



ISSMGE TC 211 GROUND IMPROVEMENT NEWSLETTER n°11, July 2015

Dear reader,

In this 11th Newsletter we provide some information concerning the recent and upcoming activities of the ISSMGE TC211. Here below more information is given regarding the following topics:

- Organization of the **workshop TC211 to be held in Edinburgh** within the framework of the XVI ECSMGE (September 2015): presentation of the technical program and time schedule
- Publication of a new book: “Ground Improvement Case Histories” involving TC211 members
- Recent and upcoming events and activities related to the TC211

1. Workshop ISSMGE TC211 in Edinburgh (September 15, 2015)



Within the framework of the XVI European Conference on Soil Mechanics and Geotechnical Engineering, which will be held in September 2015 in Edinburgh (<http://xvi-ecsmge-2015.org.uk/>), the TC211 organizes a workshop dedicated to the ground improvement works.

This workshop will be held on Tuesday 15 September 2015 in the afternoon (at 2 p.m.) at the conference venue in the Ochil suite (80 seats capacity – possibly extendable to 95).

As previously mentioned, the Workshop TC211 will be entitled:

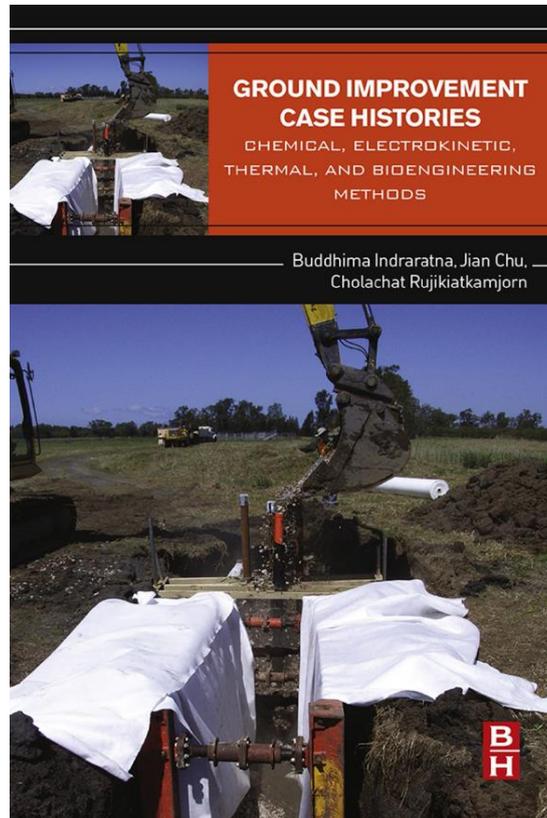
“Progress in QC/QA for GROUND IMPROVEMENT works”

The provisional program currently includes:

- **Antonio Viana Da Fonseca** (Portugal), the Chairman of TC 102 with a presentation regarding the reliability of the use of CPT, SPT, DPR, PMT and geophysical methods for the control of ground improvement works,
- **Richard Jewell** (UK) with the unusual topic of *in-situ* test and ground improvement in permafrost, hopefully with his Russian colleague Nicolai Volkov (Russia),
- **Henk Van De Graaf** (Netherlands) with the subject of *in-situ* tests and laboratory tests for ground improvement,
- **Jerome Racinais** (France) with the calibration of rigid inclusion parameters based on pressuremeter test results,
- **Jimmy Wehr** (Germany) with the topic of QC monitoring for vibro techniques,
- **Wim Maekelberg** (Belgium) with a presentation concerning the ground improvement techniques applied for the new railway construction works in Mechelen, Belgium.



2. Publication of a new book titled “Ground Improvement Case Histories” involving TC211 members



The first edition of the book, *Ground Improvement Case Histories*, published by Elsevier in 2005, has known a great success. It was thus decided to publish its expansion in a Second Edition. For the purpose of realizing that, a lot of TC211 members have been contacted and have worked together at the redaction of this new book. Edited by TC members (Buddhima Indraratna, Jian Chu and Cholachat Rujikiatkamjorn), the book is organized in three parts:

Part One: Modification by Chemical Admixtures

Part Two: Electro-Kinetic, Thermal and Explosion Based Techniques

Part Three: Bioengineering Techniques

Its content concerns a lot of Ground improvement methods such as jet grouting, deep mixing, geosynthetics, vertical drains, vacuum consolidation... notably written by TC211 members including Nicolas Denies, Noël Huybrechts, Anand Puppala...

