



Program of the 11th Baltic Sea  
Geotechnical Conference

# GEOTECHNICS IN MARITIME ENGINEERING

Gdansk, Poland  
15–18 September 2008



International Society for Soil Mechanics  
and Geotechnical Engineering



Polish Committee on Geotechnics



Gdansk University of Technology



# Program of the 11th Baltic Sea Geotechnical Conference

## Sunday 14th September 2008

9:00 - 20:00	Registration
18:00	WELCOME RECEPTION at Main Hall Gdansk University of Technology

## Monday 15th September 2008

8:00 - 9:00	Registration
9:00 - 10:30	<b>OPENING CEREMONY</b>
10:30 - 11:00	Coffee break
11:00 - 13:00	<b>SESSION 1: Practice in maritime geotechnical engineering</b> Chairpersons: P. Seco e Pinto (Portugal), K. Schjetne (Norway) Discussion leader: E.N. Bellendir (Russia) Panelists: E. Okuntsov (Latvia), M. Werno (Poland)
11.00 - 11.05	Introduction
11.05 - 11.35	<b>Invited lecture: J. S. Steenfelt (Denmark)</b>
11.35 - 11.40	Discussion (invited lecture)
11.40 - 12.00	Contribution of panellists
12.00 - 13:00	Presentations and discussion: <ul style="list-style-type: none"><li>- J-L. Chaumeny, J. Fudali, J. Saloni (France/Poland), Reclamation and Soil Improvement of the Elbe Bay as a solution for EADS Plant in Hamburg.</li><li>- R. Lippomann, S. Forneck, M. Kley (Germany), Stabilization of bridge pylons under offshore conditions.</li><li>- J. Wehr, M. Eckert, M. Dahlström, M. Topolnicki (Germany/Sweden/Poland), Stone columns in very soft clays in Sweden.</li><li>- S. Bomont, O. Mrvík (France/Czech Republic), Back experience from two cases of stabilization of coastal landslides by innovative deep drainage systems.</li><li>- N. Cruze, P. Pinto, A.V. da Fonseca, R. Andrade (Portugal), Pile bearing capacity of the new bridge over Zambezi River (Mozambique): prediction vs performance of static load tests results.</li><li>- I. Vähäaho, H. Hälvä, M. Inkala, S. Lotvonen (Finland), New rail connection between the city centre of Helsinki and the Laajassalo suburb.</li></ul>
13:00 - 14:00	Lunch
14:00 - 15:45	<b>EXHIBITION PRESENTATION SESSION</b> Chairpersons: T. Tarkkio (Finland), A. Szymański (Poland)
15:45 - 16:15	Coffee break
16:15 - 18:00	<b>POSTER PRESENTATION SESSION</b> Chairpersons: W. Wolski (Poland), J. Monnet (France)
18:00 - 19:30	<b>Meeting of representatives of the Baltic Sea ISSMGE Societies</b>
20:00 - 21:30	<b>CONCERT, Gdansk University of Technology, Auditorium Novum</b>

## Tuesday 16th September 2008

9:00 - 10:45	<p><b>SESSION 2: Laboratory testing</b>                      Chairpersons: M. Long (Ireland), Z. Lechowicz (Poland)                      Discussion leader: O. Ravaska (Finland)                      Panelists: R. A. Mangushev (Russia), C. Wijeysekera (UK), M. Lipiński (Poland)</p>
9.00 - 9.05	Introduction
9.05 - 9.35	<b>Invited lecture: S. Lacasse, T. Lunne, M.A. Sjursen, R. Dyvik (Norway), Laboratory testing for soils in maritime environment.</b>
9.35 - 9.40	Discussion (invited lecture)
9.40 - 10.00	Contribution of panellists
10.00 - 10:45	<p>Presentations and discussion:</p> <ul style="list-style-type: none"> <li>- T. Wichtmann, R. Martinez, F.D. Graeff, E. Giolo, M.N. Hernandez, T. Triantafyllidis (Germany), On the influence of the grain size distribution curve on the secant stiffness of quartz sand under cyclic loading.</li> <li>- C. Boley, S. Lenz, S. Schmitz (Germany), Large scale model tests on erosion processes in Maritime Engineering</li> <li>- H-G. Kempfert, J. Lüking, B. Gebreselassie (Germany), Load transfert mechanism of geogrids in pile supported embankments.</li> <li>- D. Branque, H. Wong, D. Subrin (France), Face stability of shallow circular tunnel in soft ground: experimental and theoretical 3D approaches.</li> <li>- H. Sturm, O. Solf, P. Kudella (Germany), Self-healing effects of shallow foundations for offshore wind turbine structures.</li> </ul>
10:45 - 11:15	Coffee break
11:15 - 13:00	<p><b>SESSION 3: Site characterization and in situ testing</b>                      Chairpersons: R. Frank (France), Z. Młynarek (Poland)                      Discussion leader: T. Lunne (Norway)                      Panelists: J. Powell (UK), A. Viana da Fonseca (Portugal)</p>
11:15 - 11:20	Introduction
11:20 - 11:50	<b>Invited lecture: P. Mayne (USA), Piezocone profiling of clays for maritime site investigations.</b>
11.50 - 11.55	Discussion (invited lecture)
11.55 - 12:15	Contribution of panellists
12:15 - 13.00	<p>Presentations and discussion:</p> <ul style="list-style-type: none"> <li>- N. Boylan, F. Mathijssen, M. Long, F. Molenkamp (Ireland/The Netherlands), Accuracy of Piezocone Testing in Organic Soils.</li> <li>- K. Dundulis, G. Žaržojus (Lithuania), Comparative analysis of the static and dynamic probing results.</li> <li>- J. Monnet (France), The use of cluster analysis for the pressuremeter tests of the north transversal tunnel in Grenoble.</li> <li>- A.M.L. Alves, F.A.B. Danziger (Brazil), Geotechnical characterisation of marine soils by means of free-fall penetration tests - An overview.</li> <li>- Z. Młynarek, J. Wierzbicki, M. Long (Poland/Ireland), Factors affecting CPTU and DMT characteristics in organic soils.</li> </ul>



