore the features, limitations, and appropriate use of static load testing as compared to bi-directional load testing, and low strain dynamic testing as compared to thermal integrity profiling. Extensive Q&A will be held deepening understanding of the methods.

2:25 p.m. - 2:30 p.m.  
Closing Remarks  
Theresa Engler | Executive Director, DFI

2:30 p.m. - 3:30 p.m.  
Networking Happy Hour with Trivia Game  
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Deep Foundations Institute (DFI) is an international association of contractors, engineers, manufacturers, suppliers, academics and owners in the deep foundations industry. Our multidisciplinary membership creates a consensus voice and a common vision for continual improvement in the planning, design and construction of deep foundations and excavations.

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Subsurface Constructors is a full-service geotechnical contractor offering a comprehensive list of services for deep foundation, earth retention and ground improvement solutions. With over 110 years of experience in the deep foundation industry and a team of geotechnical engineers, Subsurface helps develop foundation solutions in soft soils, often through the design/installation of aggregate pier ground improvement. Subsurface Constructors is headquartered in St. Louis, but works nationwide and has regional offices in Boston, Cleveland, and Minneapolis.

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ADSC-IAFD is a construction trade association dedicated to the deep foundations industry. Our focus is on drilled shaft, anchored earth retention, and micropile technologies. We are represented by specialty subcontractors, civil and geotechnical engineers, and equipment manufacturers and suppliers from around the world.

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The Geo-Institute is the professional “home” of almost 12,000 geotechnical engineers, geologists, and other geoprofessionals: a place where we build networks, learn from each other, share our own knowledge, and advance the geoprofessional community. Our members include practitioners, academics, and students from around the world, working together in 20 Technical Committees and more than 50 local Chapters. Our activities and programs include webinars, general and specialty conferences, speaker programs, and student programs; our member magazine is GEOSTRATA, published every two months. We are celebrating the 25th anniversary of our founding as a specialty Institute of the American Society of Civil Engineers.

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'As of 6/4/2020
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**Mexican Society of Geotechnical Engineering**

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The Mexican Society of Geotechnical Engineering (SMIG) is an association that aims to promote the development of engineers dedicated to the teaching and research of the professional practice of geotechnical civil engineering, through the dissemination of technical publications and participation in courses, workshops, seminars, symposia, colloquia and specialized webinars.

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**Pile Driving Contractors Association**

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Piling Canada magazine was first published in 2006 and is the premier national voice for the Canadian deep foundation construction industry. Piling Canada is published quarterly and directly mailed to more than 2,100 professionals involved in Canadian deep foundations; send us an email to be added to the free distribution list.

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