The interested reader can find information via the following links:

<http://www.elsevier.com/books/ground-improvement-case-histories/unknown/978-0-08-100191-2>

<http://www.sciencedirect.com/science/book/9780081001912>



3. Upcoming activities and events related to the TC 211

19th Southeast Asian Geotechnical Conference and 2nd AGSSEA conference on Deep Excavation and Ground Improvement



AGSSEA

19TH SOUTHEAST ASIAN GEOTECHNICAL CONFERENCE & 2ND AGSSEA CONFERENCE

Deep Excavation and Ground Improvement

31 May – 3 June 2016

Dorsett Grand Subang, Subang Jaya, Malaysia

The 19th Southeast Asian Geotechnical Conference and the 2nd Association of Geotechnical Societies in Southeast Asia Conference (19SEAGC-2AGSSEAC) will be held in Kuala Lumpur, Malaysia on 31 May – 3 June 2016.

During the conference, a TC211 session will be organized as the theme of the conference is “Deep Excavation and Ground Improvement”. We currently group our effort with the organizing committee of the conference of the 19th SEAGC to prepare the TC211 session.

In agreement with the wishes of the organizing committee of the conference, the program of the session will finally include 8 presentations (duration 20 minutes) of papers selected within the panel of papers received by the official organizing committee.

The date and the final time schedule of the TC211 session will follow later with more information concerning the full technical program.

In addition of the TC211 session, the participants will have the opportunity to attend sessions on ground improvement and stabilization, soil characterization, field testing and permanent monitoring, shallow and deep foundations, geosynthetics and geoproducts, excavations and retaining structures...

The first bulletin of the conference can be downloaded from

<http://seags.ait.asia/news-announcements/19th-southeast-asian-geotechnical-conference-2nd-agssea-conference-deep-excavation-and-ground-improvement-31-may-3-june-2016/>



Workshop on Ground Improvement and soil stabilization at the 3rd ICTG 2016



The 3rd International Conference on Transportation Geotechnics will be held in September 2016 in Guimarães, Portugal from 4 to 7 September 2016. The reader will find more information on the conference on the following website:

<http://www.civil.uminho.pt/3rd-ICTG2016/>

Within the framework of this conference, Serge Varaksin will act as the Chairman of the Workshop on Ground improvement and soil stabilization which will thus be coordinated by the TC211. This workshop will probably be organized during the first day of the Conference involving the participation of industry, designer engineers and academy. Registration for exhibitors and sponsors is now open. The received abstracts are currently under review.

The International Conference on Soft Ground Engineering, Singapore, December 3-4, 2015



During the International Conference on Soft Ground Engineering, which will be held in Singapore at the end of the year (3-4 December 2015), the debates will focus on the following topics:

- Excavation and retaining structures in soft ground
- Foundations and structures on soft ground
- **Ground improvement in soft soils**
- Laboratory and numerical studies on soft soils
- Case studies on soft ground engineering problems

The reader will find more information on the following website: <http://www.geoss.sg/icsge2015/>



4. Recent activities and events related to the TC 211

SEFE8 Seminar on Special Foundations Engineering and Geotechnics + 2nd Foundations and Geotechnics Industry Show – São Paulo, June 23-25, 2015



Between June 23 and 25, 2015 ABEF, SINABEF, ABMS, ABEG and DFI organized the SEFE8 – the 8th Seminar on Special Foundations Engineering and Geotechnics and the 2nd Foundations and Geotechnics Industry Show at the Transamérica Expo Center in São Paulo.

Now in its eighth edition the Seminar played host to well-known Brazilian and international specialists who gave lectures on the subject of foundation and geotechnical engineering (innovative techniques, academic research, experiences and case studies).

The TC 211 was invited to deliver a lecture about Ground Improvement that however was not the main topic of the conference oriented on Piles. The Keynote lecture was delivered by Serge Varaksin. The subject of the presentation was “ground improvement concept, parameters and case histories”. The presentation will soon be posted on the TC 211 website: www.tc211.be

Over 600 delegates participated in this conference.

It should be noted that Maurice Bottiau, current President of the Belgian Member Society of ISSMGE, presented a keynote on the “current status, challenges and future trends in foundations”, emphasizing the growing role of ground improvement in foundation techniques.

