

Abstract Submitted
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Classical Mechanics Experiments using Wiimotes ALEXANDER LOPEZ, ROMULO OCHOA, The College of New Jersey — The Wii, a video game console, is a very popular device. Although computationally it is not a powerful machine by today's standards, to a physics educator the controllers are its most important components. The Wiimote (or remote) controller contains a three-axis accelerometer, an infrared detector, and Bluetooth connectivity at a relatively low price. Thanks to available open source code, such as GlovePie, any PC or Laptop with Bluetooth capability can detect the information sent out by the Wiimote. We present experiments that use two or three Wiimotes simultaneously to measure the variable accelerations in two mass systems interacting via springs. Normal modes are determined from the data obtained. Masses and spring constants are varied to analyze their impact on the accelerations of the systems. We present the results of our experiments and compare them with those predicted using Lagrangian mechanics.

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