

INTERNATIONAL SOCIETY FOR SOIL MECHANICS AND GEOTECHNICAL ENGINEERING



This paper was downloaded from the Online Library of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). The library is available here:

<https://www.issmge.org/publications/online-library>

This is an open-access database that archives thousands of papers published under the Auspices of the ISSMGE and maintained by the Innovation and Development Committee of ISSMGE.

Conferens Sessions

A1-1 Test of bored piles and the outcome of the Danish standard for designing bored piles

Morten Schousboe Rasmussen
Züblin A/S, Trige, Denmark

A1-2 Small-displacement soil-structure interaction for horizontally loaded piles in sand

Søren Peder Hyldal Sørensen, Anders Hust Augustesen
COWI A/S, Aalborg, Denmark

A1-3 Is it reasonable to reduce the shaft resistance for bored piles?

Jannie Knudsen
COWI A/S, Vejle, Denmark

A1-4 Tensile capacity of steel pipe piles drilled in the bedrock

Rosa Marja Margareet Siren, Leena Katariina Korkiala-Tanttu
Aalto University, Espoo, Finland

A1-5 A Case Study of heave of pile-supported structures due to pile driving in heavily over consolidated very high plasticity palaeogene clay

Kenny Kataoka Sorensen, Tobias Horlykke, Belinda Dedenroth Pedersen
Aarhus University, Aarhus C, Denmark

A1-6 Analysis of inclined piles in settling soil

Fredrik Resare¹, Anders Beijer Lundberg², Christoffer Svedholm¹
¹Royal Institute of technology, Stockholm, Sweden
²ELU Konsult AB, Stockholm, Sweden

B1-1 In situ detection of sensitive clays – Part I: Selected test methods

Rolf Sandven¹, Alberto Montafia¹, Anders Samstad Gylland¹,
Kristoffer Kåsin², Andi Pfaffhuber², Mike Long³
¹Multiconsult, Trondheim, Norway
²Norwegian Geotechnical Institute, Oslo, Norway
³University College Dublin (UCD), Dublin, Ireland

B1-2 In situ detection of sensitive clays – Part II: Results

Rolf Sandven¹, Alberto Montafia¹, Anders Samstad Gylland¹,
Kristoffer Kåsin², Andi Pfaffhuber², Mike Long³
¹Multiconsult, Trondheim, Norway
²Norwegian Geotechnical Institute, Oslo, Norway
³University College Dublin (UCD), Dublin, Ireland

B1-3 Detecting quick clay with CPTu

Sigurður Már Valsson
Molde, Norway

B1-4 Influence of Operator Procedures on Obtained Accuracy in CPTu Testing

Kenneth Viking¹, Caesar Kardan², Leyla Nik³, Stefan Larsson⁴
INCC Teknik, Solna, Sweden
2Grontmij, Sweden
3Geosigma, Sweden
4KTH, Sweden

B1-5 A procedure for the assessment of undrained shear strength profile of soft clays

Vikas Thakur¹, Odd Arne Fauskerud², Vidar Gjesvik³, Stein Christensen⁴,
Frode Oset⁵, Steinar Nordal¹, Margareta Viklund⁶, Stein-Are Strand⁷
INTNU, Trondheim, Norway
2Multiconsult, Norway
3NGI, Norway
4SINTEF, Norway
5Norwegian Public Roads Administration, Norway
6Norwegian National Rail Administration, Norway
7Norwegian Water Resources and Energy Directorate, Norway

B1-6 Sample disturbances in block samples on low plastic soft clays

Helene Alexandra Amundsen, Vikas Thakur, Arnfinn Emdal
NTNU, Trondheim, Norway

C1-1 Effects of soil-structure interaction on the excitation and response of RC buildings subjected to strong-motion

Jónas Þór Snæbjörnsson¹, Fjóla Guðrún Sigtryggisdóttir²,
Benedikt Halldórsson²
1Reykjavik University, Reykjavík, Iceland
2University of Iceland, Reykjavík, Iceland

C1-2 ERT and seismic refraction tomography test at Äspö Hard Rock Laboratory

Marcus Wennermark, Torleif Dahlin, Roger Wisén, Mathias Ronczka
Lund University, Lund, Sweden

C1-3 Refraction seismic for mapping of limestone surface in a tunnel project in Copenhagen

Roger Wisén¹, Lars Christiansen Bagger², Mikael Jorgensen³,
Morten Elton Jensen⁴
1Rambøll/Lund University, Copenhagen, Denmark
2Rambøll, Denmark
3Niras, Denmark

