



Established in 1986

SLGS NEWSLETTER

SRI LANKAN GEOTECHNICAL SOCIETY

A Member Society of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

SLGS Project day 2018

The SLGS project day 2018 was held on 14 June 2018 at IESL Meeting Room 1. Nine commendable undergraduate projects competed for the best geotechnical project 2018 award. Each winning project received a cash prize and a certificate. The winners are as follows.

First place: A Study on the Effect of Material Anisotropy on Consolidation Behaviour of Peat by S.M. Gajanayake and R.D.S.S. Jayasooriya, Department of Civil Engineering, University of Peradeniya.

Second place: Salinity Dependent Mechanical Behaviour of Well Cement: An Experimental Study by B. Balinee and P. Disaanth, Department of Civil Engineering, University of Peradeniya.

Other competed projects are listed below.

- Relationship Between Particle Size and Permeability of Different Soils by A.H.A. Ashrar, Department of Civil Engineering, University of Peradeniya.
- Applicability of Mackintosh Probe Test in Evaluating the Degree of Compaction in Compacted Quarry-dust Backfills by P.A.M. Gomes, Department of Civil Engineering, University of Moratuwa
- Secondary Consolidation Characteristics of Peaty Clay by J.P.D.C.M. Karunarathne, Department of Civil Engineering, University of Moratuwa.
- Investigation on the Applicability of Plate Load Tests in Extrapolating the Bearing Capacity of Large Raft Foundations by O.M.Muthuhewa, Department of Civil Engineering, University of Moratuwa.
- The Compressibility Behavior of Stabilized Peat with Fly Ash using DMM: An Experimental and Numerical Study by M. Nithurshan and R. Nitharshan, Department of Civil Engineering, University of Peradeniya.
- Use of Stone Columns for Settlement Control in Construction of Embankments in Soft Peaty Clays by S.M.Y.I. Subasinghe, Department of Civil Engineering, University of Moratuwa.
- Utilization of Soil-cement Columns to Stabilize Soft Peaty Clay by K.K.J. Kodikara, Department of Civil and Environmental Engineering, University of Ruhuna



Mr. S.M. Gajanayake receiving his award from the Hony. Secretary of SLGS, Dr. J. S. M. Fowze.



Ms. B. Balinee receiving her award from the President of SLGS, Prof. S. A. S. Kulathilaka.



A section of audience at SLGS project day 2018.

Geo forum conducted by Dr. L. Wang

Geo forum for the month of June 2018 was conducted by Dr. L. Wang, Senior Manager of Technology Centre, Chuo Kaihatsu Corporation, Japan on 4 June 2018 at NBRO Conference Room.

The title of the presentation was “Monitoring of landslides and slope failures using IoT and MEMS technology for early warning”. The lecture covered the details of development of an early warning system based on tilt sensor network using MEMS technology and determination of threshold values for early warnings. The warning system with its developed equipment has been deployed in several actual slopes for validation of field performance in Japan and China. Based on the results of field case studies, the developed low-cost sensor unit and real-time warning system are considered particularly effective against rainfall induced slope failures or landslides.

Dr. Upul Atukorala awarded the prestigious Vancouver Geotechnical Society award



The prestigious Vancouver Geotechnical Society Award in 2018 was presented to Dr. Upul Atukorala. This Award is bestowed on a member of the Vancouver Geotechnical Society who has contributed in a significant manner to the Vancouver Geotechnical Society. Past recipients of this prestigious award include Professors Campanella, Liam Finn, Peter Byrne and Evert Hoek, distinguished professionals in the geotechnical industry.

Dr. Atukorala is a product of the University of Peradeniya, graduating with First Class Honors, before joining the University of British Columbia on a post-graduate scholarship where he obtained his Masters and PhD. Since then, he has practiced as an academic as well as a consultant for over 30 years. Currently, a Principal at Golder Associates which is in the Top 20 Design firms in the world, Dr. Atukorala has been involved in a variety of geotechnical consultancy work for the private as well as the public sector. He is a specialist on ground response analysis and seismic design of earth structures, soil-structure interaction analysis under static and dynamic loads, machine foundations, and ground improvement methods to mitigate liquefaction.

Dr. Atukorala has contributed to the geotechnical field by his technical papers and involvement in a number of technical committees responsible for preparing seismic design guidelines for earth-structure systems.

Geo technical Toolbox

SOME USEFUL FIGURES ON SETTLEMENT OF SHALLOW FOUNDATIONS

The following Figure from ICE Manual of Geotechnical Engineering Volume 2 is useful in the quick estimation of immediate settlement of shallow foundations on sand.

