

Thank you to all the ISM members who provided helpful and constructive input to *The Bond Zone*. As promised, in this issue we are pleased to include a few new sections, which we hope will become regular features. We welcome submittals from the membership for any of these sections.

Within this Issue:

- ISM Toronto 2007 information.
- Research news focusing on Ph.D. candidate Gary Weinstein's work.
- Spotlight on: The first use of "Root Piles" in the U.S.
- Membership News including Founding Members.
- Micropile Industry Events.

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Notes from the Chairman

Toronto, here we come ...

Preparations for the 2007 ISM workshop in Toronto are underway and we'll continue our efforts to develop micropile technology and industry, which we started in Seattle in 1997. During our first ten years, micropile specialists from about 20 countries have joined us – and we have good chances of expanding our activities to 50 countries within the next few years. The micropile industry has grown about 40 percent annually worldwide during the last 15 years, and we have a huge potential for future growth, if we can find new applications for micropile technology and new countries to use those technologies.

The homepage of ISM will be further developed to give up-to-date information on micropiles and the Society, and also to increase the

number of contacts and interaction within the micropile industry. We have MIDA (www.ismicropiles.info), a new database for load test results and analysis, and we need to input your load observations in the database as soon as possible. When we get more data to the MIDA database, we can offer valid statistical information on bearing capacity features of the micropiles. The user interface of MIDA is being updated at the moment and there are a few additions to the database, including shaft resistance calculations.



Jouko Lehtonen,
ISM Chairman



ISM Chairman
Dr. Jouko Lehtonen

2007 ISM Membership Drive



The biggest challenge facing ISM is building membership. We hope that you will continue to support ISM by renewing your membership



Niagara Falls as seen from Canada: more information on page 2.



The Road to Toronto: ISM's 8th Workshop on Micropiles

Dates: September 26-30, 2007

Workshop Venue: Historic Distillery District
Downtown Toronto, ON Canada
(www.thedistillerydistrict.com)

Hotel (rooms): Novotel Hotel, Toronto, ON, Canada
45 The Esplanade
M5E 1W2 Toronto Canada
Phone: +1 (416) 367-8900
<http://www.novotel.com>
Mention ISM when booking



Lizzi Lecturer
Dr. Thomas Herbst

Sessions: Hollow bars; Design; Case Histories; Load Testing; Joplin, Missouri Micropiles; Historic Evolution and Usage of Micropiles

Lecture: Lizzi Lecture by Dr. Thomas Herbst, Germany – A historical review of the past 55 years of achievements in micropile technology.

Technical Highlight: On-site field monitoring and low headroom installation demonstration.

Social Highlight: Niagara Falls visit and full companions program.

Research



Long standing **ISM delegate and current Secretary, Gary Weinstein** has been working in France for the past several months on scale-model tests to study cyclic loading of micropiles. He is conducting this research as part of the requirements for Ph.D. at Polytechnic University in Brooklyn, NY. The work is being conducted in cooperation with CERMES' soil mechanics research laboratory at the Ecole Nationale des Ponts et Chaussées in Paris.

The project consists of calibration chamber model-scale axial cyclic loading tests on instrumented micropiles. A new, short-term testing procedure is being used to

assess long-term performance and evaluate the development of time-dependent cyclic strains (soil-pile interaction). The effects of variable strain rates, cycling frequency and axial load levels on micropile system performance are being assessed. Data from these tests will be used to develop reliable design methods for a variety of cyclic loading applications.

This research program has been supported by ISM members Schnabel Engineering, Geosystems, L.P., Hayward Baker, CON-TECH Systems Ltd., Ischebeck, CAT Construction, Traylor Group, DBM Contractors, Moretrench, Nicholson Construction, Applied Geotechnical Engineering and Branlow Ltd. Results from this study will be presented at the upcoming ISM workshop in Toronto (September 2007). Inquiries may be directed to gmweinstein@poly.edu.

Project Spotlight



First use of "Root Piles" in the U.S.

Year: 1972

Location: 50 miles west of Chicago, Illinois, USA

Problem: Differential settlement of newly constructed one-story homes, causing cracking of thin, unreinforced concrete footing walls and corresponding stress cracks inside the homes.

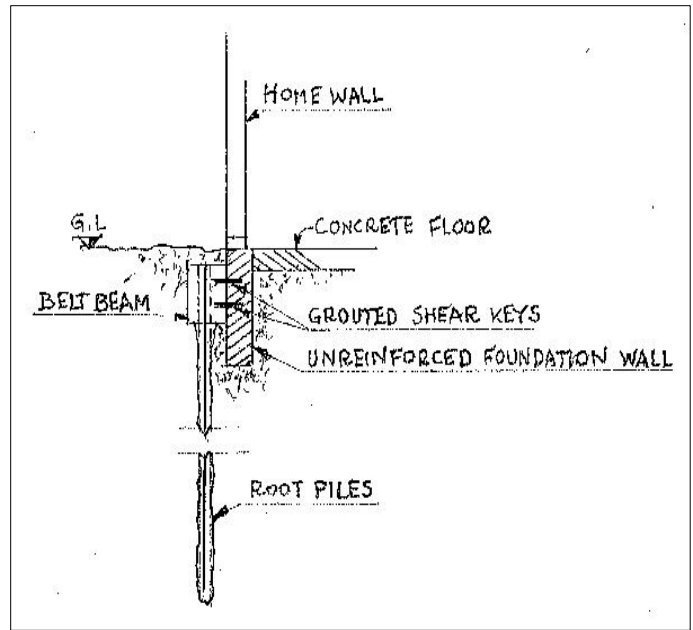
Soil Conditions: Clayey fill – placed in a frozen state.

