

This issue of The Bond Zone is focused on the ISM workshop held last autumn in Toronto, ON, Canada.

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Let's do it together!

ISM has always been, and will always be an excellent example on working together. In fact our primary means for this since 1997 has been the International Workshops, where we have worked together in an exceptionally warm and friendly atmosphere. The results of working together have been remarkable: we have members or workshop delegates from over 30 countries, the micropile business is growing significantly every year and we have helped in creating micropile codes in several countries.

The spirit of the International Workshops on Micropiles has been something really special. We have created a unique collaboration to develop micropile technology and business with designers, contractors, suppliers, researchers and universities, who are participating in ISM activities.

How could we strengthen this spirit? Maybe we need more ways to work together. Today we are lucky to find a vast collection of new IT tools, such as the various Wikis (Wikipedia, Wikiversity etc.), several ways to deliver videos and photos across the world and discussion forums. We need special tools for our members and ways for the visitors to contact us in order to expand our industry.

ISM has been always working together and it means also great opportunities for students to acquire knowledge on relatively new technology. Our students in Turku University of Applied Sciences have attended in many ISM activities, e.g. working for this issue of the Bond Zone. In the future they will be a key solution to find new means and new know-how for ISM – together.



ISM Chairman
Dr. Jouko Lehtonen

2008 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.

ISM 2007 – Toronto, ON, Canada



The 8th and most recent ISM workshop was held in Toronto, Ontario, Canada from September 26 to 30, 2007. It will likely be remembered for its superb organization, challenging and controversial field demonstration program and the influx of new, *active* delegates. The event was hosted by Isherwood Associates, Geo-Foundations Contractors, Inc., and CON-TECH Systems, Ltd. The workshop included technical presentations, social gatherings, and cultural excursions. The Organizing Committee comprised Nadir Ansari, Isherwood Associates; Jim Bruce and Todd Edmunds, Geo-Foundations Contractors, Inc.; and Dan MacLean and Horst Aschenbroich, CON-TECH Systems, Ltd.

Historical Venue

The workshop was held at the 175-year-old Historic Distillery District in downtown Toronto, the former location of the Gooderham and Worts Distillery. Set on 13 acres (over 5 hectares) in downtown Toronto, the forty plus buildings constitute the largest and best preserved collection of Victorian industrial architecture in North America. This national historic site is also Toronto's first pedestrian-only village and the city's only historic district. The technical workshop events were held at the Fermenting Cellar in the Distillery, which is now converted into large group event space.

(www.thedistillerydistrict.com)

Organizations, Delegates & Sponsors

The staff of Isherwood Associates, lead by Ms. Leanne Squire, was chiefly responsible for the on site organizations. The thoughtful planning allowed for a very smoothly run event with many considerate touches. ISM gratefully acknowledges the time and effort expended to create such a well-run and enjoyable workshop.

The delegation comprised representatives from universities, engineering consultants, contractors, owners, and material and equipment suppliers. A total of 11 countries were represented: Argentina, Austria, Canada, Finland, Germany, Japan, Portugal, Sweden, U.K., U.S.A. and Venezuela.

The workshop activities were made possible by the generous contributions of the sponsors: Bredenberg Teknik; Geotechnical Design Systems, Inc.; HC Matcon; IB-Brandner; LB Foster Company; Williams Form Engineering Corp.; Shannon & Wilson, Inc.; Moretrench American Corporation; King Packaged Materials Company; geotechnical, s.a., Inc.; Schnabel Engineering; DBM Contractors, Inc.; North American Construction Group; Special Construction Machines ECA Canada Co.;

Belpacific Excavating & Shoring; Hayward Baker, Inc.; Rautaruukki Oyj; Advanced Construction Techniques, Ltd.; Dywidag Systems International Canada Ltd.; Friedrich Ischebeck GmbH; CON-TECH Systems Ltd.; Atlantic Drill & Equipment Company; Nicholson Construction Company; Soletanche-Bachy.

