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Harm Derksen* (hderksen@umich.edu) and **Neriman Tokcan** (tokcan@umich.edu). *An algebraic approach to tensor analysis*. Preliminary report.

A tensor is a higher-dimensional array. The structure of tensor in Big Data applications can be exploited using the CP decomposition, but computing CP decompositions can be challenging. In this talk I will discuss how representation theory can be used to develop scalable algebraic algorithms for manipulating tensors. One application is denoising of tensor data. (Received August 19, 2018)