

Short Course and Workshop on Design of Machine Foundations

April 26 & 27, 2018

Carriage House Inn, 9030 McLeod Trails, Calgary, AB

PROGRAM

Day 1 – April 26, 2018	
8 a.m. – 8:30 a.m.	Registration and breakfast served
8:30 a.m. – 9:30 a.m.	Basic notions, mathematical models, types of dynamic loads, types of foundations, excitation forces of machines, design objectives, design procedure
9:30 a.m. – 9:45 a.m.	Break and discussion
9:45 a.m. – 10:45 a.m.	Site characterization and dynamic soil properties
10:45 a.m. – 11 a.m.	Break and discussion
11 a.m. – noon	Shallow Foundations: Stiffness and damping of circular and noncircular foundations, embedded footings, effect of inhomogeneity, impedance functions of a layer on half-space
noon - 1 p.m.	Lunch served
1 p.m. – 2:45 p.m.	Shallow Foundations: Effect of inhomogeneity, impedance functions of a shallow layer or layer on half-space, modelling
2:45 p.m. – 3 p.m.	Break and discussion
3 p.m. – 5 p.m.	Pile Foundations: Mathematical models for pile analysis, stiffness and damping of single piles, pile groups, interaction factors, impedance functions of pile groups
Day 2 – April 27, 2018	
8 a.m. – 8:30 a.m.	Breakfast served
8:30 a.m. – 10 a.m.	Dynamic Response of Machine Foundations: Response of rigid foundation in 1 DOF, 2 DOF and 6 DOF, design checklist
10 a.m. – 10:15 a.m.	Break and discussion
10:15 p.m. – noon	Dynamic Response to Impact Loads: Design criteria, mathematical models, impact forces, transient response of mill foundations
noon – 1 p.m.	Lunch served
1 p.m. – 2 p.m.	Pump Foundations Workshop: Vertical Pump; Horizontal Pump; Slurry Pump; Pump-Motor-Gear Box System; Multiple Pumps on Same Foundation; Pumps on Flexible Foundation
2 p.m. – 2:45 p.m.	DYNA6.1 Introduction: Types of foundations, types of soil models, types of load, types of analysis, and types of output, practical considerations
2:45 p.m. – 3 p.m.	Break and discussion
3 p.m. – 4:30 p.m.	DYNA6.1 Workshop: Computer work on DYNA6.1 (no laptop required - Dr. El Naggar will project DYNA6.1 software on the screen

For further information please contact C. Quintus – cquintus@uwo.ca