

**Decentralized Optimization using Block Iterative Schemes:
Convergence via M-matrices**

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Abstract:

In this talk a problem of decentralized optimization of multiple agents over a finite-time horizon is considered. The problem is formulated in a discrete-time domain as a set of blocks of difference equations and the convergence of this scheme is established using M-matrices. The efficiency of the method is demonstrated on a problem of a conflict resolution between multiple aircraft.