A CONJUGATE DIRECTIONS METHOD FOR MULTICRITERIA

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We propose an extension of the real-valued conjugate directions method to the strongly convex quadratic multiobjective optimization setting. As its single-valued counterpart, the method requires a set of directions, which are simultaneously conjugate respect to the positive definite matrices of all quadratic objective components. The convergence results are similar to those of the scalar-valued method: if the method is implemented with a strongly increasing or a weakly increasing auxiliary function, no matter which is the initial point, in finitely many iterations it produces, respectively, Pareto or weak Pareto optima.