

Stress Wave

Lisbon | 2008



8-10 | September

The 8th International
Conference on the

**Application of
Stress Wave
Theory to Piles**

Science, Technology
and Practice

Invitation

The International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), the Portuguese Geotechnical Society (SPG) and Instituto Superior Técnico of the Technical University of Lisbon (IST/UTL), invite you to participate in the 8th International Conference on the Application of Stress-Wave Theory to Piles that will be held in Lisbon from Sept. 8-10, 2008.

On a four-yearly basis and starting in 1980, the Stress Wave conference have been organized in several countries: Sweden (1980 and 1984), Canada (1998), Netherlands (1992), United States of America (1996), Brazil (2000) and Malaysia (2004).



Conference Venue

The Conference will be held at the Centre of Congress in the Civil Engineering Pavilion located at the Campus of Instituto Superior Técnico (<http://www.ist.utl.pt>).



Conference Web Page

The latest information is available on the conference web page:

<http://www.civil.ist.utl.pt/sw2008/>

Contact Us

If you have questions about the Conference, please feel free to contact us:

E-mail: SW2008@civil.ist.utl.pt

Address: StressWave 2008 Organizing Committee
Att. Prof. Jaime Santos
Instituto Superior Técnico
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Conference Objectives and Themes

The main objective of the conference is to create a forum for exchange of ideas and experience between researchers, equipment manufacturers and practicing engineers regarding the application of stress-wave theory to piles and other relevant problems and developments on dynamic testing and its relation to the foundation engineering.

In order to widen the contribution of all participants, the conference format comprises parallel sessions. State-of-the-art presentations of technological developments are also featured. The conference includes invited keynote lecturers and presentation and discussion of selected papers in plenary sessions.

Themes will address the following:

1. Wave mechanics applied to pile engineering
2. Relationship between static resistance to driving and long-term static soil resistance
3. Case histories involving measurement and analysis of stress waves
4. Dynamic monitoring of driven piles
5. Dynamic soil-pile interaction models. Numerical and physical modelling
6. High-strain dynamic test
7. Low-strain dynamic test
8. Rapid-load test
9. Monitoring and analysis of vibratory driven piles
10. Correlation of dynamic and static load tests
11. Quality assurance of deep foundations using dynamic methods
12. Incorporation of dynamic testing into design codes and testing standards
13. Ground vibrations induced by pile motions
14. Dynamic measurements in ground field testing

Best Paper Competition

To encourage young researchers interest in pile dynamics issues, the organizing committee invited all authors under 30 years old to join the paper competition. The winner of the competition will receive a cash prize of 1000 Euros. The jury will evaluate the paper and the oral presentation of each candidate. We are looking forward to follow this competition.

Organizing Committee

Chairman: Jaime Santos (IST/UTL)

Emanuel Maranha das Neves (IST/UTL)
Carlos Santos Pereira (IST/UTL)
Nuno Guerra (FCT/UNL)
Pedro Melo (formerly IST/UTL)
António Viana da Fonseca (FEUP)
Armando Antão (FCT/UNL)
João Portugal (LNEC)
Paulo Pinto (FCT/UC)

Conference Advisory Committee

Sêco e Pinto (President ISSMGE)
Roger Frank (Vice-President Europe ISSMGE)
António Gomes Correia (Past President SPG)
George Goble (USA)
Bengt Fellenius (Canada)
Sussumu Niyama (Brazil)

Scientific Committee

Chair of TC18

Rolf Katzenbach (Germany)
Alain Holeyman (Belgium)

TC18 Core Members:

Andrej Ponomaryov (Russia)
Daman Li (Hong Kong)
Fiona Chow (Australia)
Gavin Byrne (South Africa)
Jaime Santos (Portugal)
Mohamed El Naggar (Canada)
Roland Jörgen (Germany)
Sageom Jeong (South Korea)

International Members

Alessander Kormann (Brazil)
B. Buensuceso (Philippines)
Charles Ng (Hong Kong)
Chong Mun Fai (Malaysia)
Frank Rausche (USA)
Garland Likins (USA)
Joram Amir (Israel)
Jorge Beim (Brazil)
Jose Louis Arcos (Spain)
Julian Seidel (Australia)
Mark Randolph (Australia)
Martin Hammann (France)
Michael Holloway (USA)
Mohamad Hussein (USA)
Mohammad Mukaddam (UAE)
Mun Kwai Peng (Malaysia)
O. Klingmueller (Germany)
P. Middendorp (Netherlands)
Ravikiran Vaidya (India)
Richard Stain (UK)
Samuel Paikowsky (USA)
Sérgio Paraíso (Brazil)
Tatsunori Matsumoto (Japan)

