



THE UNIVERSITY OF CHICAGO

COMPUTATIONAL AND APPLIED MATHEMATICS COLLOQUIUM STUDENT SEMINAR

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Computational and Applied Mathematics

Limitation of Deterministic Update Orders in ADMM and CD

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Cobb 104, 5811 S. Ellis Avenue

ABSTRACT

It was recently found that the standard version of multi-block cyclic ADMM diverges. Interestingly, Gaussian Back Substitution ADMM (GBS-ADMM) and symmetric Gauss-Seidel ADMM (sGS-ADMM) do not have the divergence issue. Therefore, it seems that symmetrization can improve the performance of the classical cyclic order. A natural question arises: can the symmetrized orders achieve a faster convergence rate than the cyclic order, or even getting close to randomized versions? In this talk, I will present our work that address these issues.