4Hofoer, Denmark

C1-4 On the HVSR characteristics at Icelandic strong-motion stations

Benedikt Halldórsson¹, Jónas Þór Snæbjörnsson², Cristian Olivera¹,
S. Rahpeyma¹, Símon Ólafsson¹, Russel A. Green³

1University of Iceland, Reykjavík, Iceland

2Reykjavik University, Reykjavík, Iceland

3Virginia Polytechnic Institute and State University, Blacksburg, USA

C1-5 Effects of measurement profile configuration on estimation of stiffness profiles of loose post glacial sites using MASW

Elín Ásta Ólafsdóttir, Bjarni Bessason, Sigurður Erlingsson

University of Iceland, Reykjavík, Iceland

C1-6 Impact of data acquisition parameters and processing techniques on S-wave velocity profiles from MASW - Examples from Trondheim, Norway

Guillaume Sauvin¹, Peter O'Connor², Shane O'Rourke²,
Maarten Vanneste¹, Mike Long³, Jean-Sebastien l'Heureux¹,
Yvonne O'Connell², Tony Lombard²

1Norwegian Geotechnical Institute, Oslo, Norway

2Apex Geoservices, Wexford, Ireland

3University College Dublin, Dublin, Ireland

D1-1 Physical modeling and numerical analyses of vibro-driven piles with evaluation of their applicability for offshore wind turbine support structures

Aligi Foglia, Martin Kohlmeier, Maik Wefer

*Fraunhofer Institute for Wind Energy and Energy System Technology
(IWES), Hannover, Germany*

D1-2 Influence of deviatoric stress dependent stiffness on settlement trough width in 2D and 3D finite element modelling of tunnelling

Nicolas Gilleron¹, Emmanuel Bourgeois¹, Adrien Saitta²

1Université Paris Est, Marne La Vallée, France

2EGIS, Paris, France

D1-3 Bearing Capacity, Comparison of Results from FEM and DS/EN 1997-1 DK NA 2013

Bjørn Staghøj Knudsen¹, Niels Mortensen²

1COWI A/S, Aarhus C, Denmark

2nmGeo, Allerød, Denmark

D1-4 On numerical models for anisotropy of rocks

Henok Mekonnen Kassa¹, Steinar Nordal²

¹Statoil ASA, Oslo, Norway

²Norwegian University of Science and Technology, Trondheim, Norway

D1-5 Interpretation of Danish Chalk Design Parameters Applicable to Foundation Design

Lindita Kellezi, Hans Denver, Olsi Koreta

Geo, Kgs. Lyngby, Denmark

D1-6 Modelling of Earth Pressure from nearby Strip Footings on a Free & Anchored Sheet Pile Wall

Hans Denver, Lindita Kellezi

Geo, Kgs. Lyngby, Denmark

A2-1 Contributions of Janbu and Lade as applied to Reinforced Soil

Peter Hoffman

University of Colorado Denver, Denver, Colorado, USA

A2-2 New Developments in On-line Monitoring of Geotechnical Data

Andres Thorarinsson¹, Tony Simmonds²

¹*Vista Data Vision / Vista Engineering, Reykjavik, Iceland*

²*Geokon, Inc., Lebanon, USA*

A2-3 Laboratory study on two-dimensional image analysis as a tool to evaluate degradation of granular fill materials

Elin Bergliv, Tommy Edeskar

Luleå technical university, Luleå, Sweden

A2-4 Effect of pile sleeve opening and length below seabed on the bearing capacity of offshore jacket mudmats

Maria Vanberg¹, Tewodros Tefera², Annette Jahr²

¹*Kværner Jacket Technology, Oslo, Norway*

²*Kværner Jacket Technology AS, Oslo, Norway*

A2-5 3D FE tool for time dependent settlement predictions

Hans Petter Jostad¹, Nallathamby Sivasithamparam¹, Anders Rosenquist
af Åkershult², Yunhee Kim¹, Suzanne Lacasse¹

¹*INGI, Oslo, Norway*

²*Vianova GeoSuite AB, Stockholm, Sweden*

B2-1 OATV for strength estimations in Copenhagen Limestone

Natasa Katic¹, Rasmus Foldager², Rémi Chalmas², Helle Foged Christensen²

¹*Geo, Kgs., Lyngby, Denmark*

²*Geo, Kgs. Lyngby, Denmark*

B2-2 A preliminary attempt towards soil classification chart from total sounding

Eigil Haugen¹, Samson Abate Degago², Ole Vidar Kirkevollen², Daniel Nigussie², Yu Xiang¹

¹Norwegian Public Road Administration, DRAMMEN, Norway

²Norwegian Public Roads Administration, Trondheim, Norway

B2-3 Preliminary results from a study aiming to improve ground investigations data

