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**Block Kaczmarz algorithm for solving large overdetermined linear systems.** (Chinese. English summary) Zbl 07404478

Summary: In this paper, we research a new block Kaczmarz algorithm for solving large overdetermined linear systems. In order to accelerate convergence, we propose a new partitioning strategy based on the idea of K-means clustering. This strategy uses the cosine distance instead of the traditional Euclidean distance. We prove that our method is convergent. Numerical examples show that the algorithm is effective.

**MSC:**
65F10 Iterative numerical methods for linear systems

**Keywords:**
overdetermined linear systems; block Kaczmarz algorithm; cosine distance; convergence