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EDITORIAL BOARD

MESSAGE FROM TC302

FORENSIC GEOTECHNICAL ENGINEERING.

Chair; Dr. V.V.S. RAO

Dr. V.V.S.Rao, Chair of TC302

Forensic analysis in geotechnical engineering involves scientific and legalistic investigations and deductions to detect the causes as well as the process of distress in a structure, which are attributed to geotechnical origin. Such a critical analysis will provide answers to "what went wrong, when, where, why, how, and by whom". It also gives strong inputs to improve future designs and also assists in identifying the qualifications and expertise required for the staff. As forensic analysis is basically a back analysis based on failure observations, the normally adopted standard procedures of testing, analysis, design and construction are not adequate for the forensic analysis in majority of cases. The forensic geotechnical engineer (who is different than the expert witness) should be able to justify his conclusions in a court of law. Hence he has to be not only fully knowledge in his field of specialization including his communication skills, but should also be familiar with legal procedures.

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! For more details, refer to **more details in page 10** of this Bulletin.

MESSAGE FROM TC302 (continued)

Dr. V.V.S.RAO, Chair of TC302

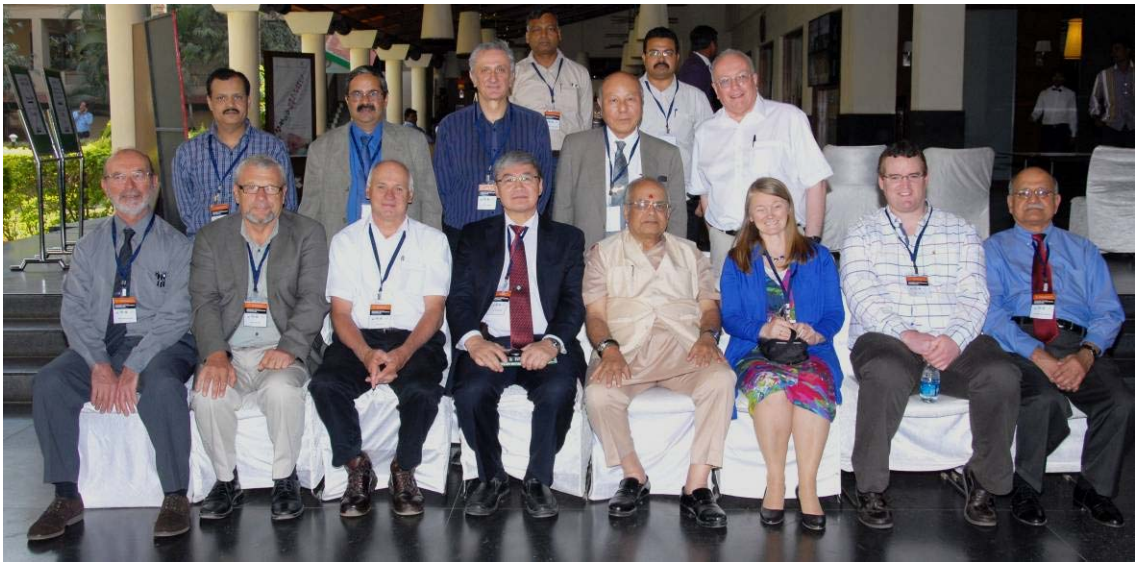
With the above points in view, ISSMGE, under the presidentship of Prof. Pedro Pinto during his term 2005 – 2009 constituted a technical committee styled as TC 40 under the Chairmanship of Dr. V.V.S.Rao, India. This TC was extended as TC 302: FGE for one more term 2009-2013 by the present president, Prof. J. Briaud. Accordingly, the terms of reference comprised of:-

Prepare a book either as a manual or as an introductory guide on the forensic procedures to be followed in failure investigations pertaining to geotechnical engineering. The book shall contain procedures for systematic scrutiny of every stage of planning, investigations (both field and laboratory), evaluation and selection of design parameters, analysis and design, construction techniques adopted, detailed documentation regarding quality control, problems encountered including meteorological conditions, etc.

To achieve the above objective, the following task forces with their respective Leaders are constituted.