Conference Programme

	Sunday 7th Sept.	Monday 8th Sept.	Tuesday 9th Sept.	Wednesday 10th Sept.
08:30-09:00	Registration	Registration		
09:00-09:30	Short course on Dynamic Pile Testing	Opening	Keynote 3 Fellenius, B.	Keynote 6 Middendorp, P.
09:30-10:00		Keynote 1 Katzenbach, R.	Keynote 4 Paikowsky, S.	ISC'2 IPPE Viana da Fonseca, A.
10:00-10:30	Break	Break	Break	Break
10:30-11:00	Sponsored by PDI, Profound BV, Piletest and Testconsult	Session 1	Best Paper Competition	Session 4a/4b
11:00-11:30		Lunch	Lunch	Lunch
11:30-12:00		Keynote 2 Goble, G.	Keynote 5 Matsumoto, T.	Keynote 7 Rausche, F.
12:00-12:30	Lunch	Break	Break	Break
12:30-13:00		Session 2	Session 3a/3b	Session 5a/5b
13:00-13:30	Short course on Dynamic Pile Testing	Welcome Reception		Closing
13:30-14:00				
14:00-14:30				
14:30-15:00				
15:00-15:30				
15:30-16:00				
16:00-16:30				
16:30-17:00				
17:00-17:30				
17:30-18:00				
18:00-18:30				
18:30-19:00				
19:00-19:30				

The Sessions will be held at the Main Auditorium excepting Sessions 3b, 4b and 5b at the Amphitheatre VA4.

Welcome Reception

Date: 8th September 2008, 6:00 p.m.

Location: Centre of Congress in the Civil Engineering Pavilion – IST

Banquet with Fado

Date: 9th September 2008, 8:00 p.m.

Location: Water Museum – Barbadinhos Steam Pumping Station

Address: Rua do Alviela, 12, Sta. Apolónia, 1170-012 Lisboa

Transportation: Bus departure at 7:30 pm, from IST

Museum website: <http://museudaagua.epal.pt/museudaagua/>

Short Course On Dynamic Pile Testing

Date: Sunday, 7th September 2008

Location: Civil Engineering Pavilion, Room VI.01

The objective of the course is to present the fundamentals of Dynamic Pile Testing to civil engineering students, practicing engineers, researchers and faculty. Being an introductory course, participants with little or no experience in the issues of Dynamic Pile Testing are welcome, as well as people willing to review the fundamentals behind dynamic load testing and integrity testing of deep foundations.

The course will be held just before Stress Wave 2008 Conference and will provide the participants with the necessary tools to take the best advantage of the conference.

Programme

Time	Topic	Speaker
09:00-09:15	<ul style="list-style-type: none">Introduction	Paulo Pinto (FCTUC)
09:15-10:30	<ul style="list-style-type: none">Pile driving – equipment and construction aspectsPile driving formulas and their limitations	Jorge Beim (Pile Dynamics)
10:30-10:45	Coffee-break	
10:45-12:15	<ul style="list-style-type: none">Introduction to one and three-dimensional stress wave theory as applied to piles	Joram Amir (Piletest)
12:15-13:15	Lunch	
13:15-14:15	<ul style="list-style-type: none">Applications for dynamic testing methodsDynamic testing equipmentDynamic testing methodologyUsage of dynamic testing methodsPresentation and interpretation of dynamic testing results	Richard Stain (Testconsult)
14:15-15:45	<ul style="list-style-type: none">Rapid load testingTesting method, equipment and interpretation	Peter Middendorp (Profound)
15:45-16:00	Coffee-break	
16:00-17:15	<ul style="list-style-type: none">Stress-wave method for pile integrity testing	Gina Beim (Pile Dynamics)

Scientific Programme

Monday, 8th Sept. 2008

09:30-10:00

OPENING

Carlos Matos Ferreira (Pres. IST), Fernando Branco (Dean DeCivil), Pedro Sêco e Pinto (Pres. ISSMGE), Rolf Katzenbach (Chair TC18), Laura Caldeira (Pres. SPG) and Jaime Santos (Chair SW2008)

Keynote 1	Title	Speaker
10:00-11:00	Economic and environment-friendly ways of designing and using deep foundations	Katzenbach, R.

