

A Projective Operator Splitting Approach to Stochastic Programming

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Firmly nonexpansive mappings are central to operator splitting methods for convex optimization and monotone inclusions. Every method that displays firmly nonexpansive dynamics with respect to the solution set can be framed as successively projecting onto separating hyperplanes between iterates and solutions. It is also possible to create new splitting algorithms by starting from the standpoint of generating such hyperplanes and projecting onto them, a train of research Benar Svaiter and I initiated in 2008. This talk describes a relatively recent method of this kind and how it has been applied to large-scale optimization under uncertainty.