SECOND INTERNATIONAL WORKSHOP ON LANDSLIDES IN SENSITIVE CLAYS

12th - 14th June 2017

Norwegian University of Science and Technology, Trondheim, Norway

WEBSITE
www.ntnu.edu/iwlsc2017

UPCOMING DEADLINES

August 15th 2016:
Manuscript submission to reviewers and editors.

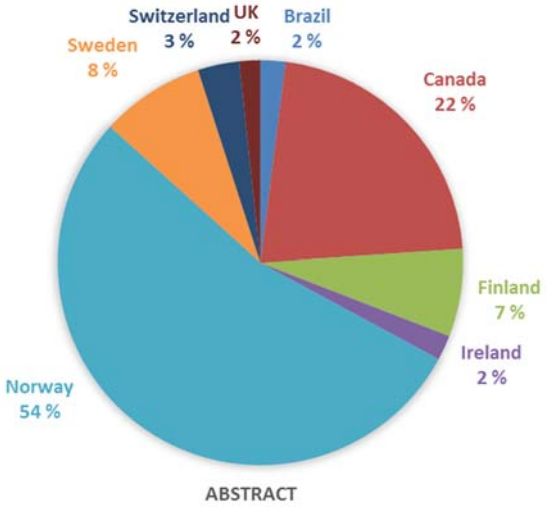
September 15th 2016:
Receive solicited corrections and signed forms from reviewers. Authors must report this to the editors.

October 15th 2016:
Author's deadline of final corrected papers submitted to editors with revision notes.

November 15th 2016:
Final deadline for abstract submission (poster presentation).

December 15th 2016:
Notification of acceptance (or rejection) of abstract for the poster session.

We are glad to inform you that the organizing committee has accepted 61 abstracts and invited their authors to submit full-length paper. A reviewer and a contact editor have assigned each paper. Authors are encouraged to visit the workshop website to obtain detailed information regarding manuscript preparation. All the accepted papers will be book chapters in the *Springer book series:* Advances in Natural and Technological Hazards Research edited by V. Thakur, J.-S. L'Heureux and A. Locat." There is still a possibility to submit your abstract for poster (no full paper).



Dr. Suzanne Lacasse (NGI, Norway) and Professor Emeritus Guy Lefebvre (Sherbrooke University, Canada) will be the keynote speakers during the workshop. They have made important contributions in the field of sensitive clays. A brief abstract of their keynote speeches is presented on the next page. We all look forward to have them with us in Trondheim in 2017.

KEYNOTE SPEAKERS

Dr. Suzanne Lacasse, NGI, Norway

Reliability of slope stability analysis for quick clays

The paper illustrates the use of the reliability approach for the analysis of slopes in quick clays, and presents reliability index and probability of failure for different case studies, including one nearshore slope. The principles of the reliability approach are first briefly described, and the input, model and results to the probabilistic slope analysis are described in detail, including the uncertainties in the parameters, triggers and calculation model. Three reliability approaches are exemplified and compared: the first order reliability method (FORM), the event tree analysis (ETA) and Bayesian Networks (BN). Landslide events, often unwittingly, are triggered or aggravated by human activity, such as change in topography (e.g. excavation or surcharge) and change in drainage conditions. Climate change can also increase the frequency of landslide. Preparedness for climate impact on landslide risk is discussed. The change in the reliability of a slope in quick clay with time is also considered. Recent work on spatial variability and slope analysis and on accounting for human error is presented. The paper also looks into the results of a recent Safe Land study on the impact of human activity on increasing or decreasing landslide hazard and on modelling the anthropogenic effect on landslide frequency. The paper proposes a new probabilistic model in flow chart format to include the effects of and the uncertainties associated with human intervention and climate change.

Professor Emeritus Guy Lefebvre, Sherbrooke University, Canada

Sensitive clays of Eastern Canada, From Geology to Slope Stability

In Eastern Canada, landslides in sensitive clays are generally localised along river valleys. This paper starts with the formation of sensitive clay deposits and the gradual erosion of river valleys in order to define phases in the development of the ground water regime and in the resulting overall stability for the slopes along a river valley. Between the bedrock and the sensitive clay deposits exits generally a layer of glacial till much more pervious than the clay. This large contrast of hydraulic conductivity has a great influence on the ground water regime and on slope stability as the erosion of the river valley progresses through the clay deposit. The slow process of river valley formation and the unloading associated with the phenomena must be considered in the selection of methods for slope analysis and for shear strength determination in the laboratory. Based on laboratory studies on block samples for a large number of sites, empirical relations are proposed for the determination of shear strength parameters as a function of the preconsolidation pressure. A qualitative assessment of the stability of a slope is also presented based on erosion activity at the toe of the slope and on the position of the river bed in regards to the till layer or bedrock.

