Bonnie S Moon* (moonb@byui.edu). Analyzing the Spring-Mass Model Against Empirical Data in a Lab.

In this lab students collect data on their spring-mass systems and compare their empirical models to their theoretical ones—giving them an opportunity to actually test a model against data. Before this lab, students should have modeled spring-mass systems and solved second-order linear differential equations with constant coefficients. This lab motivates understanding and engagement by providing connections between abstract models and physical applications. (Received September 17, 2019)