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Xin Li* (xin.li@ucf.edu), 4000 Central Florida Blvd, Orlando, FL 32816. *A Blind Matrix Decomposition Algorithm*. Preliminary report.

Matrix decomposition is a useful tool understanding multi-dimensional data sets. For example, it can be applied to computer vision in tracking an object in video sequences or removing noise in images. We will focus on fast algorithms that can decompose a matrix into a sum of sparse, low rank, and noise components. To improve the speed of some existing algorithms, we will take advantage of recent results in random projection methods. We will illustrate our algorithm with numerical experiments in Matlab to demonstrate the improvement of the new algorithm over the existing methods. (Research based on joint work with T. Boas, K. Mercier, E. Niederman) (Received September 17, 2014)