



ISSMGE TC 211 GROUND IMPROVEMENT NEWSLETTER n°13, July 2017

Special issue – SEOUL 2017



Dear reader,

In this 13th Newsletter we mainly focus on the different events, regarding Ground Improvement works, organized within the framework of the next ICSMGE 2017 which will be held in Seoul from 17 to 22 September 2017:

- Organization of the **four Discussion Sessions** dedicated to Ground Improvement works,
 - Session 1 dedicated to the GI works without admixtures and inclusions,
 - Sessions 2 and 3 dedicated to the GI works with admixtures and inclusions,
 - Session 4 dedicated to GI works with grouting type admixtures.

on September 20 and 21 – time schedule to be determined by the Seoul conference committee

- Organization of a **common TC211-TC218 Workshop** on the topic of
“MSE Walls and Reinforced Soil Slopes”

on September 20 between 9 am to 12:30 pm

- Organization of the **4th Louis Ménard Lecture** on the topic of
“Advancing the State-of-the-Art in Soft Soil Stabilisation
- From Conceptual Fundamentals to Field Applications”

on September 18 or 19 – time schedule to be determined by the Seoul conference committee



REGISTRATION TO THE SEOUL CONFERENCE VIA:

https://www.icsmge2017.org/registration/registration_01.asp

1. Organization of the four Discussion Sessions with regard to Ground Improvement

The format of the Seoul Conference will be very close to the successful format followed in Paris for the 18th ICSMGE with significant contributions from the TCs. There will be therefore two kinds of Parallel Sessions for the TCs: the Discussion Sessions and the Workshops.

The Discussion Sessions are the "official" TC Sessions of the Conference. During these parallel Sessions, a General report will be delivered by the Discussion Leader, followed by the selected oral presentations (selected from the contributions sent to the Seoul conference committee by the Member Societies).

With 58 delivered papers concerning the topic of GI works, the Seoul conference committee decided to assign four Discussion Sessions to our TC211. **These Discussion Sessions will be organized on September 20 and 21. The final time schedule has to be determined by the Seoul conference committee.**

After analysis of the delivered papers, the TC board has proposed to the Seoul organizing committee to organize the four Discussion Sessions taking into account the classification system defined in its State of the Art Report of 2009 (available on our website www.tc211.be). Considering the content of the delivered papers, four categories of GI works are assessed:

- CATEGORY A. GI without admixtures in non-cohesive soils or fill materials (such as the methods of dynamic compaction, vibrocompaction...)
- CATEGORY B. GI without admixtures in cohesive soils (e.g. preloading, vertical drains, vacuum consolidation...)
- CATEGORY C. GI with admixtures or inclusions (e.g. vibro replacement, stone columns, sand compaction piles, rigid inclusions...)
- CATEGORY D. GI with grouting type admixtures (grouting techniques, deep soil mixing...)

Considering the number of papers delivered per category, it was finally decided to organize the four following Discussion Sessions:

SESSION 1 will be dedicated to GI works of CAT. A and CAT. B with the presentation of a General Report regarding these categories.

SESSIONS 2 and 3 will be dedicated to GI works of CAT. C (only one General Report for the two sessions).

SESSION 4 will be dedicated to GI works of CAT. D with the presentation of one General Report.



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2. Organization of the TC211-TC218 Workshop “MSE Walls and Reinforced Soil Slopes”

In addition of the four Discussion Sessions, the boards of the TC 211 and TC218 will organize a common TC 211-TC218 Workshop on the topic of “**MSE Walls and Reinforced Soil Slopes**”. In the recent past, several Workshops and Short Courses were organized by the TC 211 on the following GI topics: deep mixing, marine ground improvement, rigid inclusions (in Brussels at the IS-GI 2012), grouting type techniques (in Paris at the ICSMGE 2013) and QA/QC in GI works (in Edinburgh at the ECSMGE 2015). The theme of the present Workshop, co-organized with the new TC218, will be this time dedicated to the “MSE Walls and Reinforced Soil Slopes”. The TC 211-TC218 Workshop will be full component of the official Conference and will be co-chaired by Noël Huybrechts (chairman of TC211) and John Sankey (chairman of TC218 Reinforced Fill Structures).

