

Evolutionary algorithms are often used for hard optimization problems. Solving time of this problems is long, so we want effective parallelization for this algorithms. Unfortunately, classical methods of parallelization do not work very well in cases where the individual evaluations of problems take significantly different times. In this project, we will try to extend the evolutionary algorithm with interleaving generations, which offers a better use of computational resources than classical parallel evolutionary algorithms, by speculative evaluation. Speculative evaluation means the estimation of an individual's fitness function and the prediction of the following steps, which we will use later in the case of a correct estimate. We compare the algorithm with speculative evaluation with the original version in a series of experiments and we look at the effect of accuracy in the speculative step on the performance of the algorithm.