

ISSMGE Bulletin

Volume 7, Issue 3
May 2013

International Society for Soil Mechanics and Geotechnical Engineering

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MESSAGE FROM TC202 TRANSPORTATION GEOTECHNICS Chair; PROF. DR. ANTÓNIO GOMES CORREIA

We are glad to present TC202 Transportation Geotechnics, former TC3, renamed TC202 for the period 2010-2013, under Jean-Louis Briaud's Presidency.

The goal of TC202 should be considered a broad engineering unit bridging the gap between Pavement/Railway Engineering and Geotechnical Engineering. The main task is to promote co-operation and exchange of information and knowledge about the geotechnical aspects in design, construction, maintenance, monitoring and upgrading of roads, railways and airfields. It will also cover the related environmental aspects.



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ISSMGE launches new website & GeoWorld, a network platform for geoprofessionals

The International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) and its President Professor Jean-Louis Briaud are pleased to announce the launch of the new ISSMGE website (www.issmge.org), developed by Geoengineer.org (www.geoengineer.org), the International Information Center for Geoprofessionals under the auspices of the Board-level ISSMGE Innovation and Development Committee (IDC) chaired by Professor Dimitrios Zekkos. The new web site has an improved structure and layout and has also improved capabilities to host technical content. In addition, it already makes available at no cost over 8 webinars by leaders of the profession worldwide. ISSMGE, in co-operation with Geoengineer.org, also launched last year GeoWorld (www.mygeoworld.info). GeoWorld is a free online platform that supports professional networking among geoprofessionals. All geoprofessionals can join the more than 2,200 members of GeoWorld at no cost, and with minimum time and effort create a profile and expand their network!

From the Editor:

To benefit the voting decision, the July Issue of ISSMGE Bulletin will present articles on 3 presidential candidates and 3 candidate cities of ICSMGE in 2017.

MESSAGE FROM TC202

TRANSPORTATION GEOTECHNICS (Continued)

The committee counts on the participation of 43 members from 23 different countries around the world, covering several institutions from the academia and industry. The general objectives of TC202 Transportation Geotechnics are carried out through the main Task Forces of the Committee covering the following topics:

- TF 1. Promote of use of non-traditional materials in embankments and structural layers.
Leaders: M. Winter and T. Edil.
- TF 2. Reinforcement of geomaterials and its implications in pavement and rail track design.
Leaders: E. Tutumluer and S-W Park.
- TF 3. Earthworks design, technology and management: To extend the previous work on compaction.
Leaders: Jean-Pierre Magnan and A. Gomes Correia.
- TF 4. Rail track substructures, including transition zones.
Leaders: W. Powrie, K. Muramoto and Buddhima Indraratna.
- TF 5. Subsurface sensing for transportation infrastructure condition diagnostics amongst others.
Leaders: S. Nazarian and C. Lai.
- TF 6. 2nd International Conference on Transportation Geotechnics (ICTG-2), Hokkaido, Japan, 10th to 12th September 2012. Chairman: Seiichi Miura; Secretary General: Tatsuya Ishikawa.
Leaders: T. Ishikawa and N. Yoshida
- TF 7. Journal of "Transportation Geotechnics". Proposal to be worked by A. Gomes Correia, A. Loizos & E. Tutumluer.
- TF 8. To promote TC202-sponsored sessions on Geotechnics for transportation infrastructures at ISSMGE- international, European and regional conferences on soil mechanics and geotechnical engineering, and to support special geotechnical, geoenvironmental and unsaturated soils conferences on transportation geotechnics.
- TF 9. To cooperate actively with other technical committees whose field of activity involves important questions related with transportation geotechnics.
- TF 10. Reports, Publications, Web.
- TF 11. Meetings. Most of the work will be done mainly by e-mail, or by video conference if this is felt to be the most appropriate option.

Recent activities of TC202 address what follows:

The committee has organized several events, namely:

- Participation in the 3rd International Conference on GEDMAR2011 and 5th ICGHE, from 18th to 20th May 2010, Semarang, Indonesia;
- Participation in the International Seminar-Course on Petrologic and Climate Aspects in the Behavior of Aggregates, organized by SCG with INGEOMINAS and under the auspices of TC202, on 18th and 19th November 2010, in Bogota, Colombia;
- Participation in the International Symposium on Testing and Specification of recycled Materials for Sustainable Geotechnical Construction (chair: T. Edil), from the 2nd to 4th February 2011, in Baltimore, USA. A special issue was published by ASTM International in Vol. 9, No. 2 and also in a STP 1540;
- Participation in the Short Course on Intelligent Compaction, by FHWA and Transtec Group at the Geohunan II Conference, 9th June 2011, Hunan, China;
- 1st TC202 General Meeting, during the XV ECSMGE, on 11th September 2011 (2: pm & 5: pm) at Megaron Athens International Conference Center, Athens, Greece;
- ISSMGE Webinar on Intelligent Compaction, lectured by Professor A. Gomes Correia and Professor George Chang, on 25th October 2011;
- Organization of the 2nd International Conference on Transportation Geotechnics (ISSMGE-TC202), from 9th to 12th September 2012, in Sapporo, Japan;
- Participation in the International Conference on Ground Improvement and Ground control: Transport Infrastructure Development and Natural Hazards Mitigation, from 30th October to 2nd November 2012, Wollongong, Australia;