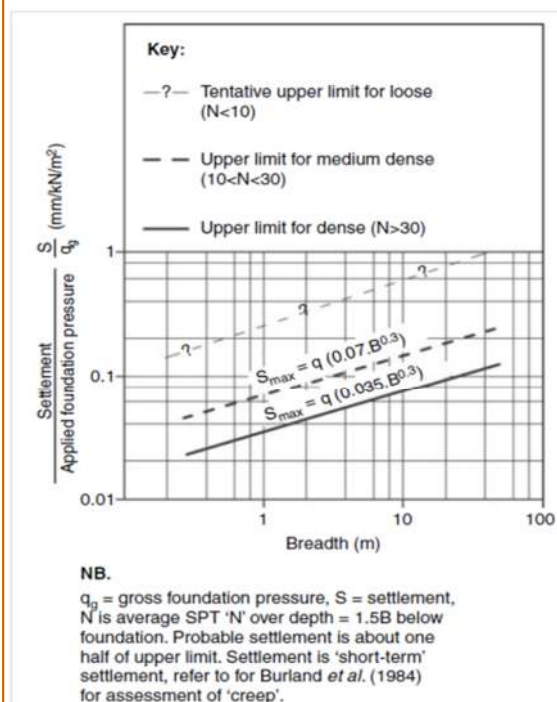
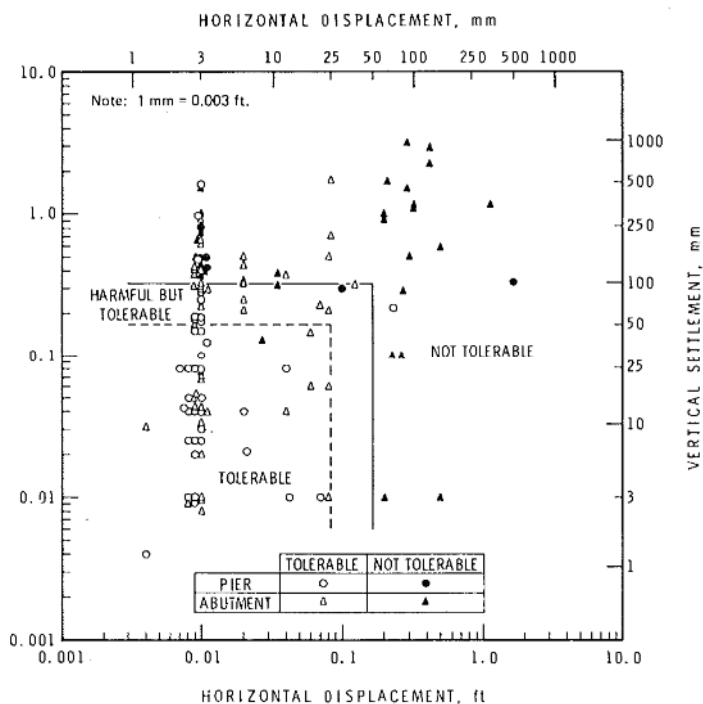


Figure 53.18 Sands, upper-limit settlement ratios
 Reproduced from Burland *et al.* (1977)

A useful guideline on tolerable settlement and horizontal displacement of shallow foundations for bridge abutments and piers is presented below.



From Bozozuk, M. (1978): "Bridge Foundations Move." Transportation Research Record, No. 678, pp.17-21.

Geo forum conducted by Dr. Muditha A Pallewattha



Dr. Muditha A Pallewattha, Irrigation Engineer from the Department of Irrigation, Sri Lanka made the presentation at the geo forum for the month of August on 30 August 2018 at NBRO conference room.

The title of the presentation was “Model development to capture the improvement of shear strength of soil using Australian native vegetation”. The lecture discusses on integrated behaviour of suction and root reinforcement in contributing to the improvement in soil shear strength and stiffness.

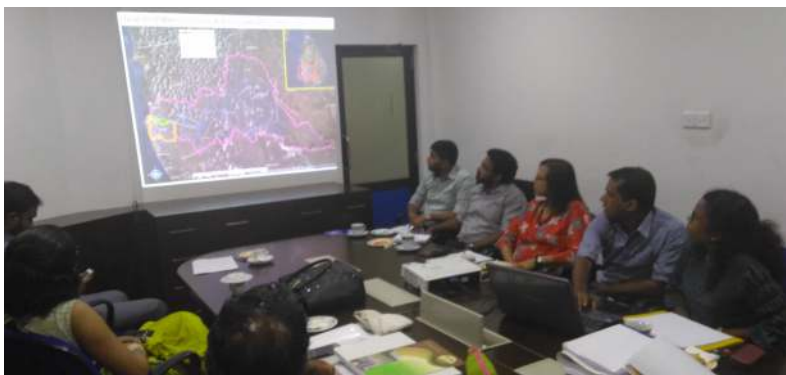


Dr. Muditha A Pallewattha conducting her presentation (Left) and participants at the geo forum (Right).

