CSi Multi-support excitation
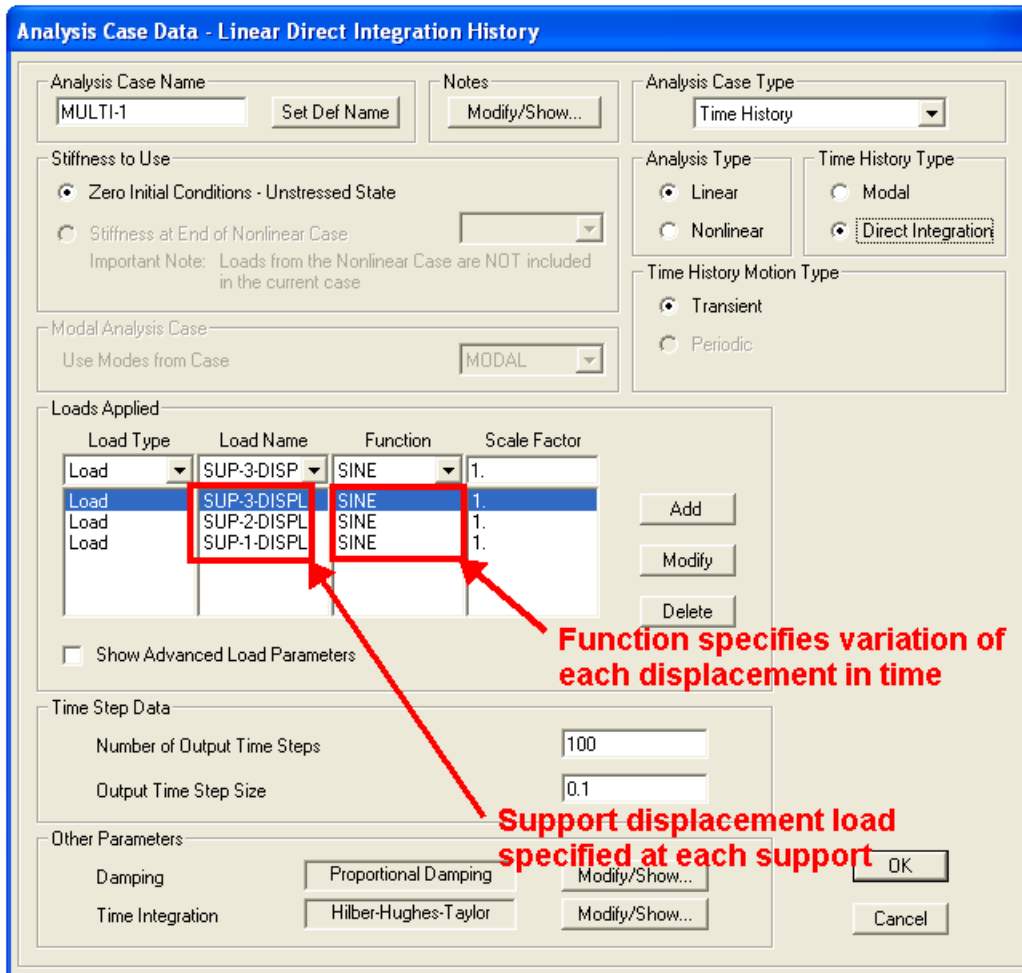
Added by Ondrej, last edited by Ondrej on Apr 28, 2010

Acceleration loads can be applied only to all supports. However, you can analyze the structure for multi-support input motions by using displacement time history records rather than acceleration time history records. If you have acceleration records, you would need to convert these to displacement records.

Once you have the displacement record, define a Load pattern in which you apply a unit value of joint displacements in the direction of acceleration at the affected joint. For this to affect the structure, you also need to restrain these joints in the direction of loading only. Then create a time history function that will describe a variation of these displacements in time. Finally, define a time history Load case that will be specified using both the displacement and the time function as shown in the figure below.

Labels