Bruno di Buò, Marco d'Ignazio, Juha Selänpää, Tim Länsivaara

Tampere University of Technology, Tampere, Finland

B2-4 Solutions for Various Obstacles Encountered with Laboratory Piping Tests

Axel Manuel Montalvo-Bartolomei, Jamie Fitzgerald Lopez-Soto,

Isaac Jed Stephens, Bryant Andrew Robbins

Engineer Research and Development Center - US Army Corps of Engineers, Vicksburg, MS, United States of America

B2-5 Determination of pull-out strength and interface friction coefficient of geosynthetic reinforcement embedded in expanded clay LWA

Joanna Gorniak¹, Marie Tankéré¹, Camille Barral², Philippe Delmas²,

Arnstein Watn³, Oddvar Hyrve⁴, Allan Dahl⁴

¹Texinov, La Tour du Pin, France

²Cnam, Ecole SITI, Paris, France

³Sintef Building and Infrastructure, Trondheim, Norway

⁴Saint-Gobain Weber, Oslo, Norway

C2-1 Dynamic stiffness of horizontally vibrating suction caissons

Chiara Latini, Varvara Zania, Björn Johannesson

Technical University of Denmark, Kgs. Lyngby, Denmark

C2-2 On the design of a deep secant pile wall

Ole Kristian Lied¹, Josefin Persson², Amund Augland¹

¹Geovita as, Oslo, Norway

²Statens Vegevesen, Oslo, Norway

C2-3 Guldborgsund Tunnel. Operation of tunnel and drained ramps

Per Beck Laursen, Thomas Petri, Susanne Brix

Rambøll, København, Denmark

C2-4 Pore pressure reduction and settlements induced by deep supported excavations in soft clay

Jenny Langford, Gunvor Baardvik

NGI, Oslo, Norway

C2-5 Underwater ERT Surveys for Urban Underground Infrastructure Site Investigation in Central Stockholm

Torleif Dahlin, Roger Wisén
Lund University, Lund, Sweden

D2-1 GeoBIM for optimal use of geotechnical data

Mats Svensson
Tyréns AB, Helsingborg, Sweden

D2-2 An attempt towards harmonizing the Norwegian guidelines related to construction on sensitive clay

Kristian Aunaas¹, Vikas Thakur², Frode Oset¹, Hanne Ottesen¹, Stein-Are Strand³, Ingrid Havnen³, Trude Nyheim³, Einar Lyche³, Margareta Viklund⁴, Mostafa Abokhalil⁴, Bjorn Kristoffer Dolva¹
1Norwegian Public Roads Administration, Oslo, Norway
2Norwegian University of Science and Technology, Trondheim, Norway
3Norwegian Water Resources and Energy Directorate, Norway
4Norwegian National Railways Administration, Norway

D2-3 Commercialising reclaimed materials in earthworks - guidelines for productization and the process of appending these materials in the Finnish national code of practice

Kirsi Koivisto¹, Juha Forsman¹, Marjo Ronkainen¹, Pentti Lahtinen¹, Pauli Kolisoja², Pirjo Kuula²
1Ramboll Finland Oy, Espoo, Finland
2Tampere University of Technology, Finland

D2-4 Education of drilling personnel carrying out pile and anchor drilling in Norway - effect on work quality and new plans for education in Norway. Ingunn Veimo Structor Oslo AS, Norge

Ingunn Veimo¹, Josefin Persson²
1Structor Oslo AS, OSLO, Norway
2Statens vegvesen, Oslo, Norway

D2-5 The role of communication and dissemination during the transition from geotechnical design to construction

Einar Helgason¹, Grete Tvedt², Josefin Persson²
1Veidekke Entreprenør AS, Oslo, Norway
2Statens vegvesen, Region Øst, Norway

Plenum 4 – Antonio Gens

Vice-President of the ISSMGE for Europe 2013-2017

The current status and ongoing work at ISSMGE with a special focus on the activities of the TCs

Plenum 5 – Fjóla Guðrún Sigtryggsdóttir,

NTNU, Department of Hydraulic and Environmental Engineering, Trondheim, Norway

The Icelandic National Lecture - Hydropower dams in the Land of Ice and Fire

A3-1 Landslide hazards in sensitive clays: Recent advances in assessment and mitigation strategies

Vikas Thakur¹, Samson Degago²

1NTNU, Trondheim, Norway

2Norwegian Public Roads Administration, Trondheim, Norway

A3-2 Risk analyses in excavation and foundation work

B. Kalsnes, B.V. Vangelsten, U. Eidsvig

Norwegian Geotechnical Institute, Oslo, Norway

A3-3 The Refne landslide, Halden, Norway: case history and use of risk assessment

