

Vancouver Geotechnical Society

A Local Section of the Canadian Geotechnical Society

www.v-g-s.ca

2022-2023 Executive Committee:

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NOTICE OF UPCOMING AGM AND TECHNICAL PRESENTATION Monday, 16 October 2023

TOPIC: Helical Piles: Efficient Foundation for Static, Dynamic and Seismic Applications

<u>SPEAKER:</u> M. Hesham El Naggar, Ph.D., P.Eng., FCAE, FEIC, FASCE – Professor, University of Western Ontario

Dr. Hesham El Naggar is a Distinguished University professor and a world leader in foundation dynamics and geotechnical earthquake engineering. He advanced the state-of-the-art in analysis and design of foundations for dynamic loads. His innovative work on foundation dynamics led to the development of DYNA6, the industry-standard in machine foundation design. His work on foundation design and geotechnical earthquake engineering has been incorporated into design guidelines recommended by regulatory bodies and learned societies. He is Editor-In-Chief of Soil Dynamics and Earthquake Engineering and past Associate Editor of the Canadian Geotechnical Journal. He published more than 550 technical papers and book chapters including 400 in selective and prestigious journals on foundations, soil-structure interaction and geotechnical earthquake engineering; and consulted on major projects worldwide. He has delivered more than 50 plenary, keynotes and invited speeches at national and international conferences. Dr. El Naggar attracted more than \$20M of research funding and graduated more than 120 PhD and Master students. In recognition of his outstanding research contributions, Dr. El Naggar received many prestigious awards including the Geosynthetics, Stermac, Meyerhof and Canadian Geotechnical Colloquium Speaker Awards from the Canadian Geotechnical Society; the Ontario Professional Engineers Medal for Engineering Research & Development; the prestigious 2021 Zhongquancun Award for Outstanding Contribution, from Beijing Council of Science and Technology; the Faculty Scholar Award, Outstanding Teaching, Research Excellence and Distinguished University Professor Awards from Western University. He is an elected Fellow of Canadian Academy of Engineering, the Engineering Institute of Canada and the American Society for Civil Engineers.

CONTENT:

Helical piles have become popular foundation option owing to their many advantages related to ease of installation and large load carrying capacity. They are typically manufactured of straight steel shafts fitted with one or more helices and are installed using mechanical torque. They can sustain static and dynamic loading and are increasingly used in applications that induce complex loading conditions on them. The behavior and design of single vertical helical piles subjected to static loading is well investigated. However, the dynamic and seismic behavior of single helical piles and their group behavior are of great importance in modern foundation engineering practice but not yet well understood. This presentation presents recent advances in evaluating the axial and lateral capacity and performance of single and grouped helical piles and their response to static, dynamic and seismic loads.



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The VGS would like to thank the following companies (in alphabetical order) for sponsoring this Cross Canada Lecture Tour:

- Conetec
- Geopier
- Reinforced Earth
- Rocscience
- Thurber Engineering Ltd.











DETAILS: Location: Centennial Room, Executive Hotel, 4201 Lougheed Highway, Burnaby, BC V5C 3Y6

Social Hour: 5:30 to 6:30 pm (drinks available at the hotel bar)

AGM: 6:30 to 6:45 pm (No need to RSVP)

Technical Presentation: 6:45 to 7:45 pm (No need to RSVP)

Dinner: 8:00 pm (\$20 will be charged for dinner). If you would like to stay for dinner, please RSVP to Ali

Jahanfar via email (ali.jahanfar@stantec.com) or at the door.