Title:

Oscillators at resonance

Abstract:

An oscillator is isochronous if all motions are periodic with a common period. When the system is forced by a time-dependent periodic perturbation with the same period, the dynamics may change drastically and the phenomenon of resonance can appear. In this talk we will show which properties the perturbations must fulfil in order to obtain unbounded solutions. We will consider different oscillators, from harmonic to nonlinear generalizations, and we will set out a number of remarks about the concept of auto-parametric resonance.