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**Rachel Grotheer, Shuang Li, Anna Ma\*** ([anna.ma@uci.edu](mailto:anna.ma@uci.edu)), **Deanna Needell** and **Jing Qin**. *Iterative Hard Thresholding for Low CP-rank Tensors*.

Recovery of low-rank matrices from a small number of linear measurements is now well-known to be possible under various model assumptions on the measurements. Such results demonstrate robustness and are backed with provable theoretical guarantees. However, extensions to tensor recovery have only recently begun to be studied and developed, despite an abundance of practical tensor applications. Recently, a tensor variant of the Iterative Hard Thresholding (IHT) method was proposed and theoretical results were obtained that guarantee exact recovery of tensors with low Tucker rank. In this talk, we present an IHT approach to approximating low-CP rank tensors and discuss connections between the low rank tensor approximation problem and problems that arise in data science. (Received September 14, 2019)