

A STUDY ON PRECONDITIONING SUITED FOR IDR(s)-RESIDUAL REDUCTION METHOD

S. Fujino and K. Murakami

Research Institute of Information Technology

Kyushu University

6-10-1, Hakozaki, Higashi-ku, Fukuoka, Japan

fujino@cc.kyushu-u.ac.jp

IDR(s)-based Residual Reduction (abbreviated as IDR(s)-R2) method [3] was proposed as one of iterative methods based on IDR theorem by P. Sonneveld and M. van Gijzen in 2008[2]. Since the iteration matrix is considered as one of preconditionings, we can choose flexibly preconditionings. This article estimates effectiveness of some preconditioning techniques for symmetric matrices applied to IDR(s)-R2 method. In particular, we focus on IC factorization with inverse-based dropping[1], and demonstrate its efficiency through numerical experiments.

References

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