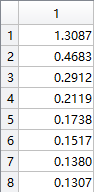
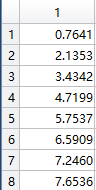
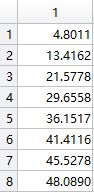
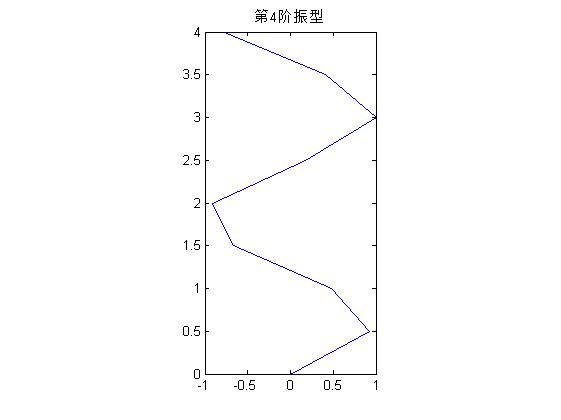
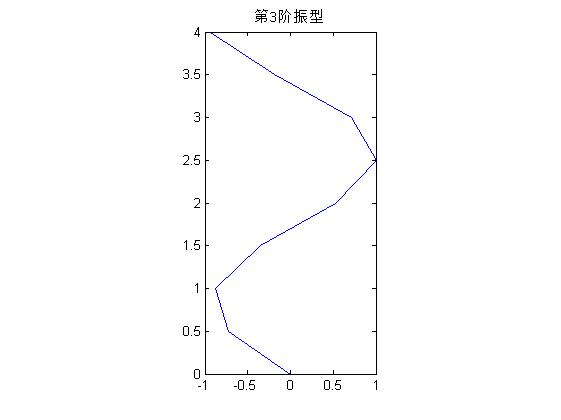
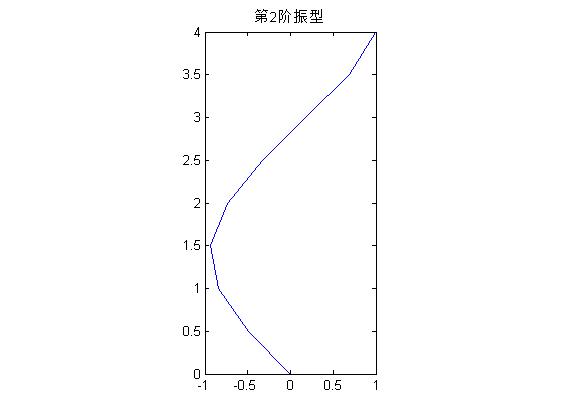
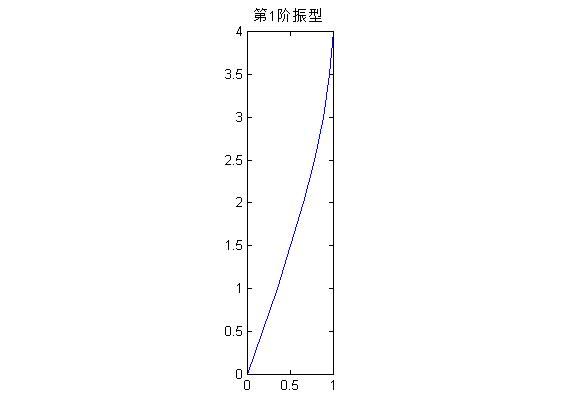
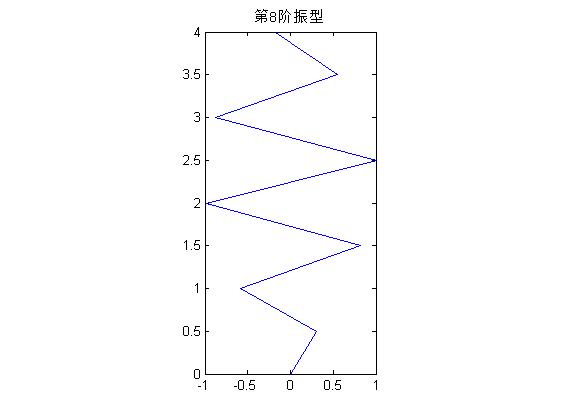
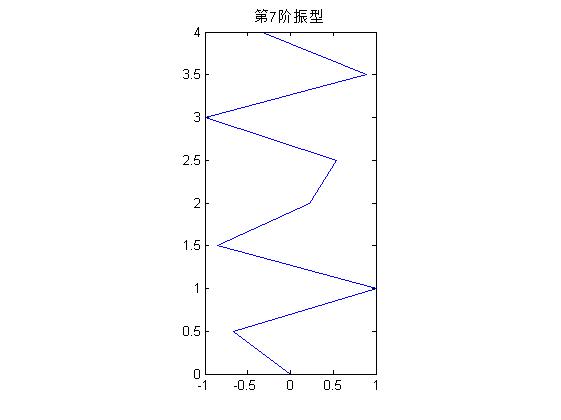
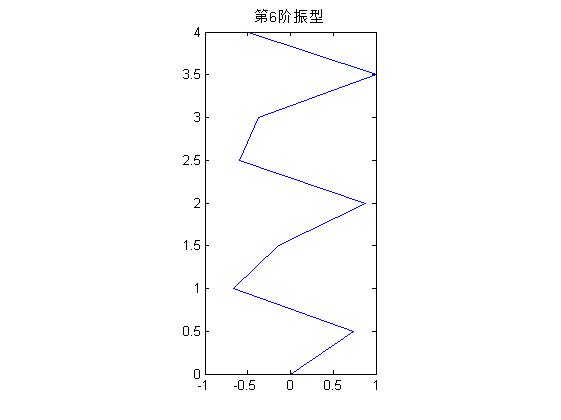
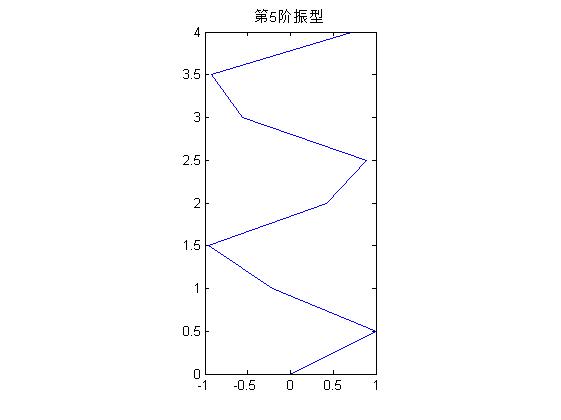
特征值分析

