# ALGORITHM FOR MULTI-AGENT COORDINATION THROUGH ADAPTIVELY REGULARIZED PARALLEL DISTRIBUTED OPTIMIZATION

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Many problems require the analysis of large, high-dimensional datasets, which make the problem intractable to most optimization algorithms. Gilboa has developed a new parallel distributed algorithm for block optimization problems using adaptive regularizer PDAR⊠. PDAR is able to solve both the joint objective problems and separated objective problems. The optimal solutions obtained by PDAR are very close to the solution of alternating optimization algorithms, with significantly reduced computation time due to parallelization. PDAR is widely applicable in problems with one global objective function and high dimensional variables, as well as problems with multiple interdependent objective functions, with broad applications to biological, social, economical, and cyber-physical problems.