

ENGINEERING WORKSHOP



Workshop on Performing Nonlinear Dynamic Analysis in SAP2000

The SAP2000 software program by Computers and Structures, Inc. (CSI) is an efficient tool for analyzing structures subject to static and dynamic loads. A friendly graphical user-interface and options to include parameters directly from engineering codes and guidelines makes it a widely accepted tool.

This workshop will provide a hands-on experience on using SAP2000 for estimating response of structures subject to dynamic loads. A simple steel moment-frame structure will be used to demonstrate steps involved in performing modal, pushover, response-spectrum, and response time-history analyses. Different options available in SAP2000 to capture nonlinear behavior of structure and their effects on structural response will also be discussed.



Manish Kumar, Ph.D., P.E. Post-doctoral Associate, University at Buffalo, USA

Manish Kumar is a post-doctoral researcher at University at Buffalo. His research interest lies in the theoretical and experimental work to address issues related to analysis and design of structures subject to seismic, blast and impact loads. He received Bachelor's degree in Civil Engineering from IIT Kanpur and his Master's and Ph.D. degrees from University at Buffalo. His Ph.D. research focused on investigation of the feasibility of seismic

isolation technology to nuclear power plants (NPPs). As a post-doctoral researcher, he is investigating the effect of aircraft-impact on base-isolated NPPs. He is also licensed as a Civil Engineer (P.E.) in the state of California. He has developed several open-source modules in software programs like OpenSees, ABAQUS and LS-DYNA. He has previously conducted hands-on workshops on using software programs like OpenSees, Air3D and LS-DYNA.

Date: March 11, 2016 Time: 10:30 AM

Location: 208 Ketter Hall, North Campus, University at Buffalo

Seats are limited to 30 and available on first come first serve basis. Please register by sending an email to <u>kundango@buffalo.edu</u> with (1) Title: "SAP2000 Workshop" and (2) Your Full Name

You can check for upcoming events here: http://gsa.buffalo.edu/eeri/activities/