Session 1 (Monday, 8th Sept., 11:30-13:00) – Main Auditorium

Moderators: Garland Likins (USA) and Paulo Pinto (Portugal)

Paper ID	Title	Speaker
165-003	Pile foundation testing of a hurricane resistant jetty	Middendorp, P.
072-001	Driving fatigue during installation of monopile foundations of the Egmond aan Zee offshore wind farm	Kooistra, A.
110-001	Experiences of remote testing and appropriate safety factors used in Sweden	Grävare, M.
179-001	Automatic signal matching techniques in dynamic pile load testing. The SIMBAT Method	Stain, R.
153-001	PDA Testing: 2008 State of the art	Likins, G.
153-002	What constitutes a good PDA test?	Likins, G.

Keynote 2	Title	Speaker
14:30-15:30	The use of dynamic methods in pile installation and design	Goble, G.

Session 2 (Monday, 8th Sept., 16:00-18:00) – Main Auditorium

Moderators: Joram Amir (Israel) and Sérgio Paraíso (Brazil)

Paper ID	Title	Speaker
066-001	Effect of soil resistance on the low strain mobility response of piles using impulse transient response method	Beim, J.
198-001	Non-destructive evaluations of in-service concrete piles by flexural wave approach	Wang, H.
080-001	The use of a Sledgehammer and a PDA to low-strain integrity test a hurricane damaged oil offshore platform	Stevens, R. F.
114-002	Limitations of low-strain integrity test for PHC piles and solution	Huang, Y.
092-001	In-place nondestructive evaluation of foundations of unknown type and depth	Olson, L.
085-001	Induced vibrations in a metallic structure by a precast pile and its correlation with the stress-wave pile test – A case study	Mota, R.
106-002	Critical comparison of ultrasonic pile testing standards	Amir, J. M.
106-001	Statistical analysis of a large number of PEM tests on piles	Amir, E. I.

Tuesday, 9th Sept. 2008

Keynote 3	Title	Speaker
09:00-10:00	Comments on the current and future use of pile dynamic testing	Fellenius, B. H.

Keynote 4	Title	Speaker
10:00-11:00	Dynamic analysis of open-ended pipe piles	Paikowsky, S. G.

Best Paper Competition (Tuesday, 9th Sept., 11:30-13:00) Main Auditorium

Jury: George Goble (USA), Bengt Fellenius (Canada), Pedro Sêco e Pinto (Portugal)

Paper ID	Title	Speaker
027-001	Analytic solution for one-dimensional propagation of waves and its adaptation to result interpretation of pile integrity test (PIT)	Restrepo, V.
118-001	Verticality effect of two extremely long driven piles	Chu, K. H.
118-002	Driveability and performance of steel H-piles on weathered rock	Shek, L. M. P.
088-001	Discrete wave equation analysis for seismic responses of piles	Cheng, S. H.
167-001	Modelling cyclic pile response using the Finite Element Method	Taborda, D.
120-001	Vibratory driving and segregation in granular matter	Denies, N.
133-002	Sheet pile vibro-driving: Power pack-vibrator-sheet pile-soil interactions	Whenham, V.
133-001	Sheet pile vibro-driving: Assumptions vs. Measurements	Whenham, V.
077-001	Evaluation of dynamic analyses and static pile load tests from bored cast-in-situ piles in dense sands and sandstones	Abou-Jaoude, G.
166-001	Comparison of static and dynamic pile load tests using an elastoplastic soil model	Costa D'Aguiar, S.

Tuesday, 9th Sept. 2008

Keynote 5	Title	Speaker
14:30-15:30	A role of pile load test – Pile load test as element test for design of foundation system	Matsumoto, T.

Session 3a (Tuesday, 9th Sept., 16:00-18:00) – Main Auditorium

Moderators: Jorge Beim (Brazil) and Ravikiran Vaidya (India)

Paper ID	Title	Speaker
I43-001	The effect of ram mass on pile stresses and pile penetration	Rausche, F.
082-001	Dynamic load test method by hitting the inner bottom of close-ended steel pipe pile	Kitamura, K.
I01-001	Pile driving in the Haina Coast, Dominican Republic	Alvarez, T. A.
I17-001	A case study of piling project and testing in Poland	Rybak, J.
I61-002	Dynamic testing in sensitive & difficult soil conditions	Morgano, C.M.
099-001	Pile driving and testing equipment	Meshcheriakov, N.G.
I18-003	Estimating residual stresses in long driven piles in weathered soils	Zhang, L. M.
I72-001	High strain dynamic testing practice in Portugal – Coimbra Polis site	Pereira, G.

