



## **Al Bayan Technical Equipment and Pile Dynamics**

**Present**

**a Workshop and Seminar Series on**



## **Deep Foundation Testing and Analysis**

**November 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup>, 2009**

**at the**

**Moevenpick Hotel & Residence Bur Dubai**

**Dubai  
United Arab Emirates**

**Monday Nov. 9, 8:30 – 17:00**

## **General Seminar on Deep Foundation Testing and Analysis**

### **Who Should Attend**

Geotechnical, structural and construction engineers; owners, contractors and other professionals involved in the design, construction and specification of deep foundations.

**This seminar is suitable for those new to the field of Foundation Testing and Analysis, and is a general overview of the methods and their applications (suitable also for those specifying the testing to gain basic understanding for assessing the results presented in reports). Those attending the second and third days of this event are strongly encouraged to also attend this first day for basic background materials.**

### **Topics**

Background and design considerations  
Development of Equipment and Methods  
Load Testing of Driven Piles and Pile Driving Monitoring  
Load Testing of Drilled Shafts  
Wave Equation Analysis for preparation of Dynamic Load Testing  
Examples of offshore and near shore pile testing  
Monitoring and Continuous Flight Auger / Augered Cast-in-Place Piles  
Pile Integrity Testing with PIT (pulse echo)  
Cross-hole Sonic Logging (CSL)

### **Program** (subject to change)

8:30	Introduction to dynamic pile testing	Rausche
10:00	Break	
10:15	Applications of the Pile Driving Analyzer <sup>®</sup> and CAPWAP <sup>®</sup>	Likins
11:15	Drilled shaft testing with the PDA	Rausche
12:00	Remote Pile Driving Analyzer Testing	Likins
12:30	Lunch	
13:30	Wave Equation analysis background	Rausche
14:00	Offshore applications of GRLWEAP, PDA and CAPWAP	Rausche
14:45	Integrity Testing by Pulse Echo	Likins
15:30	Break	
15:45	Cross Hole Sonic Logging testing	Likins
16:30	Monitoring CFA pile installation	Likins
17:00	Adjourn	

# Tuesday, Nov. 10, 8:30 – 17:00

## Deep Foundation Integrity Testing Workshop

### Who Should Attend

Geotechnical, structural and construction engineers; owners, contractors and other professionals involved in the design, construction and specification of deep foundations. **Foundation testing professionals performing these tests are strongly encouraged to attend and gain additional knowledge of the proper methods to use the software and its various features.**

### Topics

Wave Mechanics  
Using PIT-S and PIT-W software  
PIT Examples  
Using Cross-hole Sonic Logging (CSL) software  
CSL Examples  
CSL Tomography  
Wave Equation workshop

### Program (subject to change)

8:30	Wave Mechanics	Rausche
9:30	PIT-S software	Likins
10:00	Break	
10:15	Basic PIT-W software, with examples	Likins
11:15	Advanced PIT-W software, with examples	Rausche
12:30	Lunch	
13:30	Cross-hole Sonic Logging (CSL) software, with examples	Likins
14:15	CSL Tomography	Likins
14:45	Wave Equation workshop	Rausche
15:30	Break	
15:45	Wave Equation Workshop (continued)	Rausche
17:00	Adjourn	

# Wednesday Nov. 11, 7:30 – 15:45 (note earlier start time) High Strain Dynamic Foundation Testing Workshop

## Who Should Attend

**Pile Driving Analyzer® (PDA) and CAPWAP® users** interested in sharpening their skills, engineers, foundation testing professionals, students and professors already familiar with the basic concepts of deep foundation dynamic testing and analysis. **This workshop offers a good opportunity for experienced practitioners to review theoretical material and prepare for the Foundation QA HSDPT Examination.**

## Topics

PDA Testing – How to do it right  
PDA Testing: Capacity  
PDA Testing: Integrity, Stresses, Energy  
CAPWAP Analyses – hands on examples

