

## Some Results on New Preconditioned Generalized Mixed-Type Splitting Iterative Methods

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**Abstract :** In this paper, we present new preconditioned generalized mixed-type splitting (GMTS) methods for solving weighted linear least square problems. We compare the spectral radii of the iteration matrices of the preconditioned and the original methods. The comparison results show that the preconditioned GMTS methods converge faster than the GMTS method whenever the GMTS method is convergent. Finally, we give a numerical example to confirm our theoretical results.

**Keywords :** preconditioned; GMTS method; linear system; convergence; comparison

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