MESSAGE FROM TC202

TRANSPORTATION GEOTECHNICS (Continued)

- 2nd TC202 General Meeting, on 9th September 2012, in Sapporo, Japan. In this meeting it was decided that the 3rd International Conference on Transportation Geotechnics (ISSMGE-TC202) will be held in Guimarães, Portugal. Another important decision was related with the TC202 ISSMGE named lecture. After this meeting all members committee have been contacted by email and voted on the name of Ralph Proctor (with 3 votes in other choices). International Journal in Transportation Geotechnics to be published by Elsevier. Editors: A. Gomes Correia, Erol Tutumluer and Yunmin Chen (to be launched on 2014).

Upcoming activities

The upcoming events are as what follows:

- TC 202 Session on Transportation Geotechnics during the 18th Southeast Asian Geotechnical Conference “Geotechnical Infrastructure”, 30th May 2013, in Singapore;
- TC 202 Workshop on Transportation Geotechnics during the 18th IC-ISSMGE, 5th September 2013, in Paris, France. A special issue will be prepared and published by ASCE in a Special Geotechnical Publication;
- TC 202 Session on Transportation Geotechnics on 18th IC-ISSMGE, 5th September 2013, in Paris, France;
- Participation in The GeoHubei International Conference, from 20th to 22nd July 2014, in Hubei, China;
- TC202 Meeting and Workshop on the XVI ECSMGE, 13th September 2015, in Edinburgh, UK;
- 3rd International Conference on Transportation Geotechnics (ISSMGE-TC202), from 4th to 7th September 2016, Guimarães, Portugal.

2nd International Conference on Transportation Geotechnics in Sapporo as one of the remarkable activities of TC202



In 2012, the 2nd International Conference on Transportation Geotechnics (2nd ICTG) took place in the city of Sapporo, Japan from 10th September 2012 to 12th September 2012. It attracted 243 participants from 30 countries and 140 papers were presented. The conference theme of Transportation Geotechnics is recently attracting heavy concern from the engineering discipline because the transportation geotechnics is a new academic framework which pursues practical issues such as design, construction and maintenance management of transportation infrastructure like roads, railways, and airfields.

After the successful first ICTG held at the University of Nottingham, UK, in 2008 under the auspices of the International Technical Committee ISSMGE-TC3 “Geotechnics of Pavements” (currently ISSMGE-TC202), the 2nd ICTG was organized to establish new academic frameworks called “Transportation Geotechnics,” focused more to practical issues such as design, construction and maintenance management of transportation infrastructure like roads, railways, and airfields. The main subjects of the 2nd ICTG were:

- Geotechnics for Pavement, Rail Track and Airfield
- Geomaterial, including Nontraditional Materials

MESSAGE FROM TC202

TRANSPORTATION GEOTECHNICS (Continued)

- Asphalt Mixtures and Hydraulically-bound Materials
- Earthworks for Transportation Facilities
- Application of Geosynthetics
- Laboratory Testing and In-situ Testing
- Modeling and Numerical Simulations
- Design, Construction and Maintenance
- Performance Evaluation and Quality Control
- Sustainability of Management and Rehabilitation
- Risk Assessment and Environmental Issues

The invited / Keynote Lecturers were: Prof. António Gomes Correia, University of Minho, Portugal; Prof. Seiichi Miura, Hokkaido University, Japan; Prof. Buddhima Indraratna, University of Wollongong, Australia; Prof. Fumio Tatsuoka, Immediate Past President of IGS, Japan; Prof. Erol Tutumluer, University of Illinois, USA; Prof. Hervé Di Benedetto, University of Lyon, France and Prof. Delwyn G. Fredlund, Golder Associates Ltd, Canada.

Contributed Papers

140 papers were orally presented in the technical sessions, including several special sessions organized in close liaison with ISSMGE-TC101 (Laboratory Stress-Strain Strength Testing of Geomaterials), ISSMGE-TC106 (Unsaturated Soils), and ISSMGE-TC216 (Frost Geotechnics) to discuss some specific issues essential for further developments of Transportation Geotechnics (i.e., unsaturated soils, frost geotechnics and advanced laboratory testing). The topics discussed include: asphalt mixtures and hydraulically bound materials, laboratory testing and in-situ testing, sustainability of management and rehabilitation and risk assessment and environmental issues, applications of geosynthetics in transportation geotechnics including rural road maintenance with geotextile, subbase reinforcement with geogrid, pavement drainage with geocomposite and seismic mitigation with geogrid. Prof. Jun Otani (Chairperson of IGS Technical Committee on soil reinforcement) introduced the on-going activities of the TC.