圆频率，频率，周期



振型



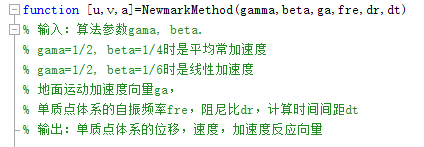


第二部分：时程分析方法

Newmark method

计算反应谱所用的数值方法为：Newmark法（线性加速度法）。取算法参数为：

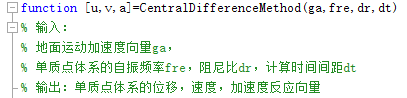
算法程序m文件：NewmarkMethod.m。



中心差分法

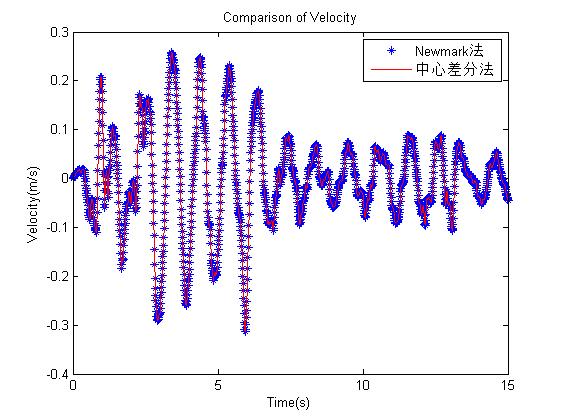
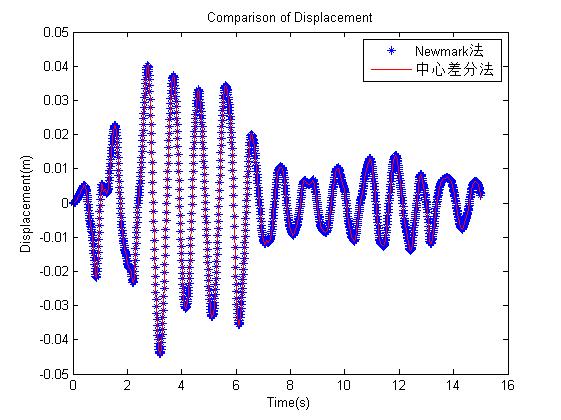
中心差分法用来和Newmark法进行对比，验证算法的有效性。

