**Convergence Analysis of Modified Triangular and Symmetric Splitting Method for the Steady State Vector of Regularized Linear System - Stochastic Matrices**

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In this paper, we analyze the convergence analysis of modified triangular and symmetric splitting (MTS) method in order to solve the regularized linear system Ax = b associated with stochastic matrices. We proved that there exist  such that the regularized matrix A = QT + I is positive definite, where I is the real identity matrix of designated dimension of QT, and QT is stochastic rate matrix with positive diagonal and non-positive off-diagonal elements. Theoretical analysis shows that the iterative solution of MTS method converges unconditionally to the unique solution of the regularized linear system.