Before the 2nd ICTG conference, three pre-conference workshops were held on:

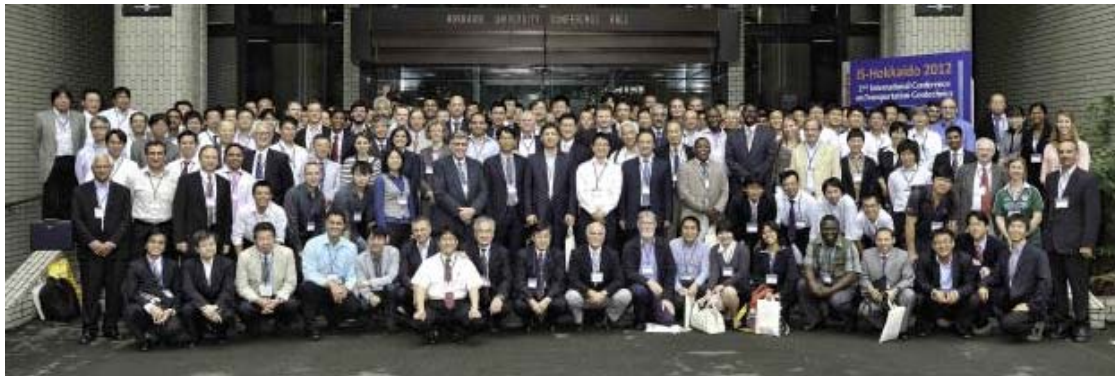
Intelligent Compaction. Speakers: Prof. A. Gomes Correia, University of Minho, Portugal; Dr. David White, Iowa State University and Dr. Hiroshi Furuya, Obayashi Corporation.

Challenges in Transportation Geotechnics in Extreme Climates. Speakers: Dr. Seppo Saarelainen, Aalto University, Finland and Dr. Andrew Dawson, University of Nottingham, UK.

Geotechnical Challenges in Rail Track and its Transitional Zones. Speakers: Prof. Peter Woodward, Heriot-Watt University, UK; Prof. K. Giannakos, SALFO & Associates SA, Greece; Dr. Eduardo Fortunato, LNEC, Portugal; Dr. Yasuo Watanabe, East Japan Railway Company, Japan; Dr. Kenji Watanabe, Railway Technical Research Institute, Japan.

MESSAGE FROM TC202

TRANSPORTATION GEOTECHNICS (Continued)



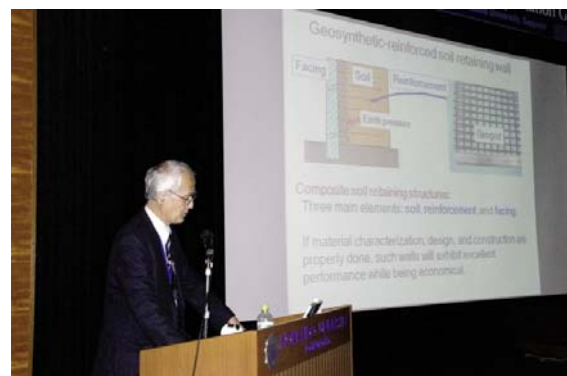
Group photograph of participants of 2nd ICTG



Opening Ceremony of 2nd ICTG



Opening Ceremony: (from left to right)
Prof. Seiichi Miura, Dr. Toru Sueoka,
Prof. Hiroshi Saeki, Prof. António Gomes Correia,
Prof. Fumio Tatsuoka and Prof. Askar Zhussupbekov



Keynote lecture by Prof. Fumio Tatsuoka

MESSAGE FROM TC202

TRANSPORTATION GEOTECHNICS (Continued)



Welcome Party at the restaurant
“ELM” in Hokkaido University



Banquet in Sapporo Grand Hotel

3rd International Conference on Transportation Geotechnics (3rd ICTG)

The next event of this series of conference is planned as what follows. Please save the date.

The Transportation Geotechnics International Conference series began under the auspices of ISSMGE-TC3 and was initiated in 2008 at the University of Nottingham, UK, as an International event designed to address the growing requirements of infrastructure for societies. The 2nd International Conference on Transportation Geotechnics took place in 2012, in Sapporo, Japan, under the ISSMGE-TC202 that follows the TC3 activities for the period 2009-2013. To continue the success of these conferences and the output of ISSMGE-TC202, the 3rd is scheduled for 2016, at Guimarães, Portugal. Following the previous ones, the challenges addressed by this conference will include 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. The 3rd ICTG will be composed of workshops and several types of sessions, as well as a technical exhibition, to better disseminate findings and best practices. A special attention will be paid to the publication of all the peer-reviewed papers, some of them in specialised international journals. On behalf of the organizing committee I am honoured to invite you to the 3rd ICTG in the City of Guimarães, UNESCO World Heritage (September 4-7, 2016).



MESSAGE FROM TC202

TRANSPORTATION GEOTECHNICS (Continued)



Conference venue: University of Minho, vila Flor Cultural Centre

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