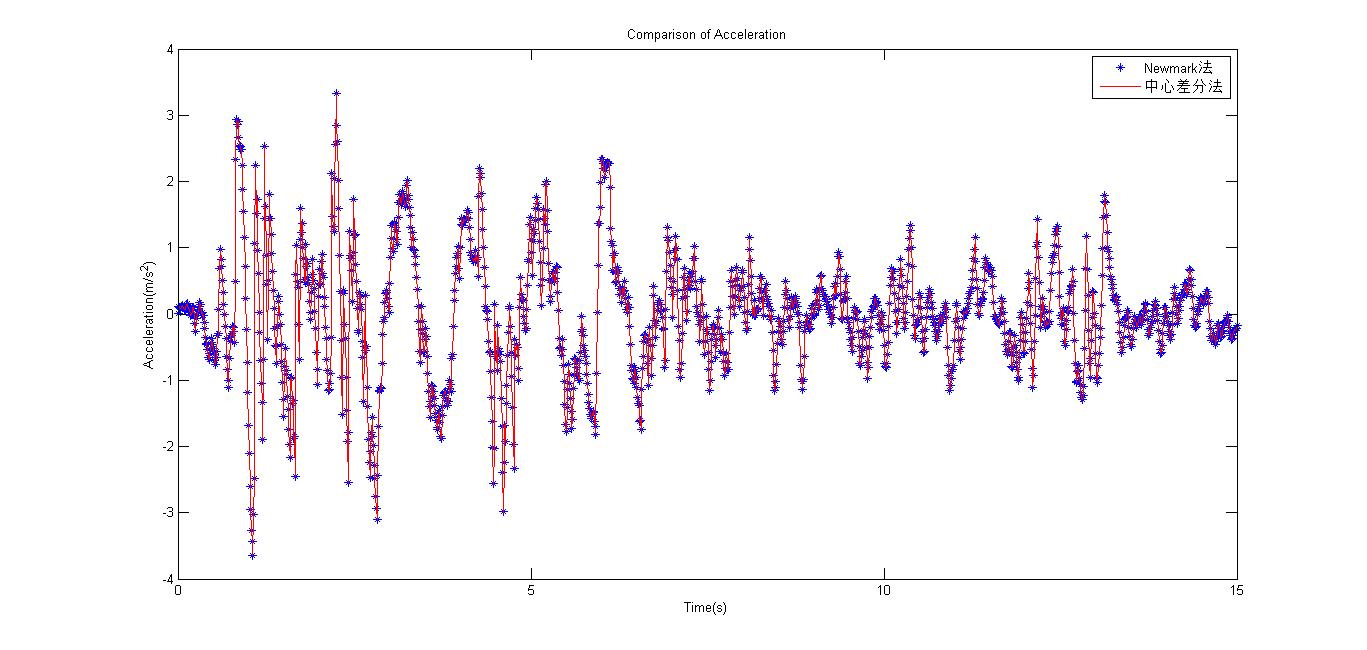
算法程序m文件：CentralDifferenceMethod.m



对比验证

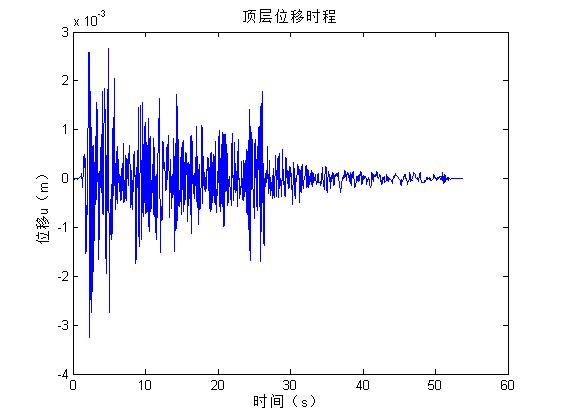
用两个方法分别计算一个单自由度体系（自振周期为1s，阻尼比5%）在El Centro波下的地震时程反应，对比位移反应时程、速度反应时程、加速度反应时程，可看出两种方法得到的曲线基本重合，说明算法的有效性。



