

Title Mathematical and Numerical Analysis of

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Abstract. The abstract should provide a brief summary of the main findings of the paper, such as: Based on a ... method and a ... method, a ... algorithm is designed to solve a ... problem in this paper. This ... problem is an ... problem with Usually, such a ... problem can be ... problem by using the ... methods. We use a ... technique to ..., which is really effective To overcome the difficulties ..., we By ..., this ... can be Moreover, we Our proposed algorithm is The results of numerical examples show the ..., while they In addition, our

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The introduction should briefly place the study in a broad context and highlight why it is important. It should define the purpose of the work and its significance. The current state of the research field should be reviewed carefully and key publications cited. Please highlight controversial and diverging hypotheses when necessary. Finally, briefly mention the main aim of the work and highlight the principal conclusions. As far as possible, please keep the introduction comprehensible to scientists outside your particular field of research.

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$$Ax = b. \quad (2.1)$$

In (2.1), we set

$$A = \begin{pmatrix} 2 & -1 & \cdots & 0 & 0 \\ -1 & 2 & \cdots & 0 & 0 \\ \vdots & \vdots & \ddots & \vdots & \vdots \\ 0 & 0 & \cdots & 2 & -1 \\ 0 & 0 & \cdots & -1 & 2 \end{pmatrix}, \quad A \in R_{n \times n} \quad (2.2)$$

and

$$b = (1, \dots, 1)^T. \quad (2.3)$$

Table should has a minimum of two columns and two rows. Plan tables to fit the column width of the journals. Avoid a format that requires setting the table sideways. Do not insert tables in the manuscript as images. All tables are numbered and include a caption (definitive title) at the top. Each table must be cited as Table 1 in the text in numerical order.

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Table 1: Total average time (seconds) used for different preconditioned AA methods.

Methods	$n = 5$	$n = 50$	$n = 500$
AA	0.0040	-	-
DiagJacobian preconditioner	0.0030	0.0040	0.0909
FullJacobian preconditioner	0.0021	0.0322	11.7176

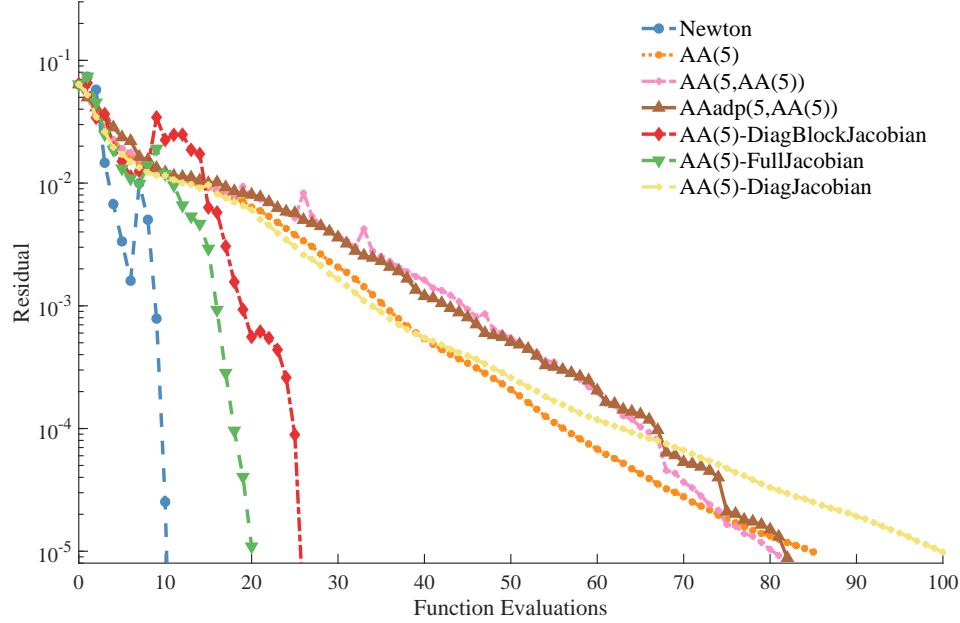


Figure 1: Performance comparisons between different solvers, including standard Newton's iteration, AA(5), AA(5) composite AA(5), adaptive AA(5) composite AA(5), preconditioned AA(5) with block-diagonal Jacobian preconditioner, AA(5) with diagonal Jacobian preconditioner, and AA(5) with full Jacobian preconditioner.

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Conflicts of Interest

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