Session 3b (Tuesday, 9th Sept., 16:00-18:00) – Amphitheatre VA4

Moderators: Nuno Guerra (Portugal) and Armando Antão (Portugal)

Paper ID	Title	Speaker
I02-001	A finite difference continuum numerical model for pile driving analysis	Fakharian, K.
I22-001	Vibration prediction for vibratory and impact pile driving using a non-linear dynamic soil-structure interaction analysis	Masoumi, H. R.
I22-002	Pile response and free field vibrations due to low strain dynamic loading	Masoumi, H. R.
I27-001	Numerical simulation of low strain dynamic pile tests	Niederleithinger, E.
I92-001	Evaluation of 1D and 2D numerical modeling techniques of dynamic pile testing	Pinto, P. L.
I82-001	Mathematical analysis of soil saturation effect on seismic pile response	Ghazavi, M.
I82-004	Pile-soil-pile interaction under horizontal harmonic vibrations: A simple approach	Ghazavi, M.
208-001	Miniature pile drivers for centrifuge testing	Levacher, D.

Wednesday, 10th Sept. 2008

Keynote 6	Title	Speaker
09:00-10:00	Recent developments in dynamic pile testing	Middendorp, P.

Special Session	Title	Speaker
10:00-11:00	Lessons learned from the ISC'2 Pile Prediction Event	Viana da Fonseca, A.

Sponsors: Mota-Engil, Sopecate, Tecnaosol-FGE, Teixeira Duarte

Session 4a (Wednesday, 10th Sept., 11:30-13:00) – Main Auditorium

Moderators: Fernando Danziger (Brazil) and Pedro Melo (Portugal)

Paper ID	Title	Speaker
I23-001	Identification of stress wave phenomena caused by soil-pile interaction	Fritsch, M.
I44-001	Dynamic analysis of a single pile in time domain considering frequency dependence of soil resistance	Matsumoto, T.
I47-001	Dimensional analysis of the wave equation applied to pile driving	Alves, A. M. L.
I82-002	Numerical analysis for pile geometry effect on drivability	Ghazavi, M.
066-002	A simplified method for predicting the load-settlement curve based on force-velocity data	Beim, J.
I48-002	On the energy reaching the sampler during SPT	Danziger, B. R.

Session 4b (Wednesday, 10th Sept., 11:30-13:00)

Amphitheatre VA4

Moderators: Oswald Klingmüller (Germany) and João Portugal (Portugal)

Paper ID	Title	Speaker
021-001	Large-scale dynamic high-strain load testing of a bridge pier foundations	Rausche, F.
I83-001	High strain dynamic pile testing on rock socketed reinforced concrete piles – Mumbai experience	Vaidya, R.
067-001	Offshore pile acceptance using dynamic pile monitoring	Webster, S.
080-002	Vibro-drivability monitoring of piles – Two case studies of a PCPS concrete pile and a 200-ft-long steel pipe pile	Viking, K.
I57-001	Comparative vibration behaviour of vibratory and impact driven prefabricated concrete piles	Lenti, L.
063-001	Worldwide dynamic foundation testing codes and standards	Beim, G.

Wednesday, 10th Sept. 2008

Keynote 7	Title	Speaker
14:30-15:30	Mastering the art of pile testing	Rausche, F.

Session 5a (Wednesday, 10th Sept., 16:00-18:00) – Main Auditorium

Moderators: Frits van Tol (Netherlands) and Michael Brown (UK)

Paper ID	Title	Speaker
091-001	Rapid pile test simulation in the geocentrifuge	Hölscher, P.
150-001	Interpretation of rapid pile load tests in sand regard to the rate effect and excess of pore pressure	Hölscher, P.
064-001	A piling method accompanying rapid load testing	Matsuzawa, K.
083-001	Newly developed rapid loading test method for small piles	Kunimatsu, S.
084-001	Rapid load testing on high bearing capacity piles	Miyasaka, T.
142-001	A new application of Statnamic: Pyrodriver	Van Foecken, R. J.
165-005	Verification of Statnamic load testing with static load testing in a cohesive soil type in Germany	Middendorp, P.
091-002	European standard and guideline for Rapid Load Test	Hölscher, P.