Technical Presentations

A total of 32 presentations were delivered during the 8 technical sessions, organized by Executive Director of ISM, Mary Ellen Bruce, P.E., U.S.A.

ISM Chairman, Jouko Lehtonen, Turku University of Applied Sciences, Finland, provided a brief outline of the ISM's origins and activities and showed an entertaining video developed from footage of the IWM 2000 in Turku, Finland.

The 4th Lizzi Lecture, highlighting the evolution of micropiles internationally, was delivered by Dr. Thomas Herbst, retired from Dywidag Systems International, Ltd, of Germany.

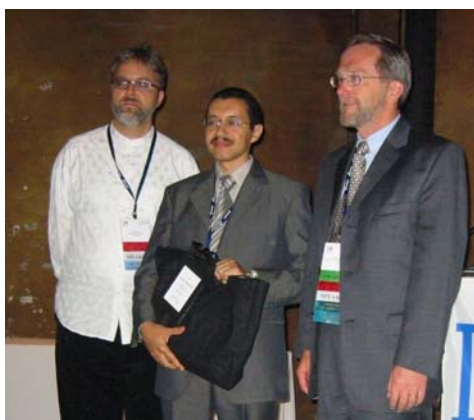
The 3rd Lizzi Scholarship was awarded to Mr. Mohamed Elkasaby of the Univer-

(Continued on page 3)



ISM group photograph in front of the Gooderham and Worts Distillery.

ISM 2007 — Toronto, ON, Canada



From left to right Nadir Ansari, Mohamed Elkasabgy and Jouko Lehtonen.

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sity of Western Ontario in London, ON, Canada. He presented the results of his ongoing research on finite element analyses of axially loaded micropiles and a proposal for future research on static and dynamic performance of micropile groups and single micropiles. ISM presented Mr. Elkasabgy with complimentary registration at the workshop, reimbursement for his travel and accommodations expenses and a series of fundamental micropile research publications and design documents. ISM gratefully acknowledges ADSC and DFI for generously donation technical literature for Mr. Elkasabgy.

Field Demonstration Program

The technical presentations were supplemented with a full-scale field demonstration program including a real time testing and data acquisition. The project manager for the field demonstration program was Mr. Jim Bruce of Geo-Foundations Contractors, Inc., Canada. A geotechnical investigation was conducted, and the boring logs were provided to the contestants. Three micropiles were installed for testing, and six rock anchors were installed as reactions. Each micropile was statically loaded in compression: two buckling tests were performed, and one was tested as a "control" pile.

The challenge was made more tempting by Isherwood Associates' offer of a 1000 CAD cash prize to the delegate who

answered most accurately the question: How did it perform under loading? The contest was capably judged by a Mr. Paul Woodfield of Branlow Piling, U.K. (contractor), Mr. Allen Cadden of Schnabel Engineering, U.S.A. (engineer), and Dr. Håkan Bredenberg of Bredenberg Teknik, Sweden (engineer/academic). The winner of the challenge was Mr. Graham Smith of Structural Preservation Systems, Inc. (U.S.A.), who cited that his success was due to a detailed understanding of local geology, having lived in Toronto and an understanding of the installation and construction conditions, especially the drilling technique, which allowed for an accurate estimate of borehole roughness and therefore bond stress.



Caricature of Field Demonstration Judges drawn by Carol Domitric.

The field demonstration prompted lively discussion and expressed opinion – for which ISM workshops are typically known and ISM delegates are never short of. ISM gratefully acknowledges the generous contributions of Geo-Foundations Contractors, Isherwood Associates, Monir Precision Monitoring, CON-TECH Systems, Dywidag-Systems International, Williams Form Hardware, King Packaged Materials and Terrain Geotechnical Consultants who made the field demonstration possible.

