

Welcome to DELFT

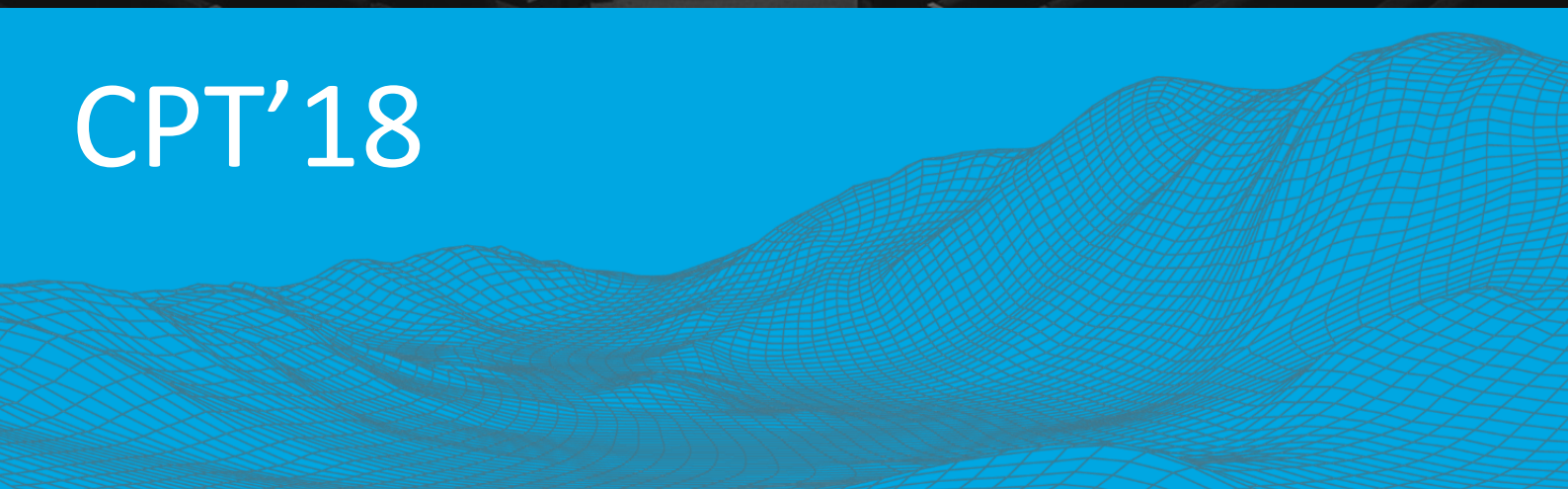


## 4<sup>th</sup> International Symposium on Cone Penetration Testing



21-22 June 2018

# CPT'18



# Programme

## Wednesday, 20 June

16:00 - 18:00 **Symposium Registration**, Aula Congress Centre, Delft University of Technology, Ground Floor

## Thursday, 21 June

08:00 - 18:00 **Symposium Registration**, Aula Congress Centre, Delft University of Technology, Ground Floor

08:30 - 18:00 **Indoor and Outdoor Exhibitions**  
Aula Congress Centre, at Entrance and on 1<sup>st</sup> Floor

### 09:00 - 10:30 **Session 1**

09:00 Opening

09:15 **Keynote Lecture - Mark Randolph**

*Penetrometer equipment and testing techniques for offshore design of foundations, anchors and pipelines*

### 10:00 - 10:35 **Presentations**

10:05 **Thermal cone penetration test (T-CPT)**

*P.J. Vardon, D. Baltoukas, J. Peuchen*

10:15 **The development of "push-heat", a combined CPT-testing / thermal conductivity measurement system**

*G.T. de Vries, R. Usbeck*

10:25 **New vibratory cone penetration device for in-situ measurement of cyclic softening**

*D. Al-Sammarraie, S. Kreiter, F.T. Stähler, M. Goodarzi, T. Mörz*

### 10:35 - 11:05 **Break**

### 11:05 - 12:20 **Session 2**

#### 11:05 - 12:20 **Presentations**

11:10 **Prehistoric landscape mapping along the Scheldt by camera- and conductivity CPT-E**