Solution: Shifting the weight of the homes onto a reinforced concrete "belt beam" structure supported by root piles. The belt beam encompassed and was connected to the footing walls by grouted shear keys (sketch). The use of conventional encased angled micropiles in the foundation walls was precluded because the walls were too thin to prevent additional cracking failures and micropiles could not be installed from within the homes.

Remediation costs: \$9,000 to \$11,000 US per home.

This project spotlight was provided by Mr. Fioravante "Van" Bares.

Thank You, Van.



Contributor Van Bares can be contacted at: fbares@comcast.net

Micropile Industry Events

- June 25-29, 2007:** ADSC's Anchored Micropiles Installation School, hosted by **ISM Member DBM Contractors**, Federal Way, Washington. Event includes Micropile Design Construction Seminar. Information may be obtained from ADSC's Mike Moore at mmoore@adsc-iafd.com.
- July 25-28, 2007:** ADSC's 2007 Summer Meeting, including ADSC/DFI Joint Micropile Committee Meeting, Lake Tahoe, Incline Village, Nevada, USA. More information may be obtained from **ISM Members and current Committee Chairmen Allen Cadden (Schnabel Engineering):** acadden@schabel-eng.com and **ISM Member John Wolosick (Hayward Baker, Inc.):** jrwolosick@haywardbaker.com.
- Sept 26-30, 2007:** International Society for Micropiles, 8th Workshop - Toronto, ON, Canada. Further information provided on Page 2 and also at: www.ismicropiles.org.
- Oct 10, 2007:** DFI's Micropiles - Developments in Design and Construction Colorado Springs, CO. Further information may be obtained from **John Wolosick (Hayward Baker, Inc.)** jrwolosick@haywardbaker.com.

ISM'S FOUNDING CORPORATE MEMBERS

COMPANY	REPRESENTATIVES
Atlantic Drill & Equipment, Co.	Mr. Tom Lambert and Mr. Steven Moomaw
BelPacific Excavating & Shoring, Ltd. Partnership	Mr. Greg Samchek and Mr. Cory Yacyshyn
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geotechnica, s.a., Inc.	Ms. Mary Ellen Bruce
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Traylor, LLC	Mr. Robert P. Traylor
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Dr. James Mason
Mr. Gary Quinn
Mr. Mike Turner
Mr. John Wolosick



From the Executive Director's Desk



The upcoming workshop in Toronto provides us with an opportunity to reflect on the decade of effort we have spent promoting and disseminating micropile information since our first workshop in 1997. We have progressed from our initial charge of transferring technology internationally to beginning to fulfill our mission of being the "international forum for coordinating and promoting all phases and aspects of micropile technology". The more recent ISM workshop sessions have focused on the process of developing the group into a stand-alone society. Now that we have accomplished this goal, we are rightly focused on providing exceptional technical and professional benefits that will allow us to maintain existing members and attract new ones.

ISM focuses exclusively on micropiles. The luxury of dedicating our efforts to a single technology is, however, paired with the demand that our activities reflect the best and most current aspects of this industry. Thriving as a society at the cutting edge of technology will require technical excellence, dedication and effective communication. We are fortunate to count among the ISM members many of the premier practitioners in the micropile industry – all of whom are extremely generous with their time and resources spent teaching others and promoting micropiles. That said, there remain many other key players in the international micropile industry who must be invited to participate and many countries that could benefit from our services. Our challenge is to define a comprehensive strategy for engaging these engineers, suppliers, researchers, contractors and owners and soliciting their contributions. We are grateful to the many members who actively invite associates to explore ISM. It is through these word-of-mouth promotions that we gain associates. A good friend and loyal supporter of ISM has affectionately referred to us as "micropiliacs"...I take that as a compliment and welcome new members to join this unique group.

Confident that our members have the technical expertise and dedication required to sustain us at the forefront of the micropile industry, I would suggest that communication is the key to fulfilling our mission. For the ISM to function as a forum of excellence for micropiles, we must acquire and disseminate micropile information effectively. I interpret my main function as Executive Director of ISM to be a communicator: the connection between members and the vehicles that provide instruction and networking on micropile topics. To this end, I will rely on you, as members, to work with me to define channels of communication that will allow me to properly gather and synthesize information most beneficial to the Society. I invite you to email or call me to discuss ways in which I may remain current with micropile activities in your area of the world.

As always, I welcome your input.

– Mary Ellen Bruce

ISM Motto Contest

The motto of a company or organization can speak volumes about the group's vision. What will the ISM's motto be? We are hosting a motto contest to select an appropriate, catchy motto for ISM. All entries will be evaluated by the ISM Board of Directors and the winning motto will be announced at the upcoming workshop in Toronto, ON, Canada in September 2007.

- Apple Computer – *Think Differently*
- Cub Scouts – *Do Your Best*
- Olympic Games – *Citius, Altius, Fortius (Faster, Higher, Stronger)*
- Nokia – *Connecting People*
- Audi – *Vorsprung durch Technik (Progress through Service)*
- Nike – *Just Do It*
- ASCE – *A Better World By Design*
- Honda – *The Power of Dreams*
- Sony – *Like No Other*
- Old Milwaukee Beer – *It doesn't get any better than this!*



SUBMISSIONS

Send your motto suggestions to Mary Ellen Bruce at mebruce@cobweb.net. Please include your name, your preferred email address, and your country of residence.

RULES

This contest is void where prohibited. All submissions become the property of ISM. Entries must be received by September 1, 2007. The entry must be your original idea, and not a copy that may be subject to copyright laws.

PRIZE

ISM fleece jacket