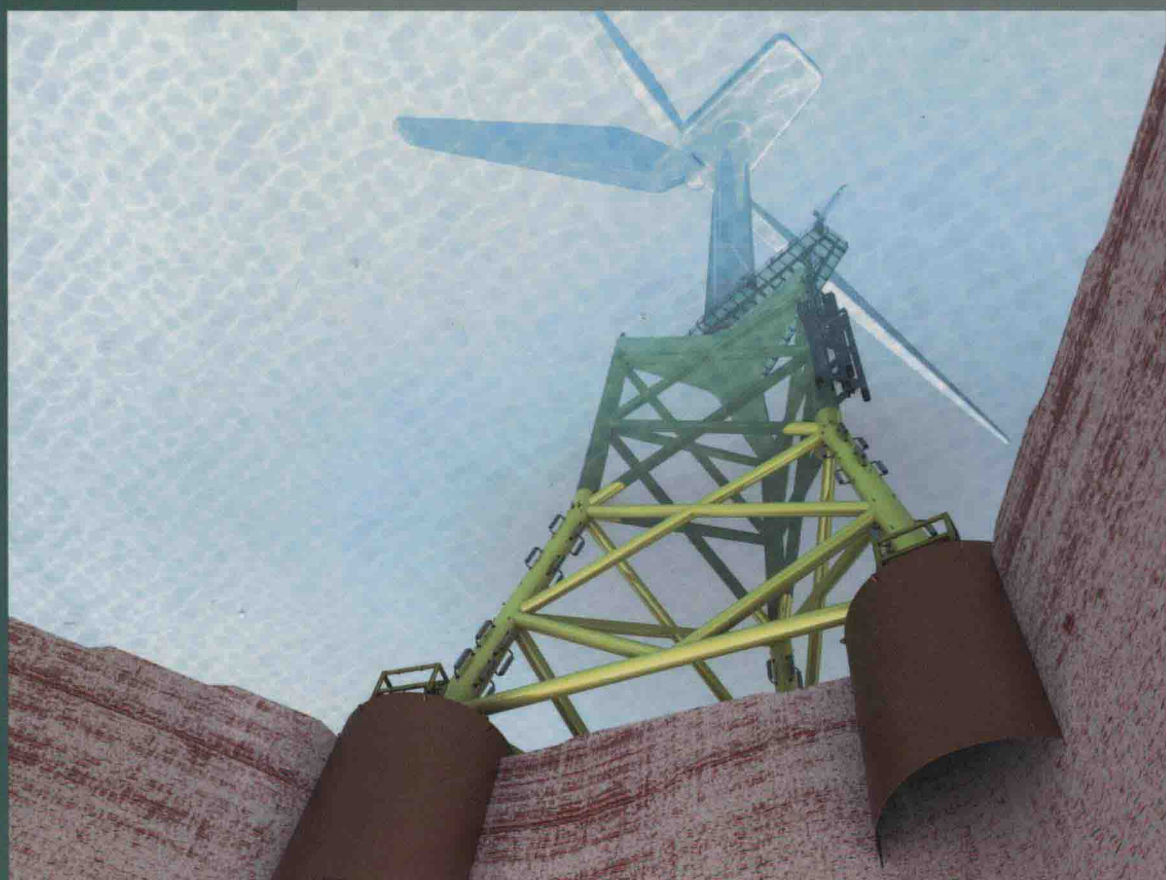


# Frontiers in Offshore Geotechnics III

*Editor:*  
Vaughan Meyer



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*Editor*

Vaughan Meyer

*Norwegian Geotechnical Institute, Oslo, Norway*

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## Preface

This, the third International Symposium on Frontiers in Offshore Geotechnics (ISFOG), hosted by the Norwegian Geotechnical Institute (NGI), follows the success of the previous two symposia hosted by the Centre for Offshore Foundation Systems (COFS) at the University of Western Australia (UWA) in 2005 and 2010.

ISFOG provides a specialist international forum to address geotechnical engineering challenges for those working in offshore construction, design and research. Many of the themes from the previous ISFOGs are still relevant today and therefore remain unchanged for the third ISFOG – these include: geohazards; soil characterisation, modelling and testing techniques; shallow, caisson and pile foundation technology; anchoring solutions; well, conductor and pipeline geotechnics; jack-up unit spudcan behaviour; and, reliability-based and performance-based geotechnical design. On advice from members of the Local Organising Committee (LOC) and the International Advisory Committee (IAC), this ISFOG has placed particular focus on integrated studies and the observed geotechnical performance of offshore structures. Studies involving collaboration between disciplines, whilst not new, are often at the current frontier in offshore geotechnics, and include geohazard studies for deep water developments and projects covering large areas, such as offshore wind farms. The observed geotechnical performance of offshore structures has been a topic of discussion for many years. With an ever increasing need to optimise foundation design and greater emphasis on reliability and performance-based considerations, our need to better predict the observed geotechnical performance of offshore structures has never been greater. Data from in-place monitoring of structures, together with experience from geotechnical field and model testing of offshore structures, are therefore vital and provide a legacy of information for future application.

