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**Fumiko Futamura\*** (futamurf@southwestern.edu), 1001 E University Ave, Georgetown, TX 78626, and **Akram Aldroubi, Carlos Cabrelli** and **Ursula Molter**. *Approximate Joint Diagonalization of Matrices*. Preliminary report.

Given a finite collection of matrices, we consider their optimal approximate joint diagonalization with respect to one or more unitary matrices. The case of matrices assumed to have the same diagonalizer has been studied and used in algorithms for blind source separation of signals. We consider this problem in a more general sense. (Received September 05, 2009)