The Continuing Education and Computer Application Committees are proud to announce the February Mini-Seminar:

"Analytical Foundation Modeling Considerations for Performance Based Design of Structures"

Speaker: Dr. J.P. Singh, P.E., G.E., President of Computers & GeoEngineering, Inc.

Date: Thursday, February 21, 2013
5:30pm – Registration Opens
6:00-7:30 pm – Presentation and Q&A

Location: Arup, 560 Mission Street, Suite 700, San Francisco, CA 94105

$25 Registration fee payable at the door (cash, check or credit card). Light refreshments will be provided. Attendees will need to pre-register by contacting the SEAONC office.

Abstract:
Risk Targeted Performance Based Engineering approaches for design require inclusion of proper representation of Soil-Foundation-Structure-Interaction (SFSI) issues in the computer models. This presentation outlines analytical foundation modeling considerations in developing the proper SFSI handshake parameters for use in analyses of performance based design of structures.

This presentation includes discussion of available computer software to assess the three-dimensional displacement/rotational nonlinear spring stiffness (various springs of the foundation stiffness matrix) of isolated piles and shafts as well as stiffness of pile and shaft groups with/without caps. The assessment of foundation stiffness springs accounts for soil (including effects of soil liquefaction and lateral soil spreading on pile/shaft foundations) as well as pile/shaft properties (including pile moment-curvature-bending stiffness relationships; pile head fixity; and pile cross-section shape).

Speaker Bio:
Dr. J.P. Singh, P.E., G.E. is the President of Computers & GeoEngineering, Inc. as well as the Principal of JP Singh & Associates. He specializes in geotechnical engineering, earthquake engineering and engineering seismology. He received his MS and Ph.D. from the University of California, Berkeley. He has been in professional practice for over 48 years and has worked on numerous projects involving dams and embankments, buildings, major industrial and refinery installations, DoD and DoE facilities, offshore platforms, ports and harbor facilities, bridges, nuclear power plants, liquid natural gas facilities, pipelines and transmission lines and industrial disposal sites throughout the United States and abroad. He has worked on many prestigious projects such as Bank of America World Headquarters and Transamerica Pyramid – the tallest buildings and landmarks of San Francisco; Golden Gate Bridge – the world famous landmark in San Francisco; Tacoma Narrows Bridge – a classic resonance failure cited in every physics text book; Trans Alaska Pipeline – world's largest and the most difficult project; Port of Oakland and Port of Los Angeles – world's two largest Container Ports. Two of his projects, Golden Gate Bridge and Trans-Alaska Pipeline, have been cited as two of the Top Nine Seismic Projects of the 20th Century by the Applied Technology Council.

SEAONC 2013 Special Projects Initiative Grant "Comparison of Soft, Weak, Open Front Retrofit Guidelines"

By Darrick Hom & Grace Kang, SEAONC Board

The SEAONC Board is pleased to announce the grant award of SEAONC's 2013 Special Projects Initiative to the project proposal entitled, "Comparison of Soft, Weak, Open Front Retrofit Guidelines" submitted by SEAONC member and principal investigator, Jonathan Buckalew of Nabih Youssef Associates.

The scope of the proposal involves the study of three documents, ASCE 41-06, Chapter A4 of the 2012 International Existing Building Code, and FEMA P807, and their application towards soft, weak, open front buildings. Two buildings will be analyzed using each of the three documents, with an advisory panel of four structural engineers evaluating the overall progress of the project.

The SEAONC Board stated that the awarded project "is extremely timely and relevant, given that the City of San Francisco is seeking direction and input in addressing these types of buildings in their long-term hazard reduction plans."

SEAONC's Special Projects Initiative (SPI) annual program is intended to provide financial support for innovative projects that will serve SEAONC and its members through initiatives that improve and promote the practice of structural engineering. The program provides one-year grants with funding up to $10,000 per project. This is the sixth consecutive year that SEAONC has been able to extend this funding to a qualified project.

The other proposals submitted this year and considered in the judging included:

- "City Tours Educating the Public About Structural Engineering", submitted by Robert Reitherman, Consortium of Universities for Research in Earthquake Engineering.
- "Testing of Reinforced Wood Tension-Only Parallel to Grain Connectors", submitted by William Vaughn, Vaughn Engineering.
- "Benchmarking Our Tools for Seismic Evaluation and Retrofit of Vulnerable Woodframe Buildings", submitted by David Bonowitz, SE.
- "Engineering, Earthquakes, and the Law", submitted by David Bonowitz, SE.
- "Residential Earthquake Retrofits – A Practical Guide", submitted by Thor Matteson, SE.
- Effects of the Seismic Vertical Component on Structural Behavior", submitted by Masume Dana, SEAONC Computer Applications and Seismology Committees.

As stated in the SPI submission requirements, grant proposals may cover a broad range of possible projects that seek the advancement of knowledge, technology transfer, and/or promote increased awareness of how structural engineering benefits society. A key program criteria requirement is that projects benefit the SEAONC membership, the structural engineering profession and/or the community.

We thank all those participating in submitting proposals to the 2013 SPI.