

# Complex configurations and nuclear structure problems

**Victor Voronov**

Bogoliubov Laboratory of Theoretical Physics, JINR, Dubna, 141980 Russia

voronov@theor.jinr.ru

**Abstract.** Starting from the quasiparticle random phase approximation based on an effective Skyrme interaction, we study the effects of phonon-phonon coupling (PPC) on the low-lying and high-lying collective nuclear states. Many examples of such effects are presented. It is shown that to reproduce experimental data one needs to take into account PPC in many cases.