Session 5b (Wednesday, 10th Sept., 16:00-18:00) – Amphitheatre VA4

Moderators: Simon French (UK) and Sofia D'Aguiar (Portugal)

Paper ID	Title	Speaker
030-001	Static and dynamic load tests comparison considering load energy level and soil nonlinearity	Pereira, J. J.
071-001	Three examples of dynamic and static load tests in the Central Europe	Bubenicek, M.
104-001	High strain dynamic testing in micropiles. Comparison of static and dynamic test results	Gil, R.
109-001	Static and dynamic testing of driven piles in Poland	Rybak, J.
116-001	Comparison between static and dynamic pile capacity. A case study from Norway	Tistel, J.
073-001	A dynamic and static load test program for drilled shafts founded in hard clay in Minatitlan, Mexico	Mendez, A.
135-001	Dynamic and static testing of concrete foundation piles with structure-integrated fiber optic sensors	Göbel, I. R.
182-003	Long-term capacity of driven non-uniform piles in cohesive soil-field load tests	Ghazavi, M.

18:00 CLOSING

Carlos Matos Ferreira (Pres. IST), Fernando Branco (Dean DeCivil), Pedro Sêco e Pinto (Pres. ISSMGE), Rolf Katzenbach (Chair TC18), Laura Caldeira (Pres. SPG) and Jaime Santos (Chair SW2008)

List of Papers

Keynotes

- The use of dynamic methods in pile installation and design
Goble, G.
- Comments on the current and future use of pile dynamic testing
Fellenius, B. H. & Massarsch, K. R.
- Mastering the art of pile testing
Rausche, F., Nagy, M. & Likins, G.
- Recent developments in dynamic pile testing
Middendorp, P.
- A role of pile load test – Pile load test as element test for design of foundation system
Matsumoto, T., Matsuzawa, K. & Kitiyodom, P.
- Dynamic analysis of open-ended pipe piles
Paikowsky, S. G. & Chernauskas, L. R.
- Economic and environment-friendly ways of designing and using deep foundations
Katzenbach, R.

Wave mechanics applied to pile engineering

- Analysis of wave propagation in piles
Chai, H. Y. & Wei, C. F.
- Analytic solution for one-dimensional propagation of waves and its adaptation to result interpretation of pile integrity test (PIT)
Rodríguez, J. & Restrepo, V.
- Identification of stress wave phenomena caused by soil-pile interaction
Fritsch, M., Stahlmann, J. & Elmer, K. H.
- Dynamic analysis of a single pile in time domain considering frequency dependence of soil resistance
Kitiyodom, P., Matsumoto, T., Tomisawa, K., Kojima, E. & Kumagai, H.
- Dimensional analysis of the wave equation applied to pile driving
Alves, A. M. L., Lopes, F. R. & Danziger, B. R.

Relationship between static resistance to driving and long-term static soil resistance

- PDA testing to evaluate axial setup in cohesive soils
Sully, J. & Parra, E. J.
- Load rate effects on high strain tests in high plasticity soils
Rodríguez, J., Alvarez, C. & Velandia, E.
- Dynamic testing in sensitive & difficult soil conditions
Morgano, C. M., White B. A. & Allin, R.
- Long-term capacity of driven non-uniform piles in cohesive soil-field load tests
Ghazavi, M. & Ahmadi, H. A.

Case histories involving measurement and analysis of stress waves

- Driving fatigue during installation of monopile foundations of the Egmond aan Zee offshore wind farm
Kooistra, A., Oudhof, J. & Kempers, M.
- The use of a Sledgehammer and a PDA to low-strain integrity test a hurricane damaged oil offshore platform
Stevens, R. F. & Viking, K.
- Dynamic load test method by hitting the inner bottom of close-ended steel pipe pile
Fujisawa, H., Yamashita, D., Kanehira, Y., Arai, M., Kitamura, K., Kuwabara, F. & Matsumoto, T.

