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 Compu-
ters & 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 Fran-
cisco, CA 94105

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

Abstract:
Risk Targeted Performance Based Engineering approach-
es for design require inclusion of proper representation
of Soil-Foundation-Structure-Interaction (SFSI) issues in
the computer models. This presentation outlines analyti-
cal 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 com-
puter software to assess the three-dimensional dis-
placement/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 stiff-
ness spring accounts for soil (including effects of soil
liquefaction and lateral soil spreading on pile/shaft foun-
dations) 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 Califor-
nia, 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 through-
out 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; Ta-
coma 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 Nabiil Youssef
Associates.

The scope of the proposal involves the study of three docu-
ments, ASCE 41-06, Chapter A4 of the 2012 International
Existing Building Code, and FEMA P807, and their applica-
tion 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 pro-
jects that will serve SEAONC and its members through ini-
tiatives 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 consecu-
tive 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 Engi-
neering”, submitted by Robert Reiherman, 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”, sub-
mitted 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 propos-
als may cover a broad range of possible projects that seek
the advancement of knowledge, technology transfer, and/or
promote increased awareness of how structural engineer-
ing 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.