## Program (subject to change)

7:30	PDA Testing – How to do it right	Likins
9:00	Break	
9:10	PDA Testing – How to do it right (continued)	Likins
10:10	PDA Testing: Capacity, with examples	Rausche
11:25	Lunch	
12:20	PDA Testing: Integrity, Stresses, Energy	Likins
13:05	CAPWAP: Background	Rausche
13:35	CAPWAP workshop: examples	Rausche/ Likins
14:20	Break	
14:30	CAPWAP workshop: examples (continued)	Rausche/ Likins
15:45	Adjourn	

## Workshop and Seminar Lecturers

**Garland Likins, P.E.:** Garland is the president of Pile Dynamics, Inc. (PDI) and a principal of GRL Engineers, Inc. (GRL). In his 38 years since participating in the original dynamic pile testing research at Case Western Reserve University, Garland has directed the development and improvement of multiple testing systems for deep foundations. He has numerous published papers, is active in several code and professional societies, and is a frequent lecturer.

**Frank Rausche, Ph.D., P.E.:** Frank is the president of GRL and a principal of PDI. He has been involved in the research and development of dynamic testing and analysis methods since the mid-1960s work at Case Western Reserve University, where the Case Method of dynamic pile testing originated. He is the principal author of the GRLWEAP and CAPWAP<sup>®</sup> programs. Frank has numerous published papers, lectures frequently and continues to be actively engaged in dynamic testing.

## Other Information

### Hotel Reservations

Please contact the hotel directly:  
Mövenpick Hotel Bur Dubai  
19th Street, Oud Metha, P.O. Box 32733  
Dubai, United Arab Emirates  
Phone +971 4 336 6000, Fax +971 4 3345510  
[www.moevenpick-burdubai.com](http://www.moevenpick-burdubai.com)

### Foundation QA Examination

Workshop attendees may take the Foundation QA Dynamic Pile Testing Examination (also known as HSDPT Certification and Certificate in PDA Testing) at any time after the workshop at a Regus location. Regus locations are available in major cities worldwide.

Because dynamic testing must be of high quality, the industry needs assurance that testers are knowledgeable about their pile testing specialty. Pile Dynamics endorses the FQA examination, however neither Pile Dynamics nor Al Bayan Technical have any involvement in exam preparation, administration, grading, certification or certificate distribution.

Registration for the exam is independent from registration for the workshop. Visit [www.foundationqa.com](http://www.foundationqa.com) (or contact [melanie@foundationqa.com](mailto:melanie@foundationqa.com)) for more information and to register for the exam.

## Registration Fees and Form

Fax or email this completed registration form to:

Al Bayan Technical att: Ms Rose Navarro  
rose@albatech.ae or fax : +971 4 2689568

For more information contact Ms. Rose Navarro at the email above or telephones:  
+971 4 2626756 or +971 4 2689524.

Name (s): \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

City: \_\_\_\_\_

State/Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

- General Seminar on Deep Foundation Testing and Analysis (Nov. 9) \_\_\_\_\_ US\$300
- Deep Foundation Integrity Testing Workshop (Nov 10) \_\_\_\_\_ US\$300
- High Strain Dynamic Foundation Testing Workshop (Nov 11) \_\_\_\_\_ US\$300

### **It is highly recommended that those attending Nov 10 and/or 11 also attend Nov 9**

- US\$ 25 discount for registration prior to Oct 10
- US\$ 25 discount for additional persons from same organization
- US\$ 100 per day discount for government employees

Registration fees includes course notes, coffee breaks and lunches.

Amount: Program total \_\_\_\_\_

Discount (if applicable) subtract \_\_\_\_\_

Grand total \_\_\_\_\_

Please remit equivalent amount in AED (UAE local currency) to :

Bank : The Commercial Bank of Dubai Ltd.,  
Bank Address : Main Branch, Deira, Dubai – UAE  
Swift Code No. : CBDUAEAD  
For Account of : Al Bayan Technical Equipment LLC  
Account No : 1000233047