Social Program

As before there was also an extensive social program during the workshop. A full companion's program was organized and guided by Jan Lancaster of Isherwood Associates. The social program included guided tours of Toronto and the Royal

Botanical Gardens and a boat tour of the Toronto Islands. The delegates and companions were treated to an indigenous-themed dinner and performance by the Kanata Native Dance Theatre, a vibrant, energetic troupe of dancers and singers from the First Nations. The highlight of the social program was the final evening bus trip, including a tour and tasting at the Château des Charmes Winery at Niagara-on-the-Lake, dinner at the enchanting Old Stone Inn and nighttime view of the spectacularly-lit Niagara Falls.

Honors & Closing Remarks



At the ISM 2006 workshop held in Schrobenuh, Donald Bruce officially stepped down as Chairman of ISM. His tireless contribution and dedication to

the ISM were gratefully acknowledged at the Toronto workshop by the presentation of an honorary chairmanship of the society during a Lizzi Ceremony. ISM is also grateful to the many members who spent time conducting reviews of technical papers, including Dr. Donald Bruce, Mary Ellen Bruce, Allen Cadden, Dr. Jesús Gómez, Mark Hinton, Dr. Terence Holman, Jouko Lehtonen, Prof. Erik Loehr, Dr. James Mason, Tom Richards, Dr. James Stewart and John Wolosick.

The Toronto workshop boasted the *active* involvement of many new ISM members, who made presentations and contributed from the floor to group discussions. This response by new members is notable and reflects a promising advancement of the society. This new member involvement added to the workshop being exceptional and unique.

The 2007 Toronto workshop proceedings are available from ISM. Please contact Mary Ellen Bruce at info@ismicropiles.org. Past IWM/ISM proceedings may be obtained through ADSC, DFI and ISM.

Dr. Donald Bruce — Honorary Chairman



Dr. Donald Alexander Bruce is honorary chairman and the former chairman of the International Society for Micropiles. He lives in Pittsburgh, PA, United States and works as a consulting geotechnical engineer.

What hobbies do you have?

Spectator sports, my favorite teams include Glasgow Rangers (soccer), Pittsburgh Steelers (American football) and the Australian cricket team; working out; gardening; history; and family.

What is your educational background?

I graduated with a Bachelor of Science degree (First Class Honors) in Geology and Mineralogy in 1973. In 1977 I completed my Ph.D. in Civil Engineering. Both degrees are awarded by University of Aberdeen, Scotland. I am also preparing my Doctor of Science degree.

How did you get to micropile industry?

My Ph.D. subject was rock anchoring and, after graduation, I joined a specialty geotechnical contractor based in England. I was soon running our Company in Hong Kong where, by accident, our first major project was the minipiling (as we called it then) job at the H.K. Country Club. Returning in the mid-80's to England, we grew a micropile group within the construction company. Upon moving to the U.S. in late 1986, micropiling was just beginning to take off and, as they say, the rest is history.

Did you ever envisage yourself in the position you are now?

Success is the progressive achievement of a worthwhile goal, and we are all successful in different aspects of our careers and at different times. I was very honored to be nominated the first Honorary Chairman of ISM, since I have very fond feelings for the concept and its members. We are at a critical time in the development of ISM and our Executive Director needs all

the help, support and encouragement she can get.

What do you think will be, and is, the largest growth area for the micropile industry?

The future of micropiling, especially over the next 10 years is very bright. I see four main growth opportunities: construction in karstic limestone terrains; construction for retrofitting in seismic zones; construction in urban areas; construction in areas where historic timber piling is deteriorating due to isostatic rebound, as in the Baltic countries.

The conceptualization and realization of ISM/IWM was yours, how did this come about?

The first IWM was indeed organized under my leadership in 1997, but the idea for it (to transfer technology to our Japanese colleagues) and the funding for it (largely U.S. Government) came from Al DiMillio of the FHWA. Without his foresight and support, there would have been no further IWM's and so no basis for the ISM. Also, at various times, other bodies have stepped in financially to save the day and we owe a great debt of gratitude to individuals, corporations and trade groups, especially in North America, Japan, the U.K. and of course, Finland.

Could you give us a brief idea of what happens at the Micropile Workshops? And why do you think this is important?

