

## Abstract

An exact solution of Schrodinger equation is presented for the problem of a harmonic oscillator of mass varying with time and coordinates according to

$$m(q, t) = m_0/e^{-\nu t} - k_0^2 q^2.$$

This case compared with known types of equivalent interactions, leads again to a new one that relates the damped harmonic oscillator with velocity-dependent interaction problem.