TF 1: Collection of data - P.W. Day
TF 2: Characterization of distress. – David Starr
TF 3: Development of failure hypothesis. – J. Mecsi
TF 4: Diagnostic tests. – W.F. Lee
TF 5: Back analysis – Popescu
TF 6: Observation method of performance evaluation – Y. Iwasaki
TF 7: Reliability aspects. – GLS Babu
TF 8: Legal Issues – D.S. Saxena
TF 9: Case Histories. – Hwang.
TF 10: Technical Susceptibilities – Rob Jessep

During the past four years, the committee has organized three international seminars: September 24-25,2010 in Budapest (organized by Prof. Mecsi), December 14-15, 2010 in Mumbai (organized by Prof. Babu) and, July 14-15, 2011 in Osaka (organized by Prof. Iwasaki). Apart from these seminars, separate sessions on FGE were also conducted during ARCs in Hong Kong and I Kolkatta.



TC 302 executives with Prof. Askar, Dr. Suzanne Lacasse and Prof. Bolton during the Bengaluru seminar

MESSAGE FROM TC302 (continued)

Dr. V.V.S.RAO, Chair of TC302

A fourth international seminar was organized in Bengaluru, India, during 10 – 12 January, 2013. Experts from fifteen countries presented special lectures. Prof. Askar Zhussupbekov, Vice President, Asian region of ISSMGE inaugurated the seminar and Dr. Suzanne Lacasse gave the main key note lecture. In all forty one papers were presented in twelve sessions. Over 140 delegates attended the seminar and made it a grand success.

The following is the list of theme lectures, invited lectures and contributed papers presented during the conference.

INAUGURAL LECTURE

1) Forensic Geotechnical Engineering – Theory and Practice by **Dr. Suzanne Lacasse-Høeg**.

THEME LECTURES

1) Performance-based design in geotechnical engineering by **Prof. Malcom Bolton.**
2) Learning from the past: The ancient Egyptians and geotechnical engineering by **Dr. Sheriff Wissa.**
3) Forensic Geotechnics – some case studies from Singapore by **Prof. C. F. Leung.**
4) Legal aspects regarding management of soil risk by **Prof. Katzenbach.**
5) Caisson failure induced by wave action by **Prof. Eduardo Alonso.**
6) Forensics of pile foundations subjected to earthquake induced by **Prof. M. Gopal.**
7) Stability of landfill capping systems on steep slopes - lessons learned from practice by **Prof. Georg Heerten.**
8) Forensic geotechnics of failing petroleum tanks **by Prof. William Van Impe.**
9) The role of uncertainty in forensic geotechnical engineering **by Prof. Robert Gilbert.**
10) Attempts to protect personal houses from seismic liquefaction by **Prof. Ikuo Towhata.**
11) Analysing Ground – Beyond a Mechanistic Approach by **Prof. M. R. Madhav.**

INVITED LECTURES

1) The Reasons of Extremely Unusual Occurrence of Full Destroying of a House in the Residential District Besoba in Soil Ground Conditions of Karaganda City by **Dr. A. Zhussupbekov.**
2) Distress in Reinforced soil walls- An appraisal by **Prof. G. V. Rao.**

TASK FORCES

1) Role of collection of data in Forensic analysis by **Dr. P. W. Day.**
2) Characterisation of failure at a large landslide in SE Queensland by geological mapping, laboratory testing, instrumentation and monitoring by **Mr. David Starr.**
3) Special material properties and circumstances on the serious Geotechnical Disasters **by Prof. .J Mecsi.**
4) Failure Analysis of A Highway Dip Slope Slide by **Prof. Wei F. Lee.**
5) Effects of Vibration by Demolition to nearby Machine Shop Floor - Wave Measurement for Dynamic Property of Ground by **Prof. Yoshi Iwasaki.**
6) Reliability analysis in Forensic Geotechnical Engineering by Prof**. G L Sivakumar Babu.**
7) Forensic Engineering, Legal Considerations, and Property Damage Assessment from Construction Vibrations by **Dr. Dhirendra S. Saxena.**
8) Technical shortcomings causing geotechnical failures by **Mr. Rob Jessep.**
9) Guidelines for Forensic Geotechnical Engineering by **Dr. V. V. S. Rao.**