Workshop committees

Chair: Vikas Thakur (NTNU, Trondheim, Norway)

Co-chairs: Jean-Sébastien L'Heureux (NGI, Trondheim, Norway)
Ariane Locat (Laval University, Canada)

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Gunilla Franzen, Swedish Geotechnical Society, Sweden
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Norwegian Water Resources and Energy Directorate, Norway
Norwegian National Rail Administration, Norway
Multiconsult AS, Norway

Workshop dates:
12-13th June 2017

Field Excursion:
14th June 2017

Workshop venue:
NTNU, Trondheim, Norway

Updates:

Deadline for paper Submission for review is 15th August 2016

For more information contact:

Professor Vikas Thakur, Norwegian University of Science and Technology

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Nr	Corresponding author		Paper Title	Country
	First Name	Last Name		
1	Sandro	Sandroni	Geotechnical, Mineralogical, Chemical and Structural Characteristics of the Sensitive Clay involved in the failure of the Port of Santana.	Brazil
2	Ariane	Locat	Sensitive clay landslides in Canada and Scandinavia	Canada
3	Denis	Demers	The use of LiDAR airbone data for retrogressive landslides inventory in sensitive clays, Québec, Canada	Canada
4	Denis	Demers	Superficial landslide risk management: the case of the city of Saguenay, Quebec, Canada	Canada
5	Denise	Leahy	Progressive Failure Potential for the North Spur, Churchill River Valley	Canada
6	Didier	Perret	Did liquefaction of thin silt and sand layers trigger the Mulgrave & Derry landslide, Quebec, during the June 23rd 2010 Val-des-Bois earthquake?	Canada
7	Dominique	Turmel	Parametric analysis of the mobility of debris from flow slides in sensitive clays	Canada
8	Jacques	Locat	The 1908 disaster of Notre-Dame-de-la-Salette : analysis of the landslide and tsumami	Canada
9	Karine	Bélanger	Geophysical and geotechnical characterization of a sensitive clay deposit in Brownsburg, Quebec	Canada
10	Kenneth	Torrance	Chemistry: An Essential Key to Understanding Quick Clays and Addressing their Landslide Risk.	Canada
11	Marten	Geertsema	A review of four historic glaciomarine landslides in northwestern British Columbia	Canada
12	Michaël	Demers Bonin	Case study: characterization of a thick sensitive clay deposit in the St. Lawrence River valley, slope stability analysis and preliminary examination of permanent deformations	Canada
13	Sarah	Bouchard	Vibratory roller influence zone near slopes with vibration susceptible soils	Canada
14	Sarah	Bouchard	Geotechnical Properties for Dynamic Site Effects in a Sensitive Clay Deposit	Canada
15	Juha	Selänpää	Problems related to field vane testing in soft soil conditions and improved reliability of measurements using an innovative vane tester	Finland
16	Marco	D'Ignazio	Effects of sample disturbance on the determination of soil parameters for advanced finite element modelling of sensitive clays.	Finland
17	Quoc Anh	TRAN	Modelling of the quickness test of sensitive clays using generalized interpolation material point method	Finland
18	Ville	Lehtonen	Advances in determining Δu and su for Limit Equilibrium analyses	Finland
19	Mike	Long	Relationships between shear wave velocity and geotechnical parameters for Norwegian and Swedish sensitive clays	Ireland
20	Anders Samstad	Gylland	CPTU classification diagrams for identification of sensitive clays	Norway
21	Ashenafi Lulseged	Yifru	Run-out assessment of sensitive clay debris using Voellmy rheology	Norway
22	Bjørn Kristoffer	Dolva	Natural hazards in a changing climate	Norway
23	Brian	Carlton	Application of a slope stability assessment screening tool to sensitive clays	Norway
24	Ellen Davis	Haugen	Mapping quick clay hazard zones: A new method for the estimation of the retrogression distance applied to existing zones	Norway
25	Eigil	Haugen	The vane shear test used in low plastic sensitive clays; Norwegian experiences	Norway