- Pile driving in the Haina Coast, Dominican Republic
Alvarez, T. A.
- High strain and low strain dynamic test analysis for pre-stressed pipe pile with obvious defects
Zhang, X. W. & Zhou, W.
- A case study of piling project and testing in Poland
Rybak, J., Sobala, D. & Tkaczynski, G.
- The approach of solving the problem of floating-piles via high-strain dynamic method
Liang, X., Fang, J. Q. & Zhang, X. S.
- Polish experience of dynamic tests for bored piles
Gwizdala K., Brzozowski T. & Blockus M.
- Use of CAPWAP for uplift resistance evaluation of wind energy tower piles
Teferra, W., Saavedra. M. R. & Echaniz, P.
- Pile foundation testing of a hurricane resistant jetty
Middendorp, P., Plooy, P. J. & Kruit, D. B.
- High strain dynamic testing practice in Portugal – Coimbra Polis site
Kaidussis, R. N., Bibi, R., Paulino, J., Pereira, G. & Gil, R.
- A case study for quay deck foundation of container terminal in Hong Kong
Song, M. J. & Park, Y. H.

Dynamic monitoring of driven piles

- Dynamic measurements of precast concrete jointed piles in a layered soil
Haddad, A. & Kheyrodin, A.
- Installation behavior of concrete cylinder piles
Malhotra, S.
- Installation monitoring of open end pipe piles
Malhotra, S.
- Pile driving and testing equipment
Meshcheriakov N. G., Meshcheriakov G. N., Vakulin A. A. & Vakulin N. A.
- Verticality effect of two extremely long driven piles
Chu, K. H. & Zhang, L. M.
- Driveability and performance of steel H-piles on weathered rock
Shek, L. M. P., Zhang, L. M. & Tang, K. H.
- Estimating residual stresses in long driven piles in weathered soils
Wang, H. & Zhang, L. M.
- Numerical analysis for pile geometry effect on drivability
Ghazavi, M. & Tavassoli O.
- Prevention of cracking for large diameter concrete pipe piles
Liu E. Y. F.

Dynamic soil-pile interaction models. Numerical and physical modelling

- Discrete wave equation analysis for seismic responses of piles
Chang, D. W., Cheng, S. H. & Lin, B. S.
- A finite difference continuum numerical model for pile driving analysis
Fakharian, K. & Feizee Masouleh, S.
- Vibration prediction for vibratory and impact pile driving using a non-linear dynamic soil-structure interaction analysis
Masoumi, H. R., François, S. & Degrande, G.
- Pile response and free field vibrations due to low strain dynamic loading
Masoumi, H. R., Degrande, G. & Holeyman, A.
- Numerical simulation of low strain dynamic pile tests
Niederleithinger, E.

- Dynamical studies of the role of buildings' foundations with continuous and discontinuous methods
Alfonsi P. & Bourgeois E.
- Modelling cyclic pile response using the Finite Element Method
Taborda, D., Zdravkoviæ, L., Kontoe, S. & Potts, D. M.
- Mathematical analysis of soil saturation effect on seismic pile response
Ghazavi, M. & Mohseni Diba, S.
- Pile-soil-pile interaction under horizontal harmonic vibrations: A simple approach
Ghazavi, M. & Ravanshenas, P.
- Evaluation of 1D and 2D numerical modelling techniques of dynamic pile testing
Pinto, P. L., Grazina, J. C. & Lourenço, J. C.
- Miniature pile drivers for centrifuge testing
Levacher, D., Morice, Y. & Thorel, L.
- Seismic behavior of a heterogeneous soil profile having uncertain depth
Badaoui, M., Mebarki, A. & Berrah, M. K.

High-strain dynamic test

- Large-scale dynamic high-strain load testing of a bridge pier foundations
Hussein, M., Bullock, P., Rausche, F. & McGillivray, R.
- A simplified method for predicting the load-settlement curve based on force-velocity data
Beim, J. & Hussein, F.
- Experiences of remote testing and appropriate safety factors used in Sweden
Hermansson, I., Grävare, M., Bjerendal, T. & Grävare, C.-J.
- The effect of ram mass on pile stresses and pile penetration
Rausche, F., Likins, G., Miyasaka, T. & Bullock, P.
- PDA Testing: 2008 State of the art
Likins, G., Pisciak, G., Roppel, S. & Rausche, F.
- What constitutes a good PDA test?
Likins, G. & Rausche, F.
- Automatic signal matching techniques in dynamic pile load testing. The SIMBAT method
Stain, R. T. & Volkovoy, Y.
- High strain dynamic pile testing on rock socketed reinforced concrete piles – Mumbai experience
Vaidya, R.
- A case study on the dynamic testing of large diameter – long drilled shafts into weathered rock
Seok, J., Cho, C., Ji, W., Yoon, J. & Park, M.