CONTRIBUTED PAPERS

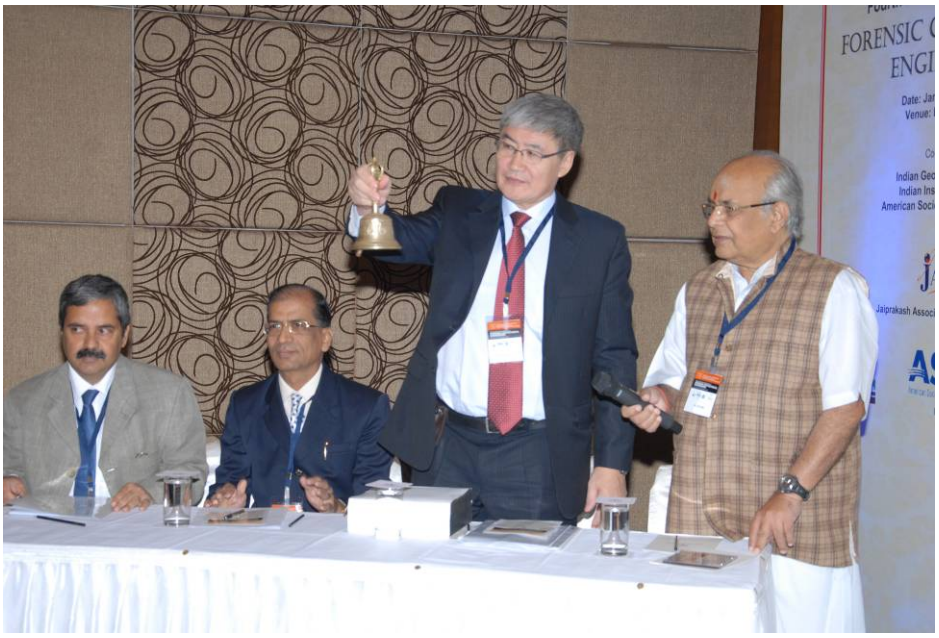
1) Analyses of Unexpected Settlements of Large Oil Tanks in the Rotterdam Port by **J. L. Bijnagte, and H. J. Luger.**

MESSAGE FROM TC302 (continued)

Dr. V.V.S.RAO, Chair of TC302

2) Investigation of Soil Saturation and Compaction Homogeneity in the failed soil nailed wall and fill using Ground Penetrating Radar by **P. Anbazhagan, P. S. Naresh Dixit, Deepu Chandran and A. Murali Krishna**
3) Forensic Geotechnical Investigations for Floor Failure of an Industrial Building near Bhopal, India - A Case Study by **S.B. Suri, Nakul Dev, Thomas Joseph & Jancy Mathew.**
4) Deep Excavations and Managing the Risk of Damages in the Proximate Vicinity by **R. Katzenbach, C. Bergmann, F. Clauss and M. Seip.**
5) Recent Approaches of Back Analysis for Addressing Geotechnical Issues **by Dauji Saha, Ranjan Kumar, Kapilesh Bhargava and Sekhar Basu.**
6) Post-liquefaction data collection and analyses for earthquakes in New Zealand by **Md. Mizanur Rahman and T. G. Sitharam.**
7) Penetration of Mudmats for Fixed Offshore Platforms - Case Studies by **Rupam Mahanta and R. K. Ghanekar.**
8) Need for Forensic Engineering in Earthquake Geotechnics – Case Studies from 2001 Gujarat Earthquake by **S. K. Prasad, I. Towhata, G. P. Chandradhara, K. V. Vijayendra, and T. Honda**
9) Forensic Analysis of Failure of Retaining Wall by **G. L. Sivakumar Babu, Raja J, B. M. Basha and Amit Srivastava.**
10) Performance a Full Raft Foundation Constructed on Soft Clay by **I.V. Anirudhan and S.V. Ramaswamy.**
11) Design and Construction of Diaphragm Walls Embedded in Rock for a Metro project by **N. Kumar Pitchumani, Makarand G. Khare, and K. V. Sridhanya**

There was a very good interaction between the speakers and delegates throughout the three days of the seminar. A lively banquet along with a grand folk dance program added glamour to the seminar.

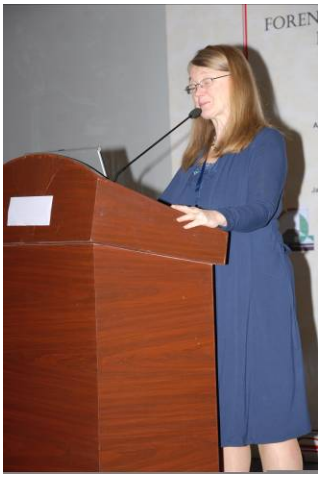


Prof. Askar inaugurating the seminar by ringing a bell.
From the left, Prof. GLS Babu(Secretary,TC302) Prof. G.N.Gandhi.(President, IGS),
Prof. Askar (Vice President, ISSMGE), and Dr. V.V.S.Rao (Chair, TC302)

MESSAGE FROM TC302 (continued)

Dr. V.V.S.RAO, Chair of TC302

KEY SPEAKERS:



Dr. SUZANNE LACASSE

Prof. MALCOM BOLTON

Dr. SHERIFF WISSA