

SE&T Colloquium Series

Winter 2008

SPEAKER

Dr. Enayat Mahajerin
Professor of Mechanical Engineering

TITLE

Truck Transportation, A Random Vibration Case

ABSTRACT

Truck transportation on a rough road involves multiple frequencies with random excitations. This means that no two segments of the motion match when overlaid on top of each other. As a result, a statistical approach based on the *Power Spectral Density* (PSD) is used. The information from PSD is crucial when trying to recreate the motion on a *vibration table*. The results can be used when simulating a trip in order to control damage to products being shipped. Current practice involves data recording using an accelerometer attached to the bottom of the truck trailer. The recorded data is fed to a computer which generates the PSD. This process is very expensive and time consuming. The object of this talk is to present an alternate approach of generating the required PSD plot for operating the vibration table.

DATE

Tuesday, April 15

TIME

4:30 – 5:20pm

PLACE

Pioneer 240

Refreshments will be served at 4:15pm.