

Theoretical insights and practical applications of Augmented Lagrangian and Block Coordinate Descent methods

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Optimization is a ubiquitous tool with practical applications in the most diverse fields of knowledge. The development of optimization methods involves both theoretical and practical aspects, while at the same time it is fed by new challenges arising from applications. In the last decades, there has been a renaissance of techniques with low time and space cost, motivated by applications of enormous size in artificial intelligence problems. In this talk, we will visit theoretical aspects of asymptotic convergence and complexity analysis of augmented Lagrangian methods and block coordinate search methods. We will illustrate the applicability of these methods with practical examples.

In Special Invited Talks at the Mathematical Congress of the Americas 2025.