In the present thesis a short introduction into the theory of L´evy processes and subordinators is mentioned. It contains also basic results from the theory of point processes, especially of the Cox process. Furture it specializes to the description of the dependence structure of components of multidimensional subordinators using L´evy copulas. There are examples presented of parametric families of L´evy copulas. On their basis graphs of cross-pair correlation functions, defined analogously to the Cox point process case, are investigated.
The work also shows the possibility of simulation of multidimensional subordinators using mentioned families of L´evy copulas. Finally it deals with estimation parameters of Gamma-Ornstein-Uhlenbeck process. It is applied an approach based on Bayes theorem and Markov Chain Monte Carlo method with consequential using of Newton-Raphson algorithm and aproximative likelihood.