

Incorporating Quadratic Functional Growth in Saddle Point Problems

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In this talk, we consider a convex-concave saddle point problem and how to incorporate quadratic functional growth assumptions into it. Saddle point problems arise in a variety of areas such as machine learning, signal processing, and Nash equilibrium. While it has been shown that a strongly convex-strongly concave setting leads to a linear convergence guarantee, we consider a weaker assumption based on quadratic functional growth to ensure the same guarantee. Finally, we present numerical experiments to validate the theory.