



**Chesapeake Section of the
American Association of Physics Teachers
Fall 2021 Virtual Meeting**

Contribution ID: 13

Type: **Talk**

Simple Harmonic Oscillator solution without calculus

Saturday, October 23, 2021 10:15 AM (15 minutes)

The analytical solution to the simple harmonic oscillator requires a knowledge of calculus (even worse differential equation), so how does one teach it at the College Physics level where students only know algebra? In this talk I will present an iterative approach that is accessible to algebra-level students. This method can be implemented quickly in Excel. The iterative solution will be compared with exact solution for both undamped and damped simple harmonic oscillator.

Primary author: TRAN, Phuc (John Tyler Community College)

Presenter: TRAN, Phuc (John Tyler Community College)

Session Classification: Morning Session 2