13th Coulomb Conference, Paris, June 15, 2015



Held in Paris on June 15, the 13th Coulomb Conference (organized by the CFMS, the French branch of the ISSMGE) was the opportunity for Marco Almeida, TC211 member, to highlight his forty years of experience dealing with the stabilization of soft clays. The presentation of the conference, titled “Amélioration des sols compressibles: études en vraie grandeur, modèles physiques et numériques” will soon be available on the website of the TC211: www.tc211.be



The Deep Mixing Conference, San Francisco, June 2-5, 2015



The Deep Mixing Conference took recently place in San Francisco (June 2-5, 2015). This international conference, organized by the Deep Foundations Institute, was co-chaired by our TC members George Filz and Masaki Kitazume.

As the deep mixing really represents an outstanding and competitive sustainable construction method, it is not surprising that the DFI deep mixing conference was a resounding success with more than 300 attendees from 23 countries.

If you were unable to attend this landmark event, you can purchase the 1 000-page conference proceedings by contacting staff@dfi.org

For this conference, TC211 members were actively participating with presentations of Abir Al-Tabbaa, Antonio Alberto Correia, Nicolas Denies, Stefan Larsson, Mitsuo Nozu, Michal Topolnicki... such as illustrated in the pictures hereunder.





[International Symposium ISP-7 PRESSIO 2015 – Tunis, May 1-2, 2015](#)



The International Symposium ISP-7 Pressio 2015 has been organized for the first time in Africa by the Tunisian Association of Soil Mechanics as part of the 16th ARCSMGE in Hammamet, Tunisia. Over 160 delegates from 32 countries from all continents participated in the symposium showing the interest for Pressuremeter techniques and the ongoing research.

Five themes were developed by numerous presentations making progress on the particular knowledge of pressuremeter techniques. Keynote lectures were presented by prestigious authors as Jean-Louis Briaud on horizontal loaded piles, Michael Pavlakis on Ménard pressuremeter tests within residual soils and weak rocks, Antonio Viana Da Fonseca on the use of pressuremeter tests for modelling residual soils geomechanics and foundation behavior and Jian Chu on the use of pressuremeter tests for land reclamation projects.

An active participation of the TC members was noted. Serge Varaksin acted as president of the scientific committee. Other involved TC211 members were Jian Chu, Babak Hamidi, Johannes Kirstein, Michal Topolniki and Kenny Yee.

In line with the TC 211 terms of references on quality control, special thanks are forwarded to Antonio Viana Da Fonseca, chairman of the TC 102, who delivered a keynote, and associating his TC to the symposium, and Jean-Louis Briaud well-known for his work on pressuremeter.

It was concluded to form a committee for the future organization of “ISP-8”.



[The International Foundations Congress and Equipment Expo, San Antonio March 17-21, 2015](#)

Join us for over
35
hours of education
presented by
industry experts

As a result of the partnership between ADSC, DFI, G-I Institute of ASCE and PDCA, the **IFCEE 2015, the International Foundations Congress and Equipment Expo** was organized in March 2015 in San Antonio with a lot of presentations, panel discussions, educational short courses, technical committee meetings, and networking with industry leaders, indoor exhibits and an outdoor equipment exposition such as illustrated hereunder.





With the participation of several actors of the ground improvement field, the conference was the stage of a lot of interesting discussions. Papers of TC211 members (Chu, Filz, Indraratna; Puppala...) are available in the proceedings of the conference:

<http://ascelibrary.org/doi/book/10.1061/9780784479087>

In these proceedings, Belgian members of the TC211, Nicolas Denies and Noël Huybrechts published a technical paper highlighting the results of a large test campaign concerning the realization of seventeen large-scale bending tests performed on real-scale soil mix elements:

<http://ascelibrary.org/doi/abs/10.1061/9780784479087.222>

It is to note that the results of these large-scale tests are currently considered for the elaboration of a new methodology for the design of soil mix walls used as earth-water retaining structures. This design methodology will be included in a handbook titled “soil mix walls” which will be published at the end of this year as the fruit of a collaboration between the Belgian Building Research Institute and the SBRCURnet in the Netherlands.

For more information about this last topic, please, contact nicolas.denies@bbri.be or noel.huybrechts@bbri.be

Finally, the TC 211 thanks you for your active participation and plans to complete this information after the European Conference on Soil Mechanics and Geotechnical Engineering of September 2015.

May the summer 2015 be a successful and relaxing time for you all !