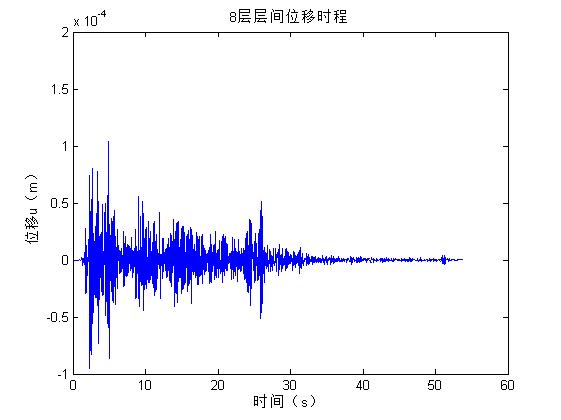
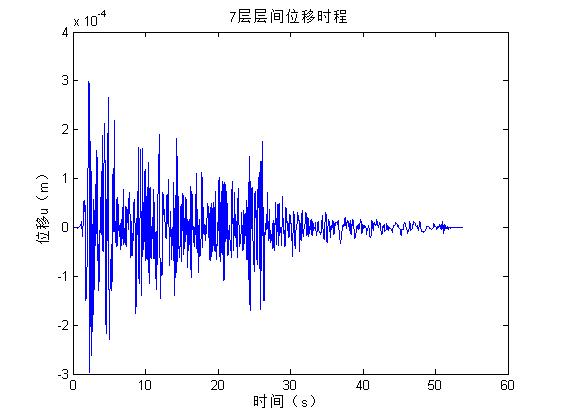
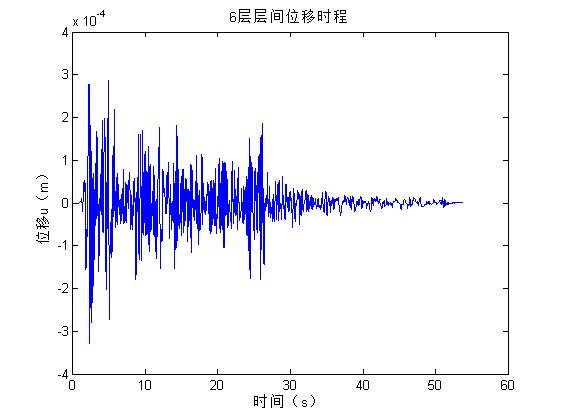
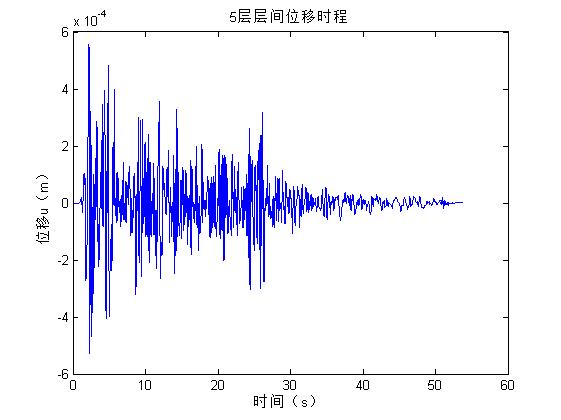
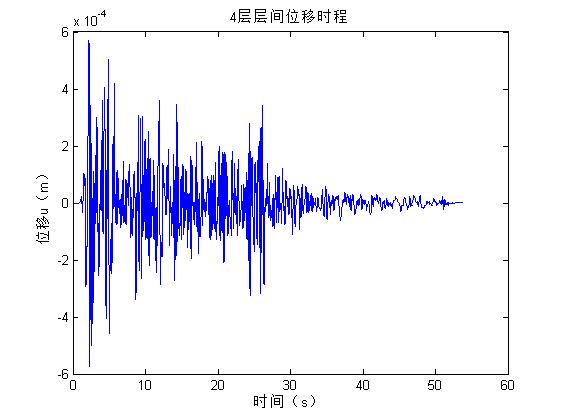