## Tuesday 16th September 2008 (continued)

13:00 - 14:30	Lunch
13:45 - 14:30	<b>TC-16 Meeting</b>
14:30 - 16:15	<b>SESSION 4: Foundation of onshore and near shore structures</b> Chairpersons: E. Dembicki (Poland), W. Sondermann (Germany) Discussion leader: B. Mazurkiewicz (Poland) Panelists: V. G. Fedorovsky (Russia), M. Topolnicki (Poland)
14:30 - 14:35	Introduction
14:35 - 15:05	<b>Invited lecture: J. Grabe (Germany), Pile foundations for nearshore and offshore structures.</b>
15:05 - 15:10	Discussion (invited lecture)
15:10 - 15:30	Contribution of panellists
15:30 - 16:15	Presentations and discussion: <ul style="list-style-type: none"><li>- F. Maccarini, M. de Groot, S. van Baars (The Netherlands), Vertical caissons breakwaters cyclically loaded.</li><li>- C. Dede, F. Saathoff (Germany), Liquefaction effects around vibrating piles.</li><li>- G. Heerten, J. Witte, R. Ciesielski (Germany/Poland), Modern solution for coastal protection and harbour construction.</li><li>- J. Steenberg-Kajabová (The Netherlands), Strengthening of the "weak link" in the dunes of Noordwijk.</li><li>- H. Lauridsen, N. Bonding (Denmark), Highly loaded quay area on soft soil.</li></ul>
16:15 - 16:30	Coffee break
16:30 - 19:00	<b>SESSION 5: Workshop of TC1 on "Influence of climate change on dike technology and coastal engineering"</b> Chairpersons: I. Vanicek (The Czech Republic), M. Pohl (Germany) Panelists: M. Sharp (USA), B. Rydell (Sweden), Y. Watabe (Japan)
16:30 - 16:35	Introduction, TC1 workshop session
16:35 - 17:00	<b>Introductory lectures:</b> <ul style="list-style-type: none"><li>- <b>N. Eernink, H. Schelfhout, M. Van (The Netherlands), Climate proof geotechnical innovations integrated in spatial planning and flood risk.</b></li><li>- <b>M. Blauw, M. Harkes, M. van Loosdrecht, L. van Paassen, M. Van, M. van der Ruyt (The Netherlands), Climate change resistant coastline by biological in-situ reinforcement of sand.</b></li></ul>
17:00 - 17:45	Presentations: <ul style="list-style-type: none"><li>- B. Rydell, M. Andersson, Y. Andersson-Sköld, M. Persson (Sweden), Geotechnical decision basis for sustainable coastal areas.</li><li>- Y. Watabe, Y. Morikawa, K. Udaka (Japan), Application of the isotache concept to long-term consolidation of Osaka Bay clay.</li><li>- M.K. Sharp, R.L. Mosher, R.S. Steedman (USA/UK), Evaluation of Levee Failures in New Orleans from Hurricane Katrina.</li></ul>

