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Xuemei Chen* (chenxuemei@uncw.edu) and **Jing Qin**. *Regularized Kaczmarz algorithm*.

We propose a novel algorithmic framework based on the Kaczmarz algorithm for tensor recovery. This is an iterative algorithm for solving a linear constrained optimization problem (with a regularizer). We provide thorough convergence analysis and its applications from the vector case to the tensor one. We also show numerical results on a variety of tensor recovery applications to illustrate the enormous potential of the proposed methods. (Received August 30, 2021)