

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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Key words: keywords 1, keywords 2, keywords 3, keywords 4.

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Equations should be typewritten whenever possible and the number placed in parentheses at the right margin. Reference to equations should use the form "Eq. (2.1)" or simply "(2.1)." Superscripts and subscripts should be typed or handwritten clearly above and below the line, respectively. For example,

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

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

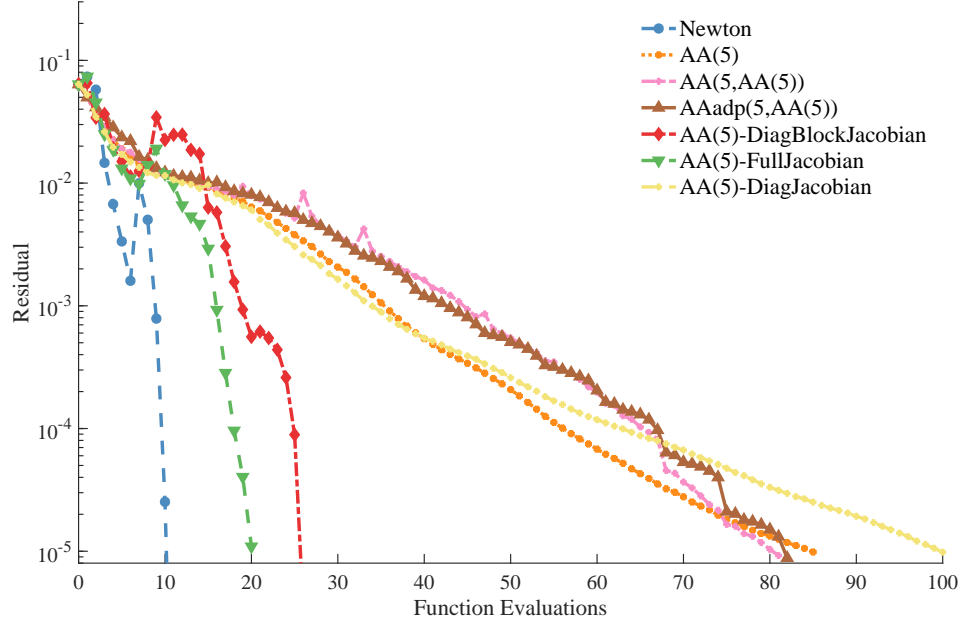


Figure 1: Performance comparisons between different solvers, including standard Newton's iteration, AA(5), AA(5) composite AA(5), adaptive AA(5) composite AA(5), preconditioned AA(5) with block-diagonal Jacobian preconditioner, AA(5) with diagonal Jacobian preconditioner, and AA(5) with full Jacobian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

above). Illustrations in colors will appear in black and white in printed version unless the authors defray the cost of color printing. At the Editor's discretion a limited number of color figures each year of special interest will be published (for printed version) at no cost to the author.

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