High Order Tensor Methods for Machine Learning and Statistics: Adaptation, Acceleration, and Subsampling

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Abstract
In this talk we present a suite of algorithms for solving optimization models arising from applications in machine learning and statistics. Typically, the objective in such models may involve a large number of terms, hence subsampling is appealing. In general, popular optimization methods for solving such problems include the high-order tensor approximation approach, which requires the knowledge on some problem parameters. To make such methods practical, one will need to find ways of implementation without such knowledge. We discuss methods that exhibit an accelerated iteration bound while maintaining the traits of being adaptive and allowing subsampling.

All are Welcome!