The TC211-TC218 Workshop will be held on September 20, from 9:00 AM to 12:30 PM:

SESSION 1 – 9:00 to 10:30 (duration = 90 minutes)

Provisional title of the presentation or topic	NAME OF THE SPEAKER	COMPANY	COUNTRY	Duration (minutes)
<i>Introduction to the TC211 activities</i>	Noël Huybrechts – chairman TC211	Belgian Building Research Institute	Belgium	10 minutes
<i>Introduction to the TC218 activities</i> <i>Presentation of the new TC218</i>	John Sankey – chairman TC218	Terre Armée	USA	10 minutes
PRESENTATION 1 <i>Overview of MSE Wall & Anchor Solutions</i>	John Sankey	Terre Armée	USA	20 minutes
PRESENTATION 2 <i>Mining Applications of MSE Walls</i>	Gary Power	The Reinforced Earth Company	Australia	20 minutes
PRESENTATION 3 <i>Use of Polymeric Geogrids in Structures with Non-Standard Reinforced Fills</i>	Chaido Doulala-Rigby (Yuli)	Tensar International Ltd	UK	20 minutes
DISCUSSION/QUESTIONS				10 minutes
COFFEE BREAK: 10:30 to 11:00				30 minutes

SESSION 2 – 11:00 to 12:30 (duration = 90 minutes)

PRESENTATION 4 <i>Hybrid reinforced soil structures with primary and secondary reinforcement for high walls and slopes</i>	Pietro Rimoldi	Maccaferri	Italy	20 minutes
PRESENTATION 5 <i>Seismic Considerations for Reinforced Soil Slopes and MSE Walls</i>	Yoshihisa Miyata	National Defense Academy	Japan	20 minutes
PRESENTATION 6 <i>Special Solutions with Geosynthetic MSE Walls</i>	Oliver Detert	Huesker	Germany	20 minutes
PRESENTATION 7 <i>Earth Pressure Distribution in the Facing Area of Geogrid Reinforced Earth Structures – Field Measurements and Design Practice</i>	Kent P. von Maubeuge	NAUE GmbH & Co. KG	Germany	20 minutes
DISCUSSION/QUESTIONS				10 minutes



3. ISSMGE Honours Lecture - Organization of the 4th Louis Ménard Lecture

Finally, it is to note that within the framework of the 19th ICSMGE, **Prof. Buddhima Indraratna** will present the **4th Louis Ménard Lecture**.



*“Advancing the State-of-the-Art in Soft Soil Stabilisation
- From Conceptual Fundamentals to Field Applications”*

The ISSMGE Honour Lectures will be organized on September 18 and 19. The final time schedule for the presentation of Prof. Indraratna has to be determined by the Seoul conference committee.

4. Recent activities and events related to the TC 211

TC211 Workshop at the 3rd ICTG in Guimarães (September 4, 2016)



The challenges addressed by this 3rd International Conference on Transportation Geotechnics included a better understanding of the interactions of geotechnics on roads, rails, airports, harbours and other ground transportation infrastructure with the goal of providing safe, economic, environmental, reliable and sustainable infrastructures.

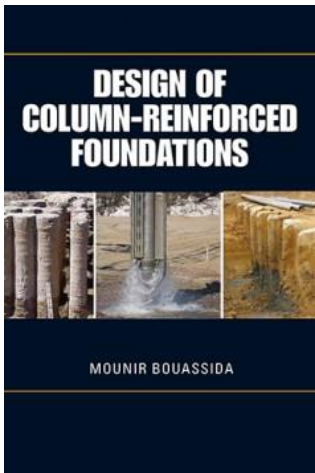
Within the framework of this conference, a TC211 Workshop dedicated to **Ground Improvement and soil stabilization** was organized resulting finally in the publication of the following e-book:

