



GeOMO 2008

Geotechnical Earthquake Engineering - Site Response

May 2, 2008

The theme of GeOMO 2008 has recently become of more interest to the Midwest civil engineering community due to the perceived earthquake risks and new code requirements. The constant seismic reminder for the New Madrid Seismic Zone and new USGS hazard mapping underway in St. Louis make this lecture very timely. The short course will provide answers to questions that frequently arise in new or retrofit engineering projects as it relates to site response.

Schedule:

8:15 am	Check-in and final registration
9:00 am	Introduction to site effects - case histories, site classification, amplification factors
10:00 am	Ground motions and hazard analyses - basics, boundary effects, transfer function concept
Noon	Luncheon - provided
1:30 pm	Dynamic soil properties - equivalent linear, nonlinear
2:30 pm	1-D analyses - equivalent linear, nonlinear, comparison
3:30 pm	2-D analyses - equivalent linear, nonlinear, comparison, SFSI
4:15 pm	Site response in the future - performance-based earthquake engineering

Course participants will gain familiarity with the concepts and related topics for use in geotechnical and structural engineering. The course includes a full day of lectures, extensive references, notes and pictorial examples of up-to-date methods in site response.

The Lecturers:

Dr. Steven L. Kramer, P.E., is a professor of civil and environmental engineering at the University of Washington. He specializes in geotechnical earthquake engineering and is author of the textbook, *Geotechnical Earthquake Engineering* (Prentice-Hall., 1996).

Professor Kramer has been involved in site response research, has written programs for equivalent linear and nonlinear site response, and consulted on site-response and ground failure projects in the U.S. and abroad. Professor Kramer is the recipient of the Casagrande Award and Huber Prize from ASCE, chaired the 1998 ASCE Specialty Conference on Geotechnical Earthquake Engineering and Soil Dynamics, and is a keynote speaker at the 2008 version of the same conference.

Dr. Pedro Arduino, is a professor of civil and environmental engineering at the University of Washington. He specializes in computational geomechanics with emphasis in constitutive modeling of soils, coupled formulations, contact mechanics, and general finite element solutions for geotechnical problems. He has also been involved in the development of a variety of computer-based instructional tools for geotechnical courses. Professor Arduino is author and co-author of many journal publications and reports and is very active in the professional practice. He has been involved in site-response analysis and performance-based evaluation of large bridge structures, reinforced walls and wharf structures. His current interests concentrate on the development of a framework for fluid-soil mixtures using distinct phases, and the use of 3-D finite element solutions for the analysis of soil-foundation interaction problems.

Location

9:00 a.m. to 4:30 p.m., Friday, May 2, 2008
Havener Center, 1346 University Drive
Missouri University of Science and Technology
Rolla, Missouri

Registration

Fee for the workshop is \$125. Registration includes course notes and a luncheon. Attendees will also receive a certificate for six Professional Development Hours.

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Register On-Line at:

http://mst.edu/NonCredit/Conference/GeoMO_2008.html