Low-strain dynamic test

- Integrity testing of piles in platform-pile systems
Chai, H. Y.
- Effect of soil resistance on the low strain mobility response of piles using impulse transient response method
Liang, L. & Beim, J.
- In-place nondestructive evaluation of foundations of unknown type and depth
Sack, D., Olson, L. & Tinkey, Y.
- Critical comparison of ultrasonic pile testing standards
Amir, J. M. & Amir, E. I.
- Limitations of low-strain integrity test for PHC piles and solution
Shi, F., Huang, Y. & Hou, W. S.

- Quality evaluation criteria for pile integrity test on deep foundation bored in tropical soil
Cunha, R. P.
- Comparing cross-hole sonic logging and low-strain integrity testing results
White B., Nagy, M. & Allin, R.
- Non-destructive evaluations of in-service concrete piles by flexural wave approach
Wang, H. & Chang, T.-P.

Rapid-load test

- A piling method accompanying rapid load testing
Matsuzawa, K., Nakashima, Y., Nakayama, M. & Matsumoto, T.
- Newly developed rapid loading test method for small piles
Kunimatsu, S., Umeda, M., Murakami, H. & Sakai, T.
- Rapid load test on high bearing capacity piles
Miyasaka, T., Kuwabara, F., Likins, G. & Rausche, F.
- Rapid pile test simulation in the geocentrifuge
Hölscher, P., van Lottum, H., Bezuijen, A., Huy, N. Q. & van Tol, A. F.
- Segmental signal matching method for Statnamic load test of piles
Chang, W. K. & Cheng, C. H.
- A new application of Statnamic: Pyrodriver
Van Foeken, R. J. & Westerbeek, J. A.
- Interpretation of rapid pile load tests in sand regard to the rate effect and excess of pore pressure
Huy, N. Q., van Tol, A. F & Hölscher, P.
- Verification of Statnamic load testing with static load testing in a cohesive soil type in Germany
Middendorp, P., Beck, C. & Lambo, A.

Monitoring and analysis of vibratory driven piles

- Vibro-drivability monitoring of piles – Two case studies of a PCPS concrete pile and a 200-ft-long steel pipe pile
Stevens, R. F., Viking, K. & Roberts, T.
- Vibratory driving and segregation in granular matter
Denies, N. & Holeyman, A.
- Sheet pile vibro-driving: Assumptions vs. measurements
Whenham, V. & Holeyman, A.
- Sheet pile vibro-driving: Power pack-vibrator-sheet pile-soil interactions
Holeyman, A. & Whenham, V.
- Comparative vibration behaviour of vibratory and impact driven prefabricated concrete piles
Rocher-Lacoste, F., Lenti, L., Lasseret, M. & Saule, R.

Correlation of dynamic and static load tests

- Static and dynamic load tests comparison considering load energy level and soil nonlinearity
Gouveia Pereira, J. J., Gomes Correia, A., Santos J. A. & Simões, T. N.
- Three examples of dynamic and static load tests in the Central Europe
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- A dynamic and static load test program for drilled shafts founded in hard clay in Minatitlan, Mexico
Mendez, A. & Samano A.

- Evaluation of dynamic analyses and static pile load tests from bored cast-in-situ piles in dense sands and sandstones
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- High strain dynamic testing in micropiles. Comparison of static and dynamic test results
Oteo, C., Arcos J. L., Gil, R. & Fernández Tadeo, C.
- Static and dynamic testing of driven piles in Poland
Rybak, J., Sobala, D. & Tkaczynski, G.
- Comparison between static and dynamic pile capacity. A case study from Norway
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- Dynamic and static testing of concrete foundation piles with structure-integrated fiber optic sensors
Schallert, M., Habel, W. R., Göbel, I. R., Stahlmann, J. & Wardinghus, P.
- Correlation of CAPWAP with instrumented static load test on a steel H pile
Paraíso, S. C., Costa C. M. C. & Aleixo, L.
- Comparison of static and dynamic pile load tests using an elastoplastic soil model
Costa D'Aguiar, S., Santos J. A., Lopez-Caballero, F. & Modaresi, A.

Quality assurance of deep foundations using dynamic methods

- Offshore pile acceptance using dynamic pile monitoring
Webster, S., Givet, R. & Griffith, A.
- Application of low-strain integrity tests for quality assurance of deep foundations in Thailand
Maung A. Win, Aye Z. Z. & Thayanan Boonyarak
- Statistical analysis of a large number of PEM tests on piles
Amir, E. I. & Amir, J. M.
- Test and consolidation method for defect of rock-socketed bored piles
Shi, F. & Chen, M.
- Multi-methods testing on tip faults of rock-socketed cast-in-place piles
Huang, Y.