*J. Verhegge, Ph. Crombé, M. van den Wijngaert*

11:20 **Interpreting improved geotechnical properties from RCPTUs in KCl-treated quick clays**

*T.E. Helle, M. Long, S. Nordal*

11:30 **CPT based unit weight estimation extended to soft organic soils and peat**

*H.J. Lengkeek, J. de Greef, S. Joosten*

11:40 **On the use of CPT for the geotechnical characterization of a normally consolidated alluvial clay in Hull, UK**

*L. Allievi, T. Curran, R. Deakin, C. Tyldsley*

11:50 **Strength parameters of deltaic soils determined with CPTU, DMT and FVT**

*L. Bałachowski, K. Międlarz, J. Konkol*

12:00 **Thermophysical finite element analysis of thawing of frozen soil by means of HT-CPT cone penetrometer**

*O.N. Isaev, R.F. Sharafutdinov, D.S. Zakatov*

12:10 **Application of CPT testing in permafrost**

*N.G. Volkov, I.S. Sokolov, R.A. Jewell*

12:20 - 13:30 **Lunch and Exhibitions**



# Programme

## Thursday, 21 June

- 13:30 - 15:00 **Session 3**  
13:30 - 14:25 **Presentations**
- 13:35 **Effect of piezocone penetration rate on the classification of Norwegian silt**  
*A. Bihs, S. Nordal, M. Long, P. Paniagua, A. Gylland*
- 13:45 **Analysis of CPTU data for the geotechnical characterization of intermediate sediments**  
*M.F. García Martínez, L.Tonni, G.A. Gottardi, I. Rocchi*
- 13:55 **Pore pressure measurements using a portable free fall penetrometer**  
*M.B. Mumtaz, N. Stark, S. Brizzolara*
- 14:05 **Free fall penetrometer tests in sand: Determining the equivalent static resistance**  
*D.J. White, C.D. O'Loughlin, N. Stark, S.H. Chow*
- 14:15 **Rapid penetration of piezocones in sand**  
*S.H. Chow, B. Bienen, M.F. Randolph*
- 14:25 - 14:55 **Discussion**
- 14:55 - 15:25 **Break**
- 15:25 - 17:45 **Session 4**  
15:25 - 16:30 **Presentations**
- 15:30 **Use of CPTu for design, monitoring and quality assurance of DC/DR ground improvement projects**  
*A. Brik, P.K. Robertson*
- 15:40 **A probabilistic approach to CPTU interpretation for regional-scale geotechnical modelling**  
*L.Tonni, M.F. García Martínez, I. Rocchi, S. Zheng, Z.J. Cao, L. Martelli, L. Calabrese*
- 15:50 **Estimation of geotechnical parameters by CPTu and DMT data: A case study in Emilia Romagna (Italy)**  
*S. Amoroso, P. Monaco, L. Minarelli, M. Stefani, D. Marchetti*
- 16:00 **CPT in a tropical collapsible soil**  
*C.S.M. Soares, F.A.B. Danziger, G.M.F. Jannuzzi, I.S.M. Martins, M.E.S. Andrade*
- 16:10 **Liquefaction resistance by static and vibratory cone penetration tests**  
*F.T. Stähler, S. Kreiter, M. Goodarzi, D. Al-Sammarraie, T. Mörz*
- 16:20 **CPT-based liquefaction assessment of CentrePort Wellington after the 2016 Kaikoura earthquake**  
*J.D. Bray, M. Cubrinovski, C. de la Torre, E. Stocks, T. Krall*
- 16:30 - 17:45 **Poster Presentations, Exhibitions and Social**
- 19:00 - 22:30 Symposium Dinner at Museum 'Het Prinsenhof' in Delft city centre (Sint Agathaplein 1, 2611 HR Delft)



# Programme

## Friday, 22 June

08:00 - 12:30 **Symposium Registration**, Aula Congress Centre, Delft University of Technology, Ground Floor

08:30 - 15:30 **Indoor and Outdoor Exhibitions**  
Aula Congress Centre, at Entrance and on 1<sup>st</sup> Floor