26	Helene Alexandra	Amundsen	A laboratory procedure to study the stress relief during and after sampling in soft sensitive clays	Norway
27	Inger-Lise	Solberg	The Norwegian National Database for Ground investigations (NADAG) - a tool to assist in landslide hazard zonation	Norway
28	Ingrid	Havnen	Quick clay hazard mapping in Norway	Norway
29	Ivan	Depina	Bayesian updating of uncertainties in the stability analysis of natural slopes in sensitive clays	Norway
30	Jean-sebastien	L'heureux	Revisiting the 1959 quick clay landslide at Sokkelvik, Norway	Norway
31	Kristian	Aunaas	Recent advances on the regulatory framework for the construction on sensitive clays	Norway
32	Lars	Andresen	Mechanics of triggering landslides as an instability problem	Norway
33	Louise	Hansen	Developments in mapping and web presentation of fjord-marine deposit distributions as the basis for mapping of quick-clay occurrences in Norway	Norway
34	Maj Gøril	Bæverfjord	Characterisation of quick clay at a landslide area at Leistad, Norway	Norway
35	Maj Gøril	Bæverfjord	Probabalistic back-calculation of quick clay slide at Leistad, Norway	Norway
36	Per Arne	Wangen	Hegramo quick clay area - Stability analysis and stabilization works	Norway
37	Petter	Fornes	Effect of strain softening behaviours on run-out distance of a sensitive clay landslide	Norway
38	Petter	Fornes	Slope stability correction factor for strain softening in sensitive clays	Norway
39	Ragnhild Håøy	Grue	Viscometric testing on sensitive clay from Byneset, Norway, and fit to the Herschel-Bulkley model	Norway
40	Rolf	Sandven	Future strategy for site investigations in quick clay areas	Norway
41	Rolf	Sandven	Geotechnical evaluations for future development of a quick clay area in Trondheim city	Norway
42	Samson Abate	Degago	On short-term slope stability calculation approaches	Norway
43	Samson Abate	Degago	Practicing hazard reduction strategies for a construction on sensitive clay slope	Norway
44	Sara	Bazin	Helicopter geophysics as a first step in regional quick clay mapping	Norway
45	Stein-Are	Strand	A pragmatic approach to assess the post-failure movements of landslides in sensitive clays	Norway
46	Siri Bente	Haugen	Evaluation of potential triggering factors of the Mofjellbekken landslide	Norway
47	Suzanne	Lacasse	Calculation of run-out for sensitive clays with GeoSuite Toolbox	Norway
48	Tonje Eide	Helle	Improving the post-failure properties in quick clays using potassium chloride	Norway
49	Trine	Flobak	Fv. 287 Strandgata – Kjøreplass bruRoad construction in quick clay	Norway
50	Vikas Chand	Baranwal	Investigation of a sensitive clay landslide area using helicopter borne EM and other geophysical methods	Norway

51	Vikas	Thakur	Recommended practice for the use of strength anisotropy in the stability calculation	Norway
52	Vikas	Thakur	Influence of weather processes on stability of a highly sensitive clay slope	Norway
53	Zhongqiang	Liu	Bayesian kriging for the mapping of sensitive clay	Norway
54	Anders	Beijer Lundberg	Soil disturbance resulting from sampling in deep layers of sensitive clay	Sweden
55	Hjördis	Löfroth	Development of methodology for quick clay mapping	Sweden
56	Karin	Odén	Mapping of landslide risks in a changing climate - Development of simplified methodology	Sweden
57	Lena	Persson	Analysis and comparison of ground geophysical, airborne TEM, and geotechnical data for recognition and modeling of quick clay areas	Sweden
58	Mats	Karlsson	On the benefits of incorporating anisotropy in stability analyses in sensitive clays	Sweden
59	Naki	Akçar	February 2011 sensitive clay landslides at the Çöllolar coalfield, eastern Turkey	Switzerland
60	Alexander	Puzrin	Spreading and ploughing in submarine landslides – a unified shear band propagation approach	Switzerland
61	Shane	Gribben	Investigating how the changes in geotechnical properties of sensitive clays influence their geophysical properties	United Kingdom