17:45 - 18:15	Workshop (includes walking around).
18:15 - 19:05	<p>Presentations:</p> <ul style="list-style-type: none"> <li>- J. Mierczyński, A. Sawicki, W. Świdziński (Poland), Modelling of liquefaction induced underwater landslides.</li> <li>- M. Pohl (Germany), Stability analysis of a bank protection in tidal waters.</li> <li>- M. Pohl, H. Schüttrumpf (Germany), Influence of ship induced pore-water-pressure in an estuarine dike.</li> <li>- R. Kauther, B. Schuppener (Germany), Ship collision with waterway embankments - a proposal for the calculation of the stopping distance and the contact forces.</li> <li>- M. Zieliński, P. Sentenac, S. Utili, M. Dyer (UK), Influence of the weather changes on the desiccation fissuring propagation and stability of flood embankments.</li> <li>- A. van Hoven, C. Zwanenburg, G.A.M. Kruse (The Netherlands), Strength of dike clay covers during wave overtopping.</li> </ul>
19:05 - 19:15	Final comments and closure.
20:30 - 23:00	<b>BANQUET, Mercure Hevelius Hotel</b>

## Wednesday 17th September 2008

9:00 - 10:45	<p><b>SESSION 6: Theoretical solutions and numerical modeling</b></p> <p>Chairpersons: M. Nußbaumer (Germany), M. Gryczmański (Poland)</p> <p>Discussion leader: Wu Wei (Austria)</p> <p>Panelists: M. Ziegler (Germany), D. Łydzba (Poland)</p>
9:00 - 9:05	Introduction
9:05 - 9:35	<b>Invited lecture: A. Niemunis, M. Cudny (Poland), On FE modelling of fully saturated soils.</b>
9:35 - 9:40	Discussion (invited lecture)
9:40 - 10:00	Contribution of panellists
10:00 - 10:45	<p>Presentations and discussion:</p> <ul style="list-style-type: none"> <li>- T. Wichtmann, A. Niemunis, T. Triantafyllidis (Germany), Prediction of long-term deformations for monopile foundations of offshore wind power plants.</li> <li>- S. Van Baars (The Netherlands), Numerical modelling of visco-plastic soft soils.</li> <li>- S.F. Tantonio, E. Bauer (Austria), Influence of interface friction on the bearing capacity of a sandbag element.</li> <li>- S. Henke, J. Grabe (Germany), Numerical investigation of the interaction between inclined piles and newly driven piles in pile grillage.</li> <li>- M. Arnold, I. Herle (Germany), Numerical modelling of vibrocompaction.</li> </ul>
10:45 - 11:15	Coffee break



## Wednesday 17th September 2008 (continued)

11:15 - 13:00

### **SESSION 7: Environmental geotechnical engineering**

Chairpersons: A. Gaberc (Slovenia), L. Furmonavičius (Lithuania)

Discussion leader: R. Katzenbach (Germany)

Panelists: G. Heerten (Germany), A. Soriano (Spain)

11:15 - 11:20

Introduction

11:20 - 11:50

### **Invited lecture: H. Brandl (Austria), Environmental geotechnical engineering of landfills and contaminated land.**

11:50 - 11:55

Discussion (invited lecture)

11:55 - 12:15

Contribution of panellists

12:15 - 13:00

Presentations and discussion:

- J. Havukainen, O. Kettunen (Finland),  
Mass stabilized TBT-contaminated sediment - case Vuosaari.
- D. Jougnot, J. Lewandowska, Ph. Gotteland, A. Revil (France),  
Hydraulic conductivity of unsaturated double porosity geomaterials.
- R. Katzenbach, J. Fronczyk, K. Garbulewski (Germany/Poland),  
Evaluation of zeolite-sand mixture as a reactive material towards landfill leachate.
- H. Pantelidou, D. Short (UK),  
London tidal flood defences - Dartford creek remediation.
- M. Fukue, Y. Fujimori, C.N. Mulligan, Z. Lechowicz, F.B.J. Barends  
(Japan/Canada/Poland/The Netherlands),  
Fixation of CO<sub>2</sub> in Sediments and its Role in Geotechnical Engineering.

13:00 - 14:30

Lunch

14:30 - 17:00

### **SESSION 8: Workshop on standards and recommendations for maritime geotechnical engineering**

Chairpersons: V. Ilyichev (Russia), M. Mets (Estonia)

Panelists: V. Jaaniso (Estonia), Z. Meyer (Poland)

14:30 - 14:35

Introduction

14:35 - 15:05

### **Invited lecture: B. Schuppener, A. Agnastopoulos, W.-R. Linder (Germany/Greece), European Geotechnical Standards.**

15:05 - 15:10

Discussion (invited lecture)

15:10 - 15:30

Contribution of panellists

15:30 - 17:00

Presentations and discussion:

- M. Heibaum, M. Herten (Germany),  
Verifications in accordance with EC 7 /DIN 1054 using numerical methods.
- N. Vogt, B. Schuppener, A. Weißbach (Germany), Implementation of Eurocode 7-1 in Germany - selection of design approach and values of partial factors.
- S. Koprivica (Serbia),  
The reliability of suggested calculation method for shallow anchors plate in sand.
- M. Doubrovsky, M. Poizner, D. Kalichawa (Ukraine), Foundations of onshore and offshore constructions on Ukrainian Black Sea and Azov Sea Coasts.

