Outer Approximation Projection Methods with Applications to Image Recovery Models

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Abstract. In this talk, we present a new outer proximation projection approach for solving the variational inequality problems in the real Euclidean space, where the feasible set is replaced by its polyhedral outer approximation. First, we prove the quasicontractiveness of the outer proximal operator. Second, we apply this property to present two new algorithms and their convergence under strongly monotone and Lipschitz continuous conditions of the cost mapping. Finally, we give some numerical results for the proposed algorithms and comparison with other well - known methods via image recovery models.

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