

The aim of this thesis is to provide a definition of dynamical symmetry and to study its properties within simple quantum systems. In particular, I investigate Kepler's problem and the isotropic harmonic oscillator. Dynamical symmetry is a kind of higher symmetry which is broken in a specific way. Definition of dynamical group and quantum mechanical system is presented. Subsequently, a definition of quantum degrees of freedom and quantum integrability is proposed. I mention briefly a possibility of finding the generators of dynamical group by considering time dependent constants of motion.