- I. Vaníček (Czech Republic), Role of filtration criteria as element protection earth structure against hydraulic failure.
- G. Heerten, J. Klomp maker (Germany), Filtration and coastal structures.
- J. Sobolewski, D. Alexiew (Germany), Piled embankments and platforms, short overview of design methods and some examples including reinforced platform for timber yard in Wismar Harbour.
- G. Modoni, P. Croce, J. Bzówka (Italy/Poland), Design of jet grouted foundations for maritime structures.
- C. Pohl, L. Vavrina (Germany), New approaches for geotechnical design of Baltic Sea dikes.

17:00 - 17:30

**CLOSING CEREMONY**

**Thursday 18th September 2008**

9:00 - 13:00

Technical visit - a boat tour around Gdańsk sea harbour.

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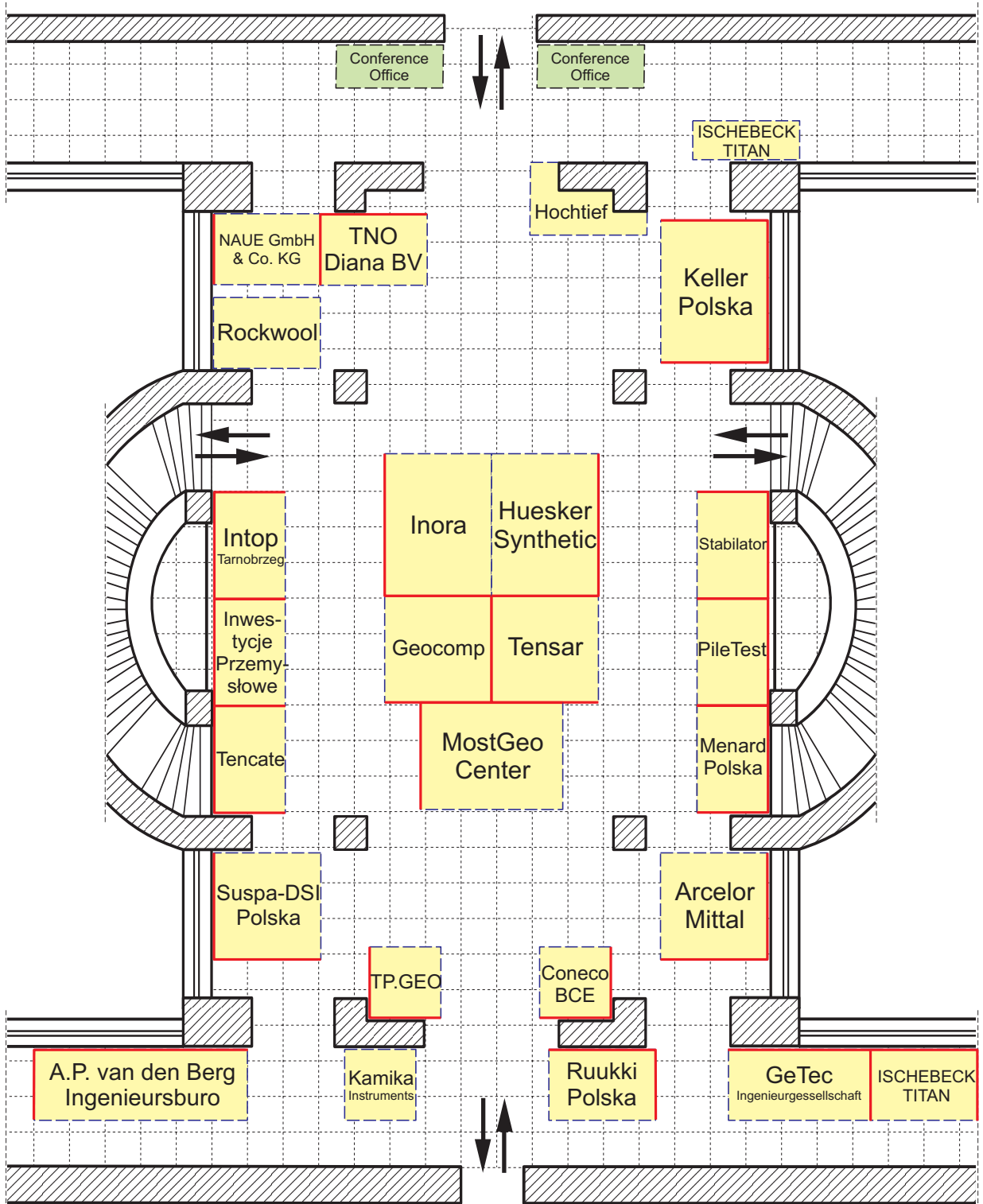
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## Aula of GUT - Conference Hall



Room No.300 - coffee breaks