The third ISFOG has retained the same format as the previous symposia, namely a three-day programme with a plenary session format. This format keeps participants together throughout the symposium, which allows for continuity of discussions and avoids clashes between concurrent (parallel) presentations. The programme also has an emphasis on the poster sessions and session reports to offer valuable exposure to the papers that do not receive full oral presentation given the constraints of the single-session format.

The keynote papers expand on the themes of the symposium. The first keynote presents the development of suction foundation technology and highlights the importance observed geotechnical performance has played in the development of this technology. The second, third and fourth keynotes respectively present: the current state-of-the-art with respect to geotechnics for top hole sections and conductors; time effects on the axial capacity of driven piles in sand; and, numerical modelling of foundation behaviour under cyclic loading. The fifth keynote presents the geohazard study scheme for the recently completed methane hydrate offshore production test in the Eastern Nankai Trough, offshore Japan. The sixth and final keynote addresses recent advances in deterministic and probabilistic methods for assessing spudcan behaviour. A key feature of all the keynotes is the value they place on field (and model) test data and in situ monitoring. We are sincerely grateful to the keynote authors who have generously contributed their time, expertise and experience to these comprehensive papers.

The symposium also coincides with The Third ISSMGE McClelland Lecture, organised by the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) and its Technical Committee 209 on Offshore Geotechnics, and it is a privilege that this is hosted as part of the third ISFOG. This lecture, given by Knut H. Andersen from NGI, focuses on soil parameters for cyclic foundation design and presents the results from work and research spanning a period of more than 40 years.

The papers collected in these proceedings include The Third ISSMGE McClelland Lecture, the six keynotes and a further 191 peer-reviewed general papers (from 23 different countries) which combined provide a comprehensive reference of the current state-of-the-art in offshore geotechnics. Each paper has been peer-reviewed by at least two reviewers, drawn from academic institutions and industry from around the world. We are indebted to the efforts of all the reviewers, who have undoubtedly raised the quality of the proceedings.

The organisation of the symposium is very much a collective effort and particular thanks are given to Marit Støvne from NGI for her editorial assistance with assembling these proceedings and her tireless work corresponding with the authors and reviewers. The assistance of members from the LOC with coordinating reviews of the papers is also gratefully acknowledged. We also thank Tom Lunne (NGI) for his organisation of the sponsorship programme, Gunn Ralle (NGI) for her coordination of the symposium arrangements and Maren Kristine Johnsen (NGI) for her assistance with graphic design and webpage development. We are also grateful

for the helpful advice from Susan Gourvenec (COFS) with respect to planning of the symposium. Finally, NGI is grateful for the support provided to ISFOG by our industry sponsors, the members of our Local Organising and International Advisory Committees, and the International Society for Soil Mechanics and Geotechnical Engineering, under whose auspices the ISFOG symposia are held.

