

Title:

Accelerating block-decomposition first-order methods for solving generalized saddle-point and Nash equilibrium problems

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Abstract:

This talk considers the generalized (two-player) Nash equilibrium (GNE) problem with a separable non-smooth part, which is known to include the generalized saddle-point (GSP) problem as a special case. We consider solving these problems by an accelerated version of the block-decomposition HPE method where the block-subproblems are approximately solved by a Nesterov-type accelerated method. Since this block-decomposition variant is able to take large stepsizes, it can substantially outperform both theoretically and computationally other existing zero-th order methods on many relevant GSP and GNE instances.