

INTERNATIONAL SOCIETY FOR SOIL MECHANICS AND GEOTECHNICAL ENGINEERING



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Administrative report of TC14 – Offshore geotechnical engineering

Compte rendu technique de la No. CT 14

S.Lacasse – Norwegian Geotechnical Institute, Norway

1 TERMS OF REFERENCE

ISSMGE TC 14 was formed in mid 1998. It has for Terms of References:

1. To promote co-operation and exchange of information about the practice of and research in offshore geotechnical engineering.
2. To act as contact persons for the profession on where reliable sources of information within offshore geotechnical engineering can be found.
3. To monitor the effectiveness of information dissemination in reaching practicing engineers and researchers through established journals and conferences; if needed, to suggest improvements; and to encourage publication of technical articles, particularly case histories in widely available journals and conferences.
4. To point out the more challenging problems and future trends in the area of offshore geotechnical engineering.
5. To develop for the ICSMGE in Istanbul in year 2001 a position document on offshore geotechnical engineering, including achievements, state of practice, applications of knowledge to geotechnical practice on land and future development needs.

2 MEMBERSHIP

The following persons are members of ISSMGE TC 14:

Chairman: Suzanne Lacasse (Norway)

Core members:

Dr. J.D. Murff (USA)

Dr. M. Randolph (Australia)

Mr. K. Al-Shafei (Saudi-Arabia)

Mr. H. Kolk (Netherlands)

Dr. J.-L. Colliat (France)(corresponding member)

Members:

Dr. J.I. Clark (Canada)

Dr. J.O. Steensen-Bach (Denmark)

Dr. K. Horikoshi (Japan)

Dr. F. Nowacki (Norway)

Dr. M. Werno (Poland)

Dr. V.G. Fedorovski (Russia)

Dr. K.S. Prakasha (India)

Dr. Alain Puech (France)

Mr. J.R.C. De Mello (Brasil)

3 ACTIVITIES INITIATED

1998

- Sponsored the conference "Geoshore 1999" in Dec. 1999 Panvel, India. Proceedings have been issued.
- Outlined a document on the application of knowledge of offshore geotechnics to geotechnical practice on land.

- Planned to possibly hold a "satellite conference" on conclusions of work of TC 14 at XVth ISSMGE Conference in Istanbul in August 2001.
- Presented challenges and achievements of Offshore Geotechnical Engineering for the Ardaman Lecture, in Orlando, Florida, USA and as Distinguished Lecture at VPI, Blacksburg, Virginia (USA) (Oct. 1998).

1999

- Continued planning of "satellite conference" at XVth ICSMGE in Istanbul, August 2001.
- Prepared and presented 9th OTRC (Offshore Technology Research Centre) Honours Lecture "Geotechnical Contributions to Offshore Engineering" (May 1999)
- Presented Keynote Lecture on "Offshore and Arctic Geotechnical Engineering Prediction, Performance and Challenges" at ISOPE Conference in Brest, France (June, 1999)
- Presented Keynote Lecture on "Recent Developments in Offshore and Near Shore Geotechnical Engineering", Panvel, Navi Mumbai, India (Dec. 1999).

2000

- Organised and sponsored "Satellite Conference on Offshore Geotechnical Practice" at XVth ICSMGE in Istanbul. Satellite conference is advertised in ICSMGE programme Issue #2. Conference will be in Izmir, Turkey 24 August 2001, with participants being taken back to Istanbul by ISSMGE on 26th August 2001. Programme is given in Annex.
- Started preparing statement documents on
 - challenges and trends in offshore geotechnical engineering,
 - ways to improve information dissemination in practice,
 - use of knowledge gained offshore for design on land.The work will be presented as part of the 36th Terzaghi Lecture - Houston, Texas, USA in October 2001.
- Presented challenges and achievements of Offshore Geotechnical Engineering as Keynote Lecture in YGEC in Southampton, UK (Sept. 2000), in Hong Kong (Nov. 2000), at MIT, Cambridge, Mass., USA (Oct. 2000) and in Montréal (Oct. 2000).

