

ISSMGE TC211 Ground Improvement

Report on the recent and upcoming TC211 activities

Reykjavik, ECSMGE 2019



Noël Huybrechts
BBRI & KU Leuven
Chairman

Jérôme Racinais
Menard group
Vice-chairman

Nicolas Denies
BBRI
Secretary

ECSMGE-2019

Update on the ISSMGE TC211 activities – September 2019

ECSMGE-2019

Period 2013 - 2017 with principal theme: “Design, Quality Control and Quality Assurance for GI works”

1. TC211 Workshop in Edinburgh (September 15th 2015) – Progress in QC/QA for GI works
2. TC211 Workshop in Guimarães (October 16th and 17th 2015) – GI and soil stabilization
3. TC211 Workshop in Kuala Lumpur (May 31st to June 3 2016) – GI works
4. TC211 ACTIVITIES IN SEOUL 2017

XVI ECSMGE 2015
13-17 September 2015 - Edinburgh



**Presentations and e-book available on the
TC211 website:
www.tc211.be**

3rd International Conference on Transportation Geotechnics

3rd ICTG 2016

04-07 September 2016, Guimarães, Portugal

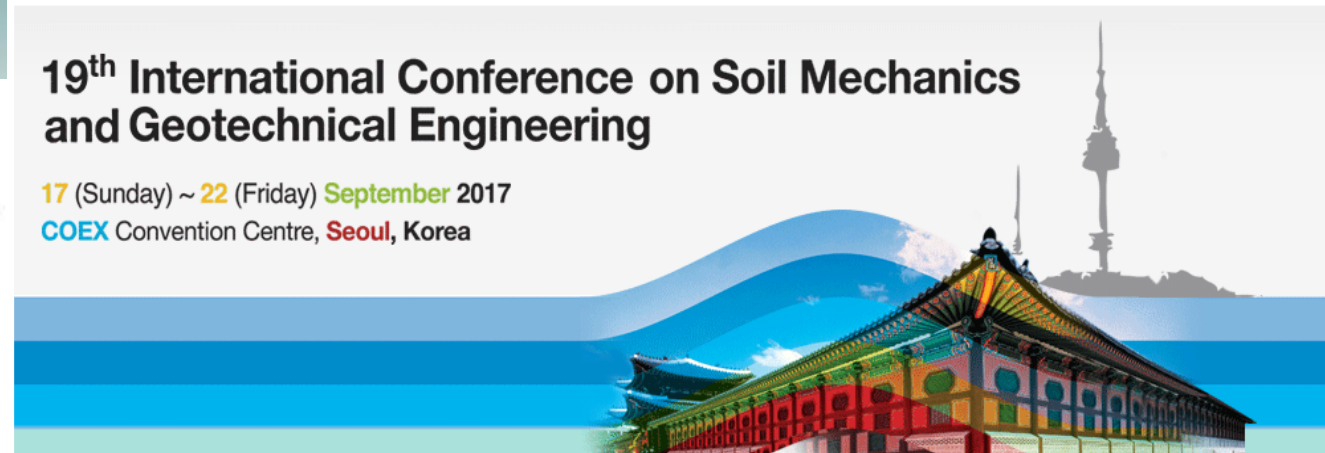


AGSSEA

**19TH SOUTHEAST ASIAN GEOTECHNICAL
CONFERENCE & 2ND AGSSEA CONFERENCE**

**19th International Conference on Soil Mechanics
and Geotechnical Engineering**

17 (Sunday) ~ 22 (Friday) **September 2017**
COEX Convention Centre, **Seoul, Korea**



Period 2013 - 2017 with principal theme: “Design, Quality Control and Quality Assurance for GI works”

4. TC211 ACTIVITIES IN SEOUL 2017

- **4 Discussion Sessions** dedicated to GI works
- **1 GENERAL REPORT** of the papers by Noël Huybrechts, Nicolas Denies, Jeroen Dijkstra, Cholachat Rujikiatkamjorn, Jérôme Racinais & Almer van der Stoel
- **1 Common TC211-TC218 Workshop** on the topic of
“MSE Walls and Reinforced Soil Slopes”
- **4th Louis Ménard Lecture** on the topic of
“Advancing the State-of-the-Art in Soft Soil Stabilisation
- From Conceptual Fundamentals to Field Applications”
by Prof. Buddhima Indraratna (University of Wollongong)



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+ **strong collaborations** with

- ❖ DEEP FOUNDATIONS INSTITUTE – DFI
- ❖ ETC 3 (European Technical Committee 3 – Piles)
- ❖ TC102 In situ testing (Workshop Edinburgh 2015)
- ❖ TC 218 – Reinforced fills (Workshop TC211-TC218 Seoul 2017)

+ **participations to dedicated publications**



Design of Piles in Europe
How did Eurocode 7 change daily practice?