Tone Fallan Smaavik

NGI, Oslo, Norway

A3-4 Effects of extreme rainfall on geotechnical hazards in the Canadian Rocky Mountains

Emily Catherine Hunter

University of Alberta, Edmonton, Alberta, Canada

A3-5 Pore pressure response in the upper open aquifer- field investigations and modelling

Hanna Blomén

Swedish Geotechnical Institute, Gothenburg, Sweden

B3-1 Integrated analysis of ground penetrating radar and laser scanner

Timo Saarenketo

Roadscanners group, Rovaniemi, Finland

B3-2 Some recent developments on geophysical testing of peat

Mike Long¹, Andy Trafford²

1University College Dublin (UCD), Dublin, Ireland

2APEX Geoservices, Ireland

B3-3 Full scale reinforced road embankment test sections over soft peat layer, Estonia

Juha Forsman¹, Taavi Dettenborn¹, Peeter Skepast², Mait Mets³,

Mattias Olep³, Ivo Vallas⁴, Taavi Tõnts⁴

1Ramboll Finland Oy, Espoo, Finland

2Skepast&Puhkim AS, Estonia

3AS Geotehnika Inseneribüroo G.I.B., Estonia

4Maanteeamet, Estonia

B3-4 Installation of fully grouted piezometers

Kristoffer Kåsin

NGI, Oslo, Norway

B3-5 Extended interpretation basis for the vane shear test

Anders Samstad Gylland¹, Vikas Thakur², Arnfinn Emdal²

1Multiconsult, Trondheim, Norway

2The Norwegian University of Science and Technology, Trondheim, Norway

C3-1 Foundation of a new bridge over the Göta River in Gothenburg

Kien Du-Thinh, Lennart P. A. Johansson, Fredrik Nystrom

Cowi AB, Göteborg, Sweden

C3-2 The traffic junction Lindholmsmotet in Gothenburg: An example of creative geotechnical engineering in the construction phase

Torbjörn Edstam, Anders Kullingsjö

Skanska Sverige AB, Gothenburg, Sweden

C3-3 Construction of the Sporðöldu Dam, Iceland

Björn Jóhann Björnsson¹, Leifur Skúlason², Jón Smári Úlfarsson³

1Stuðull, consulting engineers, Hafnarfjörður, Iceland

2Hnit Consulting Engineers, Reykjavik, Iceland

3Landsvirkjun, the National Power Company, Reykjavik, Iceland

C3-4 A geostatistical analysis of variations of permeability within a compacted dam core

Étienne Hébert, Jean Côté

Université Laval, Québec, Canada

C3-5 Temporary Groundwater Control for Construction of Railway Tunnels in Copenhagen

Jes Michaelsen, Judith Wood

Ramboll, Copenhagen, Denmark

A4-1 Experience and challenges in using a new pile drilling method in highly sensitive clays

Samson Abate Degago¹, Steinar Giske¹, Svein E. Hove¹, Vikas Thakur²

1Norwegian Public Roads Administration, Trondheim, Norway

2Norwegian University of Science and Technology, Trondheim, Norway

A4-2 Reliability-based design of a monopile foundation for offshore wind turbines based on CPT data

Ida Elise Vikestad Overgård

NTNU, Trondheim, Norway

A4-3 Reliability analysis of piles and pile groups based on dynamic load testing

Jimmie Andersson, Gary Axelsson
ELU Konsult, Stockholm, Sweden

A4-4 Application of Thermal Piles in Thawing a Frozen Ground

Gowthaman Sinnathamby¹, H. Gustavsson¹, L. Korkiala-Tanttu¹,
C.P. Cervera², M. Koskinen³
1Geoengineering, Aalto, Finland
2Fundación Valenciaport, València, Spain
3City of Helsinki, Helsinki, Finland

B4-1 COBRA Cable Site Investigations in the Wadden Sea, Denmark

Lone Klinkby¹, Rasmus Juncher², Martin Laier¹, Anne Rosborg¹,
Anna Bondo Medhus¹, Karsten Pedersen¹
1COWI, Vejle, Denmark
2Energinet.dk, Fredericia, Denmark

B4-2 Founding on (un)known chalk in Aalborg

Caspar Thrane Leth¹, Kim André Larsen¹, Thomas Madsen¹,
Jan Dannemand Andersen²
1COWI A/S, Aalborg, Denmark
2GEO, Brabrand, Denmark

B4-3 Field measurements of pore water pressure changes in very high plasticity stiff clays adjacent to driven piles

Thomas Rye Simonsen
Geo and Department of engineering, Aarhus University, Aarhus, Denmark

