

**2. Simple Harmonic Oscillator as a model for matter wave interactions
.....3 lectures (1hr 30m each)**

Speakers: Prof. G. S. Agarwal

(a) Theory / Tutorial

Harmonic oscillators

Its application to matter waves

Experiments with matter waves

includes coherent superpositions and interference of matter waves

parametric four wave mixing processes

collapse and revivals

Coherence of matter waves

Spin squeezing in two mode condensates