International Symposium
28 and 29 April 2016, Leuven, Belgium



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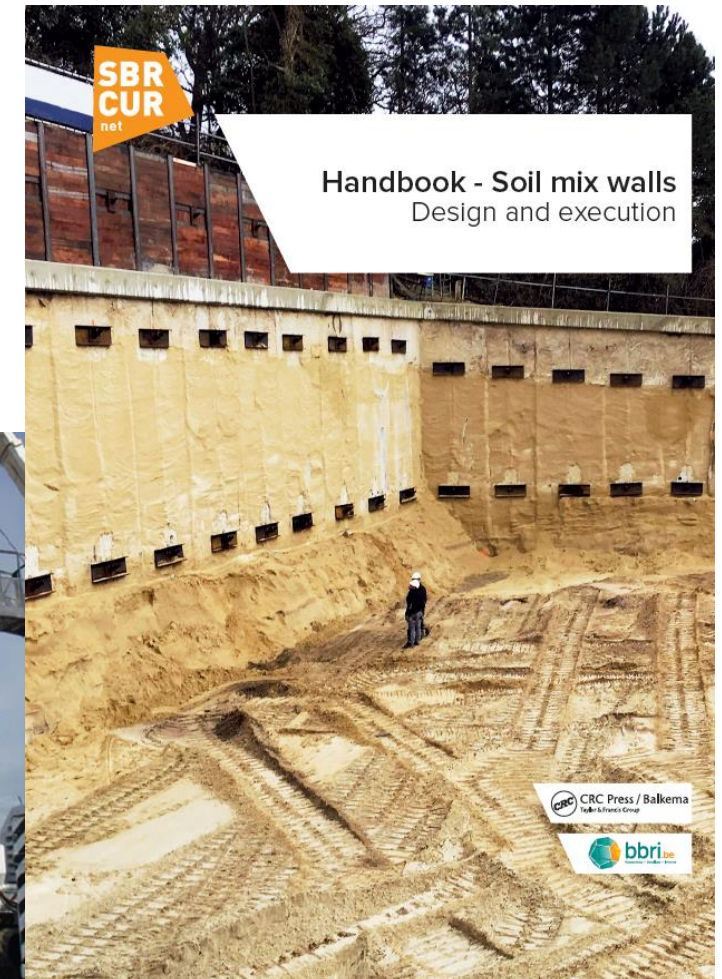
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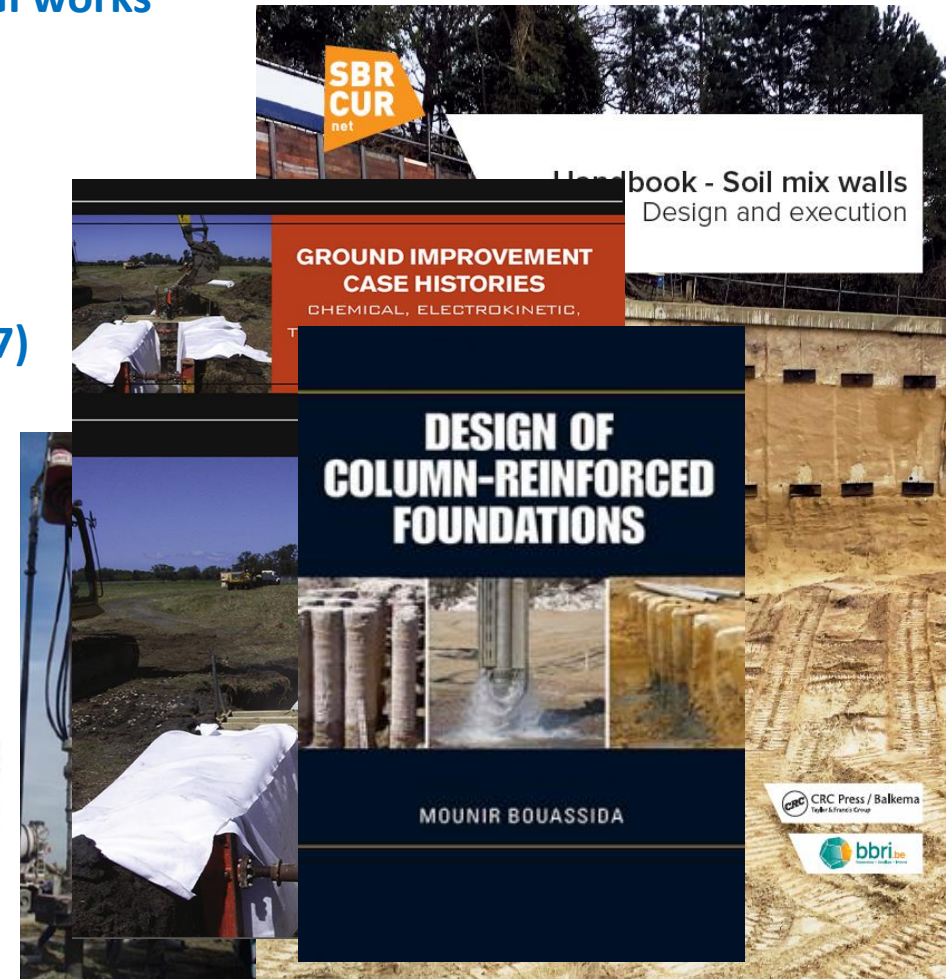
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Period 2017 - 2021 introducing a new principal theme:

