

Recent Developments in Block Krylov Methods

Institute of Mathematics of the Czech Academy of Sciences, Prague

MONDAY September 7

- 13:45 OPENING
- 14:00 **Dorota Šimonová**
Finite precision block Lanczos computations
- 14:30 **Jörn Zimmerling**
Matricial Stieltjes continued fractions for Large-Scale PDEs via block-Lanczos
- 15:00 **Vladimir Druskin**
Acceleration of Lanczos recursions for large matrices with dense spectra using Krein–Nudelmann and other square-root terminators
- 15:30 COFFEE BREAK
- 16:00 **Petr Tichý**
On the Dubrulle variant of the block CG method
- 16:30 **Gérard Meurant**
Error norm estimates for block conjugate gradient algorithms
- 17:00 **Jan Papež**
Adaptive error estimation
- 18:00 DINNER AT SLADOVNA RESTAURANT (VODIČKOVA 12)

TUESDAY September 8

- 09:00 **Erin Carson**
A survey and history of block Gram–Schmidt algorithms
- 09:30 **Yuxin Ma**
A stable one-synchronization variant of reorthogonalized block classical Gram–Schmidt and its application in Krylov subspace methods
- 10:00 **Jaroslav Kruis**
Simultaneous solution of several eigenvectors in structural dynamics
- 10:30 COFFEE BREAK
- 11:00 **Michal Outrata**
On a direct AMG method based on KSM
- 11:30 **Martin Plešinger**
Block-Lanczos-type Processes with Deflation: An Application in Total Least Squares (TLS)
- 12:00 **Iveta Hnětynková**
Block bidiagonalization for extraction of relevant data in multilinear TLS
- 12:30 CLOSING + TIME FOR DISCUSSIONS