

Table 1: Examples of configurations of variables used to tune the algorithm. Lower values of  $\overline{rank}$ , shown in the right columns, represent better algorithm performance. The actual validation test, represented by  $(r^s, r^v)$  is compared against a lowerbound  $lb$  where the ranks of the test set are known, an upperbound  $ub$  where the ranks are in reverse order, and  $(r^s, r^s)$ , where the training set and test set are equivalent.

Parameters				$\overline{rank} = MPR(train, test)$			
$\alpha$	$\epsilon$	$\lambda$	$f$	$ub$	$lb$	$(r^s, r^v)$	$(r^s, r^s)$
1	$10^{-8}$	0.01	1	0.0	0.0	0.0	0.0
1	$10^{-8}$	0.1	5	0.0	0.0	0.0	0.0
20	$10^{-8}$	0.01	1	0.0	0.0	0.0	0.0
20	$10^{-8}$	0.1	5	0.0	0.0	0.0	0.0
100	$10^{-8}$	0.01	1	0.0	0.0	0.0	0.0
100	$10^{-8}$	0.1	5	0.0	0.0	0.0	0.0