



CSC Seminar

SPEAKER

Pascal den Boef

TU Eindhoven, Department of Mathematics and Computer Science

TITLE

Reduced Rank Extrapolation for Low-Rank Matrix Sequences

ABSTRACT

Problems in control and model reduction often involve matrix equations (e.g., Lyapunov and Riccati equations). Iterative solvers of these equations for large-scale problems typically produce sequences of low-rank matrices which converge to the solution. To accelerate convergence, this work proposes an extension of the Reduced Rank Extrapolation (RRE) method for low-rank matrix sequences. We discuss potential ways to integrate this extension with existing iterative solvers for matrix equations. The method is numerically demonstrated on several benchmark examples.

Tuesday, February 6, 2024 at 2:00 pm
seminar room Prigogine