“Innovations in design, execution and QA/QC of Ground Improvement works”

new BOARD of the TC211:

Chair: **Noël Huybrechts** (Belgium Building Research Institute – BBRI and KU Leuven – Belgium)

Vice Chair: **Jérôme Racinais** (Menard group, France)

Secretary: **Nicolas Denies** (Belgium Building Research Institute - BBRI – Belgium)

Members nominated by the Chair:

1. B. Hamidi (Menard, Australia)
2. Michał Topolnicki (Keller group, Poland)
3. S. Varaksin (Apageo, France)
4. Vernon Schaefer (Iowa State University, USA)

Period 2017 - 2021:

“Innovations”

new Terms of reference of the TC211:

1. Launch of a **new TC211 website** – updated version available since 01/2019: **www.tc211.be**
2. Abandoning the Newsletters for a **more dynamic way of communication** (short and more regular)
3. Participate by **dedicated workshops** in the international conferences **inviting TC members to contribute** to the knowledge and develop the addressed themes

ISSMGE TC211 Workshop
@ CANCÚN in NOVEMBER 2019
Co-chaired by J. RACINAIS & V. SCHAEFER

XVI CONGRESO PANAMERICANO
DE MECÁNICA DE SUELOS
E INGENIERÍA GEOTÉCNICA

17 - 20 NOVIEMBRE
2019
Cancún Mx.

- Quality Control of Vibro-compacted Carbonate Sands by means of CPT by Patrick Mengé (DEME)
- Wind Turbine Tower Foundations Ground Improvement using Rammed Aggregate Piers by Juan Pablo Rodríguez (Geopier Foundation Company)
- State of the Art of QA/QC for Deep Mixing applications by Michel Coudry (Soletanche Bachy)
- Deep ground improvement by Controlled Modulus Columns (CMC) and Prefabricated Vertical Drains (PVD) for the future Fuel Terminal in Tuxpan, Veracruz by Rémi Chatte (Menard Mexico)
- State of Practice of Vibro Compaction in Asia by Leong Kam Weng (Keller)

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4. **Promote the activities and the links with other organizations or TC's** (in particular the **Deep Foundations Institute – DFI**, the **EFFC**, the **TC 102 – In situ testing** and the **new TC218 – Reinforced fills**)

Period 2017 - 2021:

JUNE 5-8, 2018 @ROME



European Federation of
Foundation Contractors

**DFI-EFFC International Conference on Deep Foundations and
Ground Improvement: *Urbanization and Infrastructure
Development-Future Challenges***

June 05, 2018 - June 08, 2018
Sapienza University
Rome, Italy



[Alessandro Flora](#)

SESSION:
[Ground Modification
Technologies](#)



[Noel Huybrechts](#)

SESSION:
[Ground Modification
Technologies](#)

Period 2017 - 2021:

SEPTEMBER 12, 2019 @BRUSSEL



September 12, 2019 | Brussels, Belgium

**Existing and Innovative
Methods in
Pile Integrity Testing**

**Quality Assurance of
Foundation Piles**

Thursday, 12 September 2019

Belgian Research Road Centre
Sterrebeek, Belgium

*Organized by DFI Europe
in collaboration with the
DFI Testing and Evaluation Committee*



DFI Europe Regional Chapter

*with Frank Haehnig (President
DFI Europe), Gerald Verbeek
(Chair, DFI Testing and
Evaluation Committee), Rolf
Katzenbach, Teemu Riihimäki,
Ernst Niederleithinger, Marcel
Bielefeld, Oswald Klingmüller,
Tony Butcher, Joram Amir...*

Period 2017 - 2021:

JUNE 15-18, 2020 @GDANSK



www.dfi.org/DM2020

Period 2017 - 2021:

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5. Introduce a **new principal theme** for the period:
 “Innovations in design, execution and QA/QC of Ground Improvement works”
6. **Organize two main TC EVENTS** at the **ECSMGE Reykjavik 2019** and **ICSMGE Sydney 2021** based on the new principal theme **“Innovations”**
7. **Organize the 5th Louis Ménard Lecture** in Sydney 2021

Period 2017 - 2021:

DRAFT – TC 211 Working Document QA/QC of Vibrocompaction

TOPIC: Post-control of GI by deep vibrations by means of averaged values of CPT results

1. **Working document** on the topic of QC/QA of vibrocompaction available via www.tc211.be
2. In a near future: **creation of a working group** (=task force) which will shortly work on that matter and which will include the big actors of the vibrocompaction market

ROLE OF THE TASK FORCE:

- a. Analysis of the WORKING DOCUMENT
- b. Analysis of the current “standard practices” for the QC of vibrocompaction works with CPT’s
- c. Proposition of a harmonized international consensus for the QA/QC of vibrocompaction works