The Workshops are great fun, and the emphasis has always been twofold — to assure open technology exchange, and to renew personal friendships at “cultural events” organized by the host country. Presentations are made in carefully defined technical sessions. We always try to assure that authors from the four main geographical groups (North America, Asia, Northern Europe and Western Europe) are represented in each session. Full technical papers are submitted and the collection issued as the record of the Workshop. These Proceedings now comprise a very impressive body of work, cataloging practice evolution for over a

decade. Each Workshop opens with the Lizzi Lecture — an address given by an invited specialist — and also features the award of the Lizzi Scholarship to a young researcher from the host country. These events help us to keep the good name of our “father of micropiles,” the late Dr. Fernando Lizzi, firmly to the fore, and provide a regular reminder to his surviving family of our love and admiration for their paterfamilias.

What is the most exciting current development happening in the micropile industry?

Throughout the world, the use of micropiles is continuing to grow in response to market needs, the skill and ingenuity of the contractors and manufacturers, and the focused excellence of our researchers. However, in my opinion, the most exciting development is that almost unique phenomenon: free and open technical exchange between the representatives of each of the industry sectors. This means that the industry continues to grow and advance, creating more and more opportunities for competition and participation. Admittedly the maturity of this “perestroika” concept is at different levels in different countries. For example, it is well developed in North America, rapidly advancing in Japan, but arguably and paradoxically only in the embryonic stage in some of the “older” Western European countries. This is a major challenge for ISM leadership in the years to come.

OBITUARY

It is with the deepest sorrow that we report the recent death of **Mr. Pasi Korkeakoski** of Rautaruukki of Hämeenlinna, Finland. Pasi was a much beloved member of ISM, and he will be remembered fondly for his vibrant character and valuable contributions to micropile research. He will be sadly missed. Pasi is survived by his common-law wife and two children Ella (15) and Juho (12). Contributions in support of the Korkeakoski children may be made through ISM by contacting Mary Ellen Bruce at info@ismicropiles.org.



The Road to London: ISM's 9th Workshop on Micropiles

Tentative Dates: May 13-17, 2009

Further information will be available at a later time.

Additional information may be obtained from ism2009@branlow.co.uk.

Micropile Industry Events

- April 3-4, 2008:** ADSC Micropile Design & Construction Seminar, Tuscany Suites & Casino, Las Vegas, NV, USA. Information may be obtained from ADSC's Yolanda Maloney at +1 (214) 343 2091 or ymaloney@adsc-iafd.com.
- June 8-14, 2008:** ADSC-IAF 2008 Faculty Workshop, Chattanooga, Tennessee, USA. Information may be obtained from ADSC's Jan Hall at jhall@adsc-iafd.com.
- June 16-19, 2008:** Development of Urban Areas and Geotechnical Engineering, St. Petersburg, Russia. For additional information see <http://www.georec.spb.ru/eng/conf/080616/>.
- July 30 - August 2, 2008:** ADSC Summer Meeting, Quebec City, Quebec, Canada.
- Oct 15-17, 2008:** DFI 33rd Annual Conference on Deep Foundations & 11th International Conference on Piling and Deep Foundations, Hilton New York, New York, NY, USA. For additional information see <http://deepfoundations08.org/>.
- Mar 15-19, 2009:** International Foundation Congress & Equipment Expo, Buena Vista Palace Resort, Orlando, Florida, USA. For technical questions please contact Conference Chairman Mohamed H. Hussein at MHGRL@pile.com.
- May, 2009:** International Society for Micropiles, 9th Workshop, London, United Kingdom.

ISM Has Moved

The address of International Society for Micropiles has changed. Here are the new contact details.

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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. We received 53 proposals for the ISM motto and now it's time for you to vote.

INSTRUCTIONS

Go to the address below, vote for up to 5 different mottos, and give us your contact information.

ADDRESS

<http://digijumenterprise.com/answer/?sid=171583&chk=7OJDA7YN>

