

# Evaluation of the Co-mutation Operators in Optimization of Multiple SVM Kernels

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The aim of this paper is to present a comparative study about the effect of the genetic operators used in an original evolutionary method for optimization of SVM multiple kernels. The computation of the optimal parameter values of SVM kernels is performed using an evolutionary method based on the SVM algorithm for evaluation of the quality of chromosomes. We defined several variants of the co-mutation  $LR - M_{ijn}$  operator, introduced by us in a previous paper and used them in the evolutionary algorithms. Algorithms inspired by nature are used to improve  $LR - M_{ijn}$  operator performance. The evaluation of different  $LR - M_{ijn}$  based co-mutation operators and their comparison with classical genetic operators was made using cross-validation, in order to estimate how accurately the computed multiple kernels will perform in practice.