

# **Learning Objectives**

At the end of workshop attendees will be able to:

- Select an appropriate method of integrity assessment of deep foundations for a particular application
- Review reports of integrity and dynamic load test of deep foundations
- Operate the PDA in a manner conducive to acquiring good quality data
- Assess pile bearing capacity, pile driving stresses, hammer performance and pile integrity by various methods
- Avoid pitfalls when analyzing PDA data with the CAPWAP software
- Interpret PDA testing and CAPWAP software results
- Describe the soil-model used in CAPWAP
- Review options for CAPWAP analysis and output
- Analysis using GRLWEAP

#### Who Should Attend

- Pile Driving Analyzer® (PDA) and CAPWAP® users interested in sharpening their skills
- PDA and CAPWAP users interested in taking the Dynamic Measurement and Analysis Proficiency Test\*

## **Registration Fees**

(Includes: course material in PDF, AM/PM breaks and lunch)

- Deep Foundation Dynamic Testing and Analysis Workshop Rp. 5.800.000
- Dynamic Measurement and Analysis Proficiency Test (No Discounts) Rp. 4.000.000

## **Closing Date & Limited Seating**

Limited seat up to 60 participants.

Please send in the registration form with your payment before February 29th, 2024



#### **Workshop Lecturers**



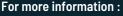
<u>Dr. George Piscsalko, P. E.,</u> is the president of Pile Dynamics, Inc. He's responsible for design and development of test equipment for the deep foundation industry. With 27 years experience, he involves in design of PDA, PIT, CHA, TIP, and PIR (Pile Installation Recorder). George oversees coordination and conducting domestic and international seminars for Pile Dynamics, Inc. He is Registered Professional Engineer in Ohio, Michigan, and New Jersey. He also holds 7 US Patents.



<u>Dr. Brent Robinson, P. E.</u>, is the vice president of Plle Dynamics, Inc. and GRL Engineers Inc. He oversees Civil Engineering and Research and Development activities and trains users of PDI equipment. Since joining the organizations in 1999, Brent has performed measurement and analysis for foundation projects around the world. Dr. Robinson, received his Ph.D. from North Carolina State University, is Chair of the Geotechnical Committee of the Cleveland section of the American Society of Civil Engineers, and was the recipient of the TRB Best Paper Award in Soil Mechanics, 2010.



<u>Dr. Aksan Kawanda</u>, is Geotech Efathama's geotechnical expert, specialist in deep foundation, foundation testing and geotechnical instrumentation. He is a Registered Geotechnical Engineer in Indonesia, also an international certified for dynamic load test. Present, he is the Head of Professional Certification Development in Indonesian Society for Geotechnical Engineer and a lecturer major in Geotechnical and deep foundation in Universitas Trisakti.



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# **SCHEDULE**

#### Day 1, 08:00 - 17:00

- 08:00 Registration
- 08:30 Session I : Overview of the Benefits of Testing, Method Selection, and How to implement Testing into a project
- 09:00 Session II:
  - Understanding of Testing Methods and Their Results
  - Illustrative Examples of Test Methods
  - Advantages and Limitations of Methods
  - · Risk Mitigation with Test Methods
- 10:30 Break
- 10:45 Session II
- 12:00 Lunch
- 13:30 Session II
- 15:00 Break
- 15:15 Session III: Case Histories Illustrating Cost Benefits
- 16:15 Session IV: Indonesian Market Specifications & Testing Qualifications
- 17:00 Adjourr

#### Day 2, 08:00 - 17:00

- 08:00 Registration
- 08:30 Wave Mechanics for PDA testers
- 10:30 Break
- 10:45 PDA Testing Proper Practices
- 12:30 Lunch
- 13:30 PDA Testing Proper Practices (cont.)
- 14:00 PDA Data Quality Examples
- 14:45 Break
- 15:00 CAPWAP: An Introduction, Basic Modelling and Program Operation
- 16:15 Basic CAPWAP Example(s)
- 17:00 Adjourn

#### Day 3, 08:00 - 17:00

- 08:00 Registration
- 09:00 CAPWAP and Case Method Comparisons
  - Show Case Method Examples and the standard RMX Calculation
  - CAPWAP examples where RSU are chosen over RMX
- 10:30 Break
- 10:45 Stress and Integrity Calculations
  - End bearing pile with Tension (compare CSB and TSX) and Output in CAPWAP
  - 'Broken' pile analysis (analyze with the BETA Method as well as modelling reduced impedance in CAPWAP)
- 12:00 Lunch
- 13:00 Bored Piles: CAPWAP Analysis Methods
- 15:15 Break
- 15:30 Dynamic Measurement and Analysis Proficiency Test\*
- 17:00 Adjourn

\*At the end of the Workshop, participants may take a multiple-choice **Dynamic Measurement and Analysis Proficiency Test** which will take less than 1-1/2 hours to complete. The test covers the theory of Wave Mechanics, Case Method (PDA) equations, data quality assessment, data interpretation and basic CAPWAP analysis. The test is designed for those with experience in using the PDA and CAPWAP. Those taking the test are advised to study "Appendix A" and "Helpful Hints" of the PDA manual, review some of the EXAMPLE data provided with the PDA, and read the CAPWAP background material. Those without access to these manuals and examples should contact **proficiencytest@pile.com** in advance of the test date by showing payment receipt. Visit the Proficiency Test website: **www.PDAProficiencyTest.com** to learn more about this test. A Certificate of Proficiency will be awarded to those who pass the test. The level indicated on the Certificate is dependent on the score achieved on the test.