

## AN OPERATOR SPLITTING APPROACH FOR TWO-DIMENSIONAL KAWARADA PROBLEMS

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*Abstract.* The authors study a second order operator splitting formula for computing numerical solutions of singular and nonlinear Kawarada partial differential equation initial-boundary value problems. Their investigations particularly focus at the global numerical error, algorithmic realization, and stability of the decomposed schemes. Computational experiments are presented to validate and illustrate their results. The simulation demonstrates the viability and capability of the new splitting methods for solving nonlinear and singular problems with potential industrial applications.

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