Vaughan Meyer  
June 2015

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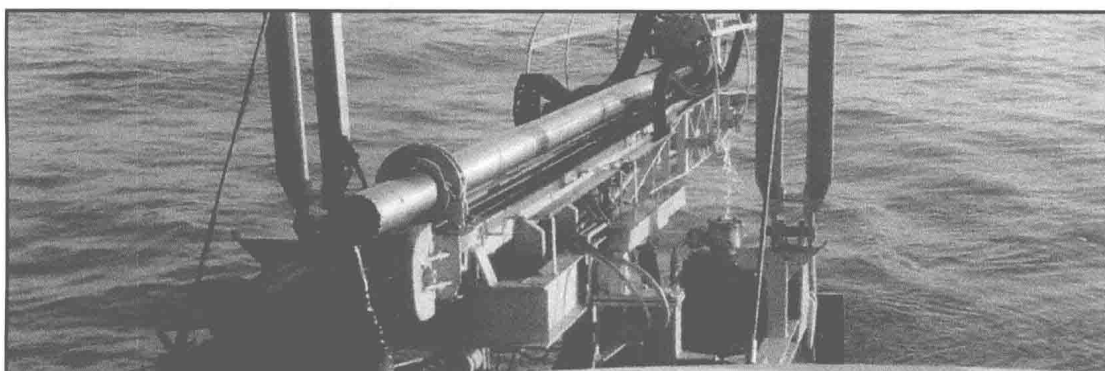
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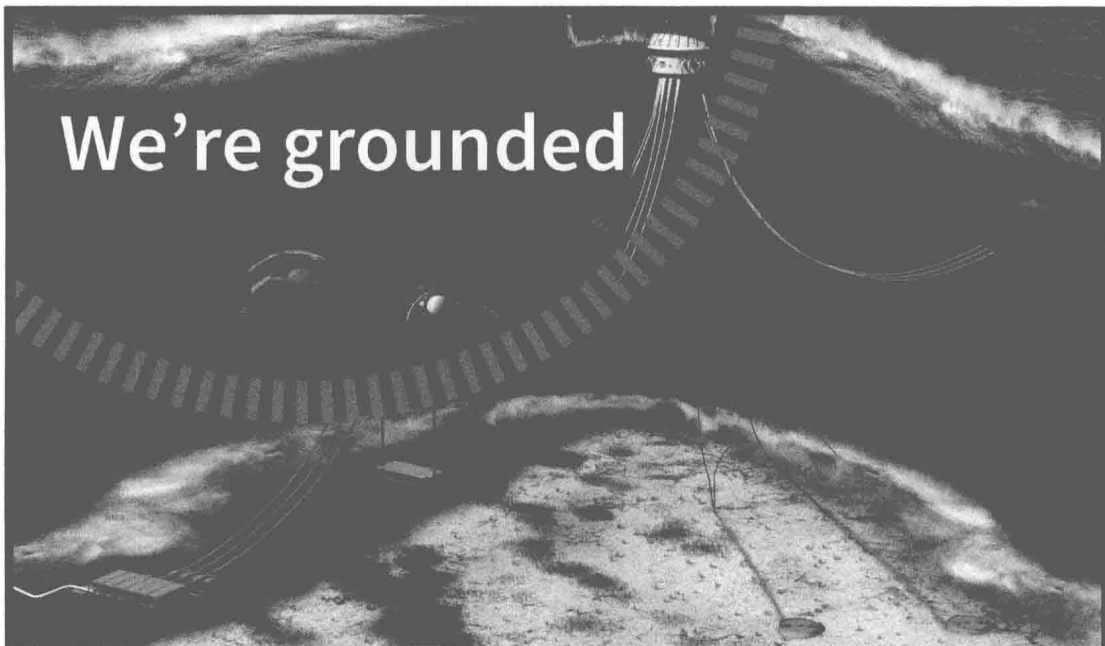


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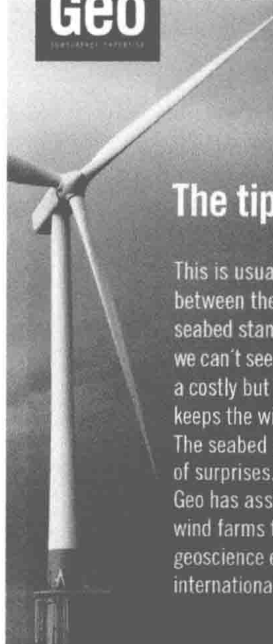
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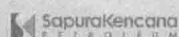
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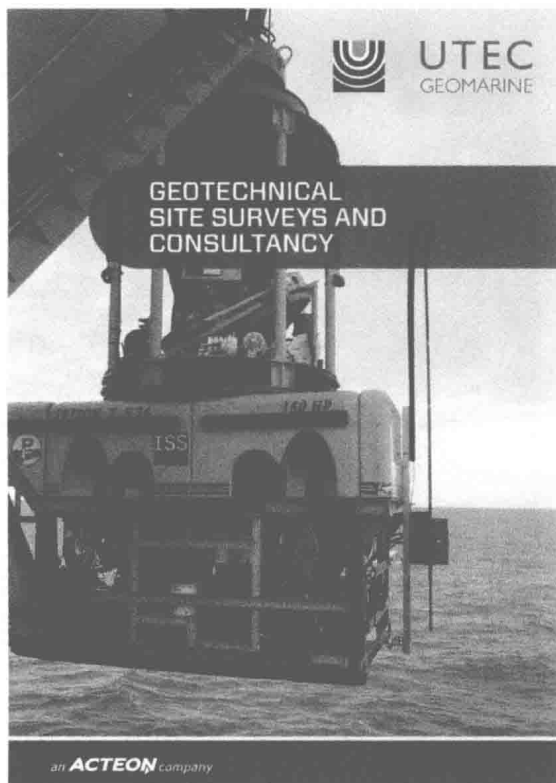
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