2001

- Contributed to suction caisson and anchor study for the American Petroleum Institute in cooperation with Offshore Technology Research Center in Houston, Texas, USA (2000-2002).
- Workshop on suction caisson at OTRC Wayne Dunlap Symposium, Houston, Texas USA April 2001 - Proceedings have been issued (in cooperation with Offshore Technology Research Center in Houston, Texas, USA).

- Presented challenges and achievements of Offshore Geotechnical Engineering at University of Illinois, Urbana-Champaign (April 2001) and at Czech Academy of Sciences (May 2001).
- Carry out Satellite Conference, August 2001 in Izmir, Turkey.
- Contribute to Terzaghi Lecture, October 2001, Houston, Texas, USA.
- Contribute to and investigate sponsorship of "International Conference on Physical Modelling" in USA Geotechnics, July 2002, St. John's, Newfoundland, Canada.
- Prepared three administrative documents for ISSMGE.
 - o Report on activities of TC 14 September 1998-August 2000.
 - o Activities for 2000 and plans for 2001.
 - o Recommendations to incoming ISSMGE Board on future of TC 14.
- Hold TC 14 Committee meeting at XVth ICSMGE in Istanbul in August 2001.

4 ACHIEVEMENTS

All the activities listed above have been or will be carried out, some after August 2001. With respect to the terms of reference, contributions have been made to each of the terms listed, but none of the terms have been completed, as research and practice on the topic are on-going and some of the objectives are open-ended.

In addition to the achievements above, all committee members have been active in publishing and presenting results of offshore work over the past 4 years.

A TC 14 Committee Meeting will be held at the XVth ICSMGE in Istanbul to make a decision on whether to prepare or not a position document on Offshore Geotechnical Engineering, and our recommendation for the future of TC 14 in ICSMGE.

5 ANNEX

- Programme of Satellite Conference "Offshore Geotechnical Engineering".

SATELLITE CONFERENCE at ICSMGE Friday, August 24th 2001

OFFSHORE GEOTECHNICAL ENGINEERING Organised by TC 14 of ISSMGE

OBJECTIVE

The workshop presents an overview of central aspects of the geotechnical design of offshore foundations. The lectures summarise the state of practice for the practising engineer. An example project in Izmir will be presented together with a short site visit on the next day.

PRESENTERS

Harry Kolk	Fugro, Leidschendam, The Netherlands
Philippe Jeanjean	BP-Amoco, Houston, USA
Jean-Louis Colliat	TotalFina Elf, Pau, France
Jack I. Clark	Consultant, Newfoundland, Canada
Tore Kvalstad	NGI, Oslo, Norway
Knut H. Andersen	NGI, Oslo, Norway
Suzanne Lacasse	NGL, Oslo, Norway

TECHNICAL PROGRAMME

- PART 1 INTRODUCTION (8:30 to 8:45)
by Suzanne Lacasse
- PART 2 SOIL INVESTIGATIONS (8:45 to 9:45)
by Harry Kolk
- PART 3 GEOHAZARDS (10:00 to 11:00)
by Tore Kvalstad
- PART 4 CYCLIC BEHAVIOUR AND ANALYSIS OF BEARING CAPACITY (11:15 to 12:15)
by Knut H. Andersen
- LUNCH*
- PART 5A CASE STUDIES (14:00 to 15:00)
by Philippe Jeanjean (Gulf of Mexico), Suzanne Lacasse (North Sea)
- PART 5B CASE STUDIES (15:15 to 16:15)
by Jean-Louis Colliat (offshore West-Africa), Jack I. Clark (Canadian Atlantic)
- PART 6 IZMIR BAY MUD DREDGING AND DISCUSSION OF ITS USE FOR CONTAINER TERMINAL RECLAMATION (16:30 to 17:15)
- PART 7 GENERAL DISCUSSION (17:15 to 18:00)
Presenters on panel
Question and answer session on concepts and applications presented