Incorporation of dynamic testing into design codes and testing standards

- Worldwide dynamic foundation testing codes and standards
Beim, G. & Likins, G.
- European standard and guideline for Rapid Load Test
Hölscher, P., van Tol, A.F. & Middendorp, P.

Ground vibrations induced by pile motions

- Induced vibrations in a metallic structure by a precast pile and its correlation with the stress-wave pile test – A case study
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- Examination of ground vibrations and dynamic pile measurements during driven pile installation
Hajduk, E. L. & Adams, J. C.
- Benign and harmful dynamic effects from pile driving
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Dynamic measurements in ground field testing

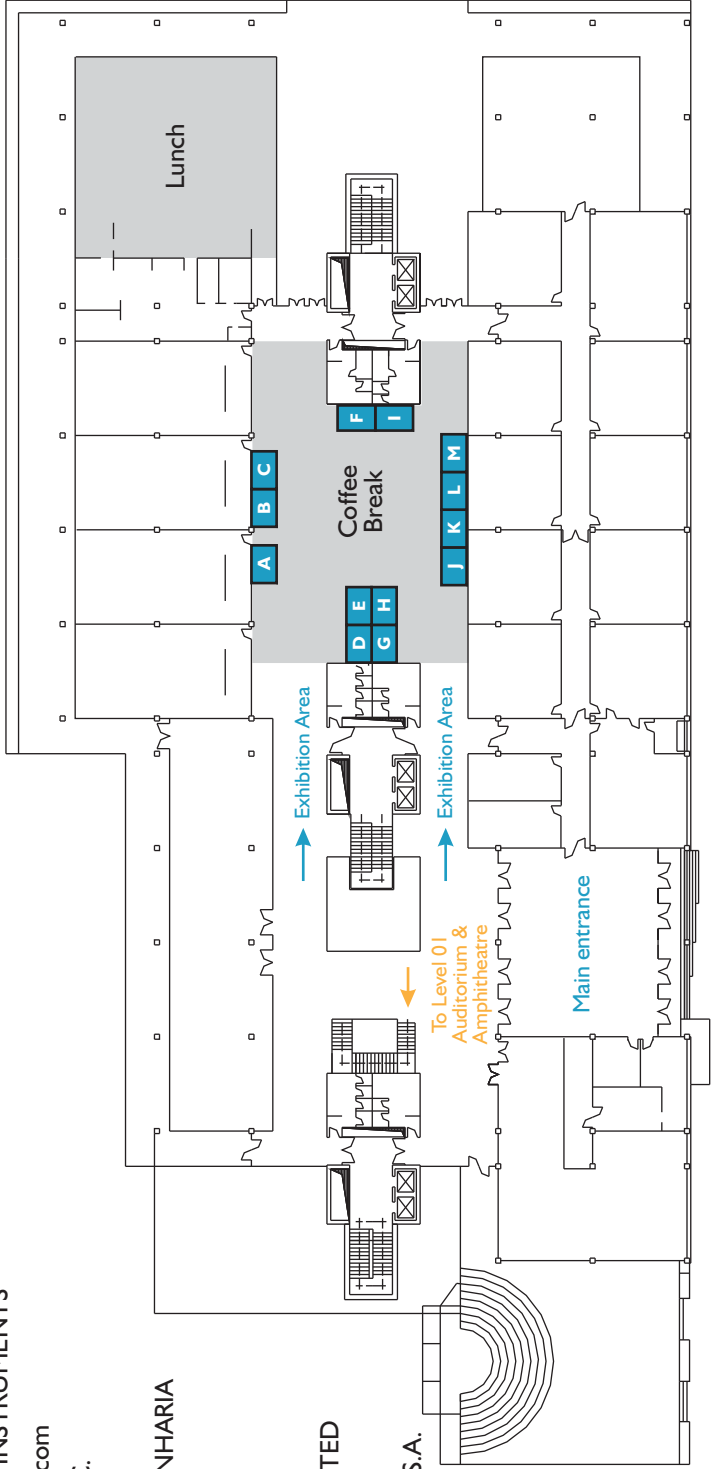
- Influence of rod type in SPT efficiency
Rodrigues, C., Cavalcante, E. H., Danziger, B. R. & Viana da Fonseca, A.
- On the energy reaching the sampler during SPT
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