### 09:00 - 10:30 **Session 5**

09:00 **Keynote Lecture - Ross Boulanger**  
*Inverse filtering procedure to correct cone penetration data for thin-layer and transition effects*

### 09:45 - 10:30 **Presentations**

09:50 **Transition- and thin layer corrections for CPT based liquefaction analysis**  
*J. de Greef, H.J. Lengkeek*

10:00 **Simulation of liquefaction and consequences of interbedded soil deposits using CPT data**  
*F. Yi*

10:10 **CPT in thinly inter-layered soils**  
*D.A. de Lange, J. Terwindt, T.I. van der Linden*

10:20 **Detection of soil variability using CPTs**  
*T. de Gast, P.J. Vardon, M.A. Hicks*

10:30 - 11:00 **Break**

### 11:00 - 12:15 **Session 6**

#### 11:00 - 11:55 **Presentations**

11:05 **MPM simulation of CPT and model calibration by inverse analysis**  
*P. Ghasemi, M. Calvello, M. Martinelli, V. Galavi, S. Cuomo*

11:15 **Numerical simulation of cone penetration test in a small-volume calibration chamber: The effect of boundary conditions**  
*M. Goodarzi, F.T. Stähler, S. Kreiter, M. Rouainia, M.O. Kluger, T. Mörz*

11:25 **A state parameter-based cavity expansion analysis for interpretation of CPT data in sands**  
*P.Q. Mo, H.S. Yu*

11:35 **Realistic numerical simulations of cone penetration with advanced soil models**  
*Z.Y. Orazalin, A.J. Whittle*

11:45 - 12:15 **Discussion**

12:15 - 13:30 **Lunch and Exhibitions**



# Programme

## Friday, 22 June

- 13:30 - 15:00 **Session 7**
- 13:30 **Keynote Lecture - Kenneth Gavin**  
*Use of CPT for the design of shallow and deep foundations on sand*
- 14:15 - 15:00 **Presentations**
- 14:20 **Direct use of CPT data for numerical analysis of VHM loading of shallow foundations**  
*J.A. Schneider, J.P. Doherty, M.F. Randolph, K. Krabbenhøft*
- 14:30 **Development of numerical method for pile design to EC7 using CPT results**  
*J.O. Vasconcelos, J. O'Donovan, P. Doherty, S. Donohue*
- 14:40 **Interpreting properties of glacial till from CPT and its accuracy in determining soil behaviour type when applying it to pile driveability assessments**  
*A. Cardoso, S. Raymackers, J. Davidson, S. Meissl*
- 14:50 **Effects of clay fraction and roughness on tension capacity of displacement piles**  
*L.V. Doan, B.M. Lehane*
- 15:00 - 15:30 **Break**
- 15:30 - 17:00 **Session 8**
- 15:30 - 16:45 **Presentations**
- 15:35 **Challenges in marine seismic cone penetration testing**  
*P. Gibbs, R.B. Pedersen, L. Krogh, N. Christopher, B. Sampurno, S.W. Nielsen*
- 15:45 **Correlations among SCPTU parameters of Jianguo normally consolidated silty clays**  
*H. Zou, S. Liu, G. Cai, A.J. Puppala*
- 15:55 **NMO-SCTT: A unique SCPT tomographic imaging algorithm**  
*E. Baziw, G. Verbeek*
- 16:05 **Behaviour of granitic residual soils assessed by SCPTu and other in-situ tests**  
*N. Cruz, J. Cruz, C. Rodrigues, M. Cruz, S. Amoroso*
- 16:15 **Shallow depth characterisation and stress history assessment of an over-consolidated sand in Cuxhaven, Germany**  
*V.S. Quinteros, T. Lunne, L. Krogh, R. Bøgelund-Pedersen, J. Brink Clausen*
- 16:25 **Effect of cone penetrometer type on CPTU results at a soft clay test site in Norway**  
*T. Lunne, S. Strandvik, K. Kåsin, J.S. L'Heureux, E. Haugen, E. Uruci, A. Veldhuijzen, M. Carlson, M. Kassner*
- 16:35 **Fibre optic cone penetrometer**  
*P. Looijen, N. Parasie, D. Karabacak, J. Peuchen*
- 16:45 - 17:00 **Closure**



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