Randomized sketched TT-GMRES for linear systems with tensor structure

Monday, 20 January 2025 16:00 (2 hours)

We consider the use of sketching to improve the performances and usability of Krylov tensor methods; in this talk, we will consider the case study of TT-GMRES, and describe the many possibilities that arise where sketching is helpful to improve performances and accuracy, often in somewhat unexpected ways. Our ideas build upon sketching in GMRES and streaming low-rank approximation algorithms that were recently introduced. This is joint work with Leonardo Robol (University of Pisa) and Davide Palitta (University of Bologna).

1. A. B., D. Palitta and L. Robol, 2024. Randomized sketched TT-GMRES for linear systems with tensor structure. arXiv preprint, arXiv:2409.09471.

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