

## Abstract

Generally, traditional Likelihood analysis methods have low efficiency in high dimensions. However in many problems the Markov chain Monte carlo (MCMC) needs a large number of running and chains to achieve reliable results and becomes time consuming. A well-established method, Genetic algorithm, is an excellent alternative method for optimization. Indeed this algorithm is based on the Darwin's theory of evolution and simulates the evolution of generation. In this seminar we will introduce a simple generic algorithm and as a practical example apply this method to find the best value of likelihood function and optimum value of corresponding cosmological free parameters in the various dark energy models.