

# Abstract

The investigation of Vibration Equation is challenging and needful for the application. Components of microphones, audio systems, and other gadgets are formed by membranes. Moreover, membranes might be utilized to research on wave mechanics and propagation. In this review study, our aim in this work is to investigate various vibrating system models. In particular we will investigate the vibration model of the drum head in the setting of fractional calculus modeling. Moreover, graphical analysis will be used for more insight of the results.