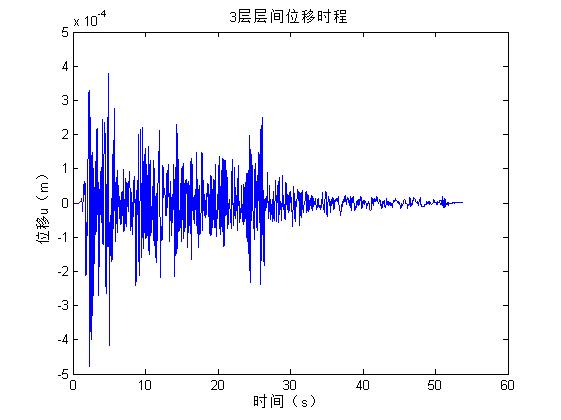
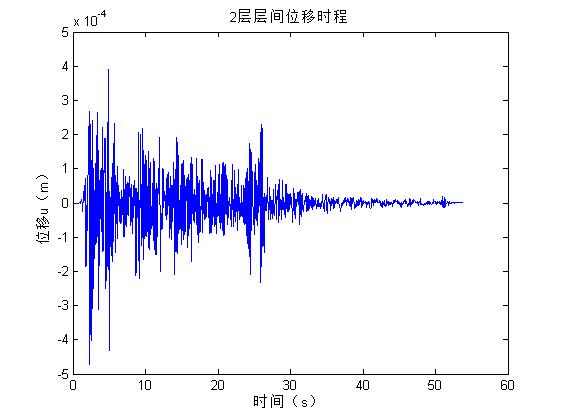
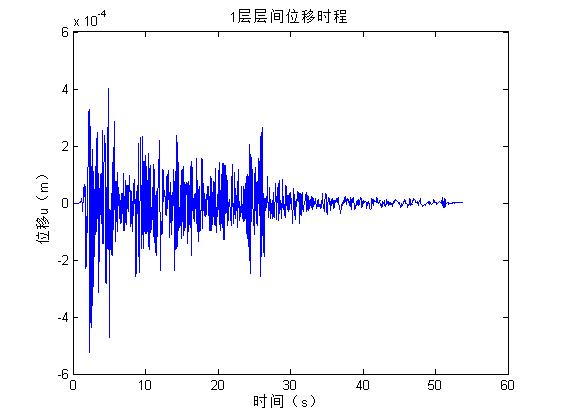


ElCentro

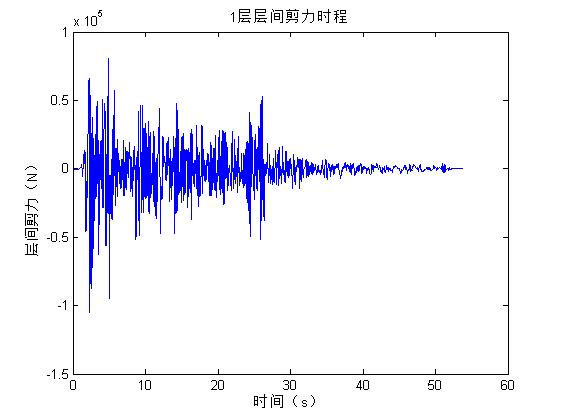
顶层位移时程



各层层间位移时程



底层层间剪力时程



各层层间位移、剪力绝对值最大值包络图