Workshop 4: Ground Improvement and Soil Stabilisation – Presentations, eBook, Serge Varaksin, António Alberto S. Correia and Miguel Azenha (Eds.). ISBN 978-989-20-7008-7 and DOI 10.5281/zenodo.154668

This e-book is freely available on the website of the TC211: www.tc211.be



Finally, we can note this last year the publication of the following interesting books regarding the practice of GI works:

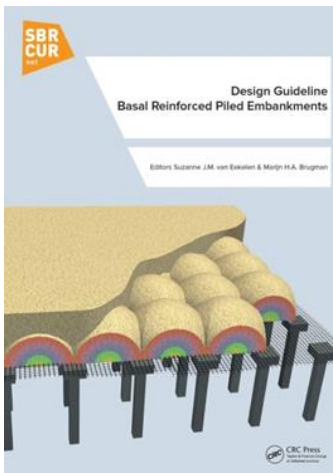


The book “Design of column-reinforced foundations” of Prof. Mounir Bouassida is now available via the following link:

<http://www.jrosspub.com/design-of-column-reinforced-foundations.html>

In this book, the design of foundations on reinforced soil by columns is discussed within a general framework where several aspects are taken into consideration: modeling of reinforced soil, bearing capacity, settlement, acceleration of consolidation, and improvement of soil characteristics with selected case histories.

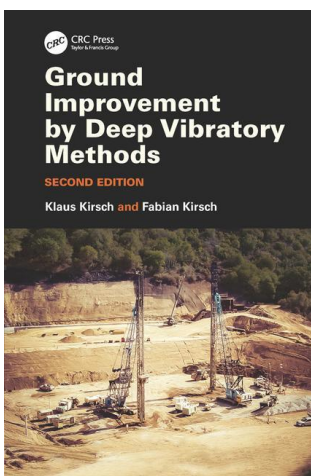
Mounir Bouassida is a professor of civil engineering at the Ecole Nationale d’Ingénieurs de Tunis (ENIT) of the Université de Tunis—El Manar where he earned his B.S., M.S., Ph.D., and doctorate of sciences diplomas, all in civil engineering. He currently teaches soil mechanics and limit analysis courses at ENIT and the Polytechnic School of Tunisia. Prof. Bouassida held the office of the vice president of ISSMGE for Africa (2005–2009).



A basal reinforced piled embankment consists of a reinforced embankment on a pile foundation. The reinforcement consists of one or more horizontal layers of geosynthetic reinforcement installed at the base of the embankment. A basal reinforced piled embankment can be used for the construction of a road or a railway when a traditional construction method would require too much construction time, affect vulnerable objects nearby or give too much residual settlement, making frequent maintenance necessary.

Edited by Suzanne van Eekelen and Marijn Brugman within the framework of the activities of the SBRCURnet, this publication is a guideline (CUR226) for the design of basal reinforced piled embankments. More information about the content of this book on:

<https://www.crcpress.com/Design-Guideline-Basal-Reinforced-Piled-Embankments/Eekelen-Brugman/p/book/9789053676240>



Vibro compaction and vibro stone columns are the two dynamic methods of soil improvement most commonly used worldwide. These methods have been developed over almost eighty years and are now of unrivalled importance as modern foundation measures. This second edition includes also a chapter on vibro concrete columns constructed with almost identical depth vibrators. Redacted by Kirsch and Kirsch, this practical guide for professional geotechnical engineers and graduate students systematically covers the theoretical basis and design principles behind the methods, the equipment used during their execution, and state of the art procedures for quality assurance and data acquisition.

More information about the content of this book on:

<https://www.crcpress.com/Ground-Improvement-by-Deep-Vibratory-Methods-Second-Edition/Kirsch-Kirsch/p/book/9781482257564>



Finally, the TC 211 wish to thank you for your active participation to all these activities and we wish to see you during the Seoul conference!

May the summer 2017 be a relaxing time for you all!