A visit by SLGS to SLLRDC

The need to encourage young local engineers to present papers at the forthcoming ICGE Colombo 2020 was emphasized at executive committee meetings of SLGS. In this context it was decided that a group of Senior Academics and Practitioners of SLGS ExCo will visit several institutions and have close discussions with young engineers guiding them to prepare research papers based on projects they conduct. The first visit was made to Sri Lanka Land Reclamation and Development Corporation (SLLRDC). Prof. Athula Kualthilaka, Dr. Prasanna Rathnaweera, Dr. Udeni Nawagamuwa and Dr. Ashani Ranatunga participated. Prof. Kulathilaka outlined the concept and Dr. Ranatunga made a presentation on formulation of a conference paper. Few engineers from SLLRDC made presentations on their current projects with geotechnical involvement and discussions were held on the possibility of developing research papers out of these projects. It was a very fruitful interactive session and SLGS will follow up until the research papers are completed. SLGS is planning to make visits to few other organisations.

Some glimpses of the event are depicted below.



Forthcoming Events of SLGS

SLGS Annual Conference 2018 and AGM

SLGS Annual Conference 2018 and AGM is scheduled for 18 September 2018. The theme of the conference is "MODERN DAY FOUNDATIONS".

The schedule of presentations and AGM is presented below.

9:45 - 10:45 : Presentation 1: "Compaction Grouting Techniques" by Eng. Park Tae Young, Director, Denver Korea E&C Co. Ltd., Korea.

10:45 - 11:45 : Presentation 2: "Sea Side Construction", Dr. Kim Gyung Suk, General Director, Denver Korea E&C Co. Ltd., Korea.

11:45 - 13:15 : Lunch

13:15 - 14:15 : Presentation 3: "PF – Point Foundation & SAP – Screw Anchor Pile", Eng. Han Byung Kwon, Vice President / Professional Engineer and Eng. Lee Ki Tae, General Manager of Global Business Division, Ext Co. Ltd., Korea.

14:15 - 15:15 : Presentation 4: "Basement Construction & Soil Improvements", Dr. Mun Jae Sung, Senior Researcher and Eng. Lee Ki Tae, General Manager of Global Business Division, Ext Co. Ltd., Korea.

15:15 - 15:45 : Concluding Remarks, Vote of Thanks and Evening Tea.

15:45 - 17:00 : 22nd Annual General Meeting of the SLGS.

3rd International Conference in Geotechnical Engineering (ICGE - Colombo - 2020)

2nd Bulletin of ICGE - Colombo - 2020 has been released and the conference website will be launched soon. Some important information on Keynote lectures and important dates are as follows.

Important Dates

Acceptance of abstracts	- 25 March 2019
Notification of the acceptance of abstracts	- 24 June 2019
Receipt of the full paper for reviewing	- 14 October 2019
Notification of the acceptance of full paper	- 13 January 2020
Receipt of the final camera ready papers	- 10 February 2020

Keynote Speakers

Prof. Charles W.W. Ng - Unsaturated Soils and Slope Stability.
Distinguished Prof Buddhima Indraratna - Ground Improvement for Rail and Road Infrastructure .
Prof. Krishna Reddy - Modeling Coupled Dynamic Processes in Landfills: Holistic Long-Term Performance Management to Improve Sustainability .
Dr. Brian Simpson - Deep Excavations and Tunnelling.
Dr. Chris Haberfield - Piled Foundations - Soil Structure Interaction.

Forthcoming Conferences

- ISDCG 2019 - 7th International Symposium on Deformation Characteristics of Geomaterials, 26-06-2019 - 29-06-2019, Glasgow, United Kingdom. <https://www.is-glasgow2019.org.uk>.
- 7th Asia-Pacific Conference on Unsaturated Soils, 23-08-2019 - 25-08-2019, Nagoya, Japan, <https://www.jiban.or.jp/e/activities/events/20190823-25-seventh-asia-pacific-conference-on-unsaturated-soils/>.
- 3rd International Conference on Information Technology in Geo-Engineering (3rd ICITG 2019), 29-09-2019 - 02-10-2019, Guimarães, Portugal, <http://www.3rd-icitg2019.civil.uminho.pt/>.
- XVI Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, 14-10-2019 - 18-10-2019, Chinese Taipei, <http://www.16arc.org>.
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SLGS and ISSMGE Membership Fees

SLGS members are kindly requested to pay the membership arrears at your earliest. A notice indicating due fees is attached.

Please inform any changes in the contact details.

Membership Admission Fee	Rs. 200/=
Annual Membership Fee	Rs. 700/=
ISSMGE Fee	Rs. 1500/=

Call for papers for SLGS Journal

SLGS wishes to call for full papers for its Annual Journal. Number of pages per paper is limited to 12. All the papers will be subjected to double blind review by two referees. Selected papers will be published in the SLGS Journal (hard copy version) and will be made available online through the SLGS website. Please send your papers to the following email address.

Editor Journal: nadeejpriyankara@yahoo.com

The SLGS Newsletter comes to you in volumes of four fascicles issued in February, May, August and November in each year. If you prefer to receive the newsletter by email, please send your email address to the editor, newsletter

Address for Correspondence:

Sri Lankan Geotechnical Society

C/o National Building Research Organisation
No. 99/1, Jawatta Road, Colombo 5, SRI LANKA

Tel:

President: +94-77-6623411

Hony Secretary: +94-11-2668842

Treasurer: +94-11-4309494

Editor: +94-755-494973

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