B4-4 Freezing-Thawing Laboratory Testing of Frost Susceptible Soils

Amin Zeinali¹, Deniz Dagli¹, Tommy Edeskar¹
Lulea University of Technology, Lulea, Sweden

B4-5 Investigation into the effect of uncertainty of CPT-based soil type estimation on the accuracy of CPT-based pile bearing capacity analysis

Omar Hamza¹, Angela Bellis²
1University of Derby, Derby, United Kingdom
2Atkins ltd, United Kingdom

C4-1 An integrated approach to Geotechnics and Geophysics on the Electrification Programme in Denmark

David Ross Alvin, Ole Frits Nielsen, Carsten Steen Sørensen
COWI A/S, Århus, Denmark

C4-2 Deformation Modelling of Unbound Materials in a Flexible Pavement

Þorbjörg Sævarsdóttir¹, Sigurður Erlingsson²
1EFLA consulting engineers, Reykjavík, Iceland
2University of Iceland, Reykjavík, Iceland

C4-3 , Statistical analysis of thaw index for thaw weakening design purposes

Tommy Edeskar¹, Adam Fredriksson¹
Luleå University of Technology, Luleå, Sweden

C4-4 , Theoretical and experimental investigations of Continuous Compaction Control (CCC) systems

Johannes Pistor¹, Mario Hager¹, Dietmar Adam¹, Fritz Kopf²
1Vienna University of Technology, Vienna, Austria
2Fritsch, Chiari & Partner ZT GmbH, Vienna, Austria

C4-5 Strength and deformation properties of volcanic rocks in Iceland

Niels Nielsen Foged, Katrine Alling Andreassen
Technical University of Denmark, Kgs. Lyngby, Denmark

A5-1 Design of protective dolphins in demanding geotechnical conditions

Andrija Krivokapic, Hanna Sjöstedt, Nenad Davidovic
Ramboll, København S, Denmark

A5-2 On the use of vertical drains and pore pressure control for soft soil stabilization with lime/cement columns

Frode Oset¹, Carl Erik Dahl², Grethe Bodholt¹
1Norwegian Public Roads Administration, Oslo, Norway
2Rambøll, Norway

A5-3 Engineering and execution of tight sheet walls

Robert Bruin
Geovita as, Oslo, Norway

A5-4 Decision-making for increased sustainability in underground construction works by use of Analytical Decision-making for increased sustainability in underground construction works using Analytical Hierarchy Process

Miriam S. Zetterlund, Magnus Eriksson
Swedish Geotechnical Institute, Gothenburg, Sweden

B5-1 Oedometer tests with measurement of internal Friction between Oedometer ring and reconstituted clay specimen

Michael Rosenlund Lodahl¹, Kenny Kataoka Sørensen², Niels Mortensen³, Helle Trankjær⁴

1COWI A/S and Aarhus University, Aalborg, Denmark

2Aarhus University, Department of Engineering, Aarhus, Denmark

3nmGeo, Denmark

4COWI, Aarhus, Denmark

B5-2 Study on the practices for interpretation of preconsolidation stress from oedometer tests

Priscilla Paniagua, Jean-Sebastien l'Heureux, Shaoli Yang, Tom Lunne

NGI, Trondheim, Norway

B5-3 Correlations between shear wave velocities and geotechnical parameters in Norwegian clays

Jean-Sebastien l'Heureux¹, Mike Long²

1Norwegian Geotechnical Institute (NGI), Trondheim, Norway

2University College Dublin, Dublin, Ireland

B5-4 Triaxial testing of overconsolidated, low plasticity Clay Till

A. H. Augustesen, J.N. Goth, J.S. Steinfeldt

COWI A/S, Kongens Lyngby, Denmark

C5-1 Climate change induced river erosion as a trigger for landslide

Gunnel Göransson¹, Jim Hedfors², Karin Odén²

1The Swedish Geotechnical Institute, Gothenburg, Sweden

2Swedish Geotechnical Institute, Gothenburg, Sweden

C5-2 Landslide risks in a changing climate, Nors River pilot study area

Karin Bergdahl, Karin Odén, Hjördis Löfroth, Gunnel Göransson,

Åsa Jönsson, Ramona Kiilsgaard

The Swedish Geotechnical Institute, Gothenburg, Sweden

C5-3 Strength increase below an old test embankment in Finland

Marco d'Ignazio, Tim Länsivaara

Tampere University of Technology, Tampere, Finland

C5-4 Mechanical weathering effect on tailings

Juan Rodriguez, Tommy Edeskär, Sven Knutsson

Luleå University of Technology, Luleå, Sweden