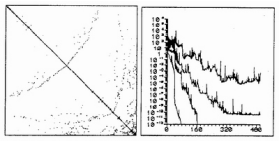
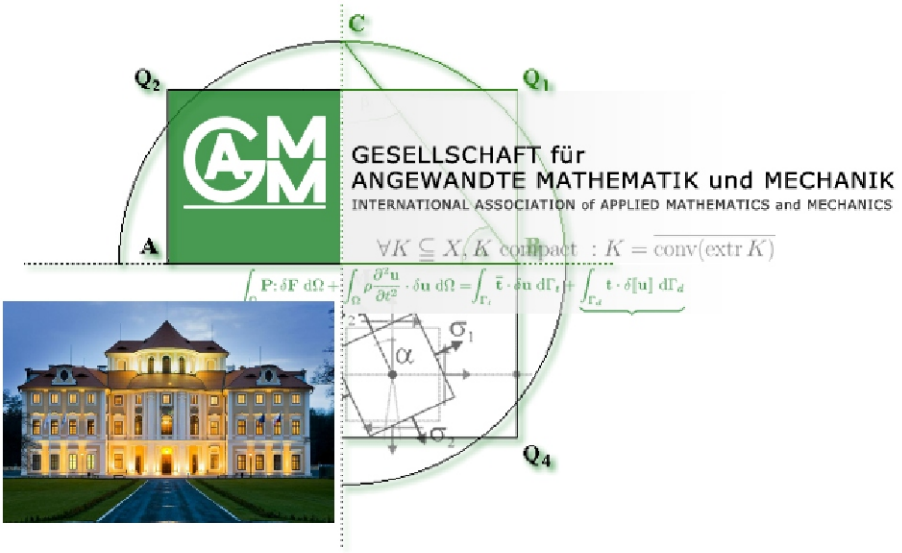


XII GAMM Workshop on Applied and Numerical Linear Algebra

September 2-5, 2012, Chateau Liblice, Czech Republic

http: //www.cs.cas.cz/gamm



SCIENTIFIC PROGRAM

Sunday, September 2, 2012

18.00-22.00	**Registration**
19.00-21.00	**Dinner**

Monday, September 3, 2012

8.50-9.10	**Opening:** ***P. BENNER, J. KRATOCHVÍL, Z. STRAKOŠ***
9.10-10.50	**Chair:** ***V. MEHRMANN***
9.10-10.00	***R. RANNACHER:*** Balancing discretization and iteration errors in finite element error analysis
10.00-10.50	***M. GANDER:*** Iterative methods for Helmholtz problems
10.50-11.20	**Coffee – Tea**
11.20-12.35	**Chair:** ***A. BUNSE-GERSTNER***
11.20-11.45	***V. MEHRMANN:*** Peforming the gamma-iteration in optimal H-infinity control via permuted graph bases
11.45-12.10	***M. FEISTAUER:*** On some aspects of the space-time discontinuous Galerkin method
12.10-12.35	***M. HINZE:*** Simulation and control of multiphase flows governed by the Cahn-Hilliard Navier-Stokes system (CHNSS)
12.35-14.00	**Lunch**
14.00-15.40	**Parallel 1, Chair:** ***D. KRESSNER***
14.00-14.25	***H. WEICHELT:*** Preconditioning of large-scale saddle point systems arising in Riccati feedback control of flow problems
14.25-14.50	***Y. LIN:*** A new minimal residual method for large scale Lyapunov equations
14.50-15.15	***J. SAAK:*** Towards a GPU add-on for the MESS library
15.15-15.40	***G. OKŠA:*** The Riccati method for singular subspaces of large sparse matrices
14.00-15.40	**Parallel 2, Chair:** ***J. MÁLEK***
14.00-14.25	***V. KULVAIT:*** Stress limiting behavior of a sample in the anti-plane strain numerical simulation
14.25-14.50	***M. LANZENDÖRFER:*** Piezoviscous incompressible fluids and lubrication problems
14.50-15.15	***T. VEJCHODSKÝ:*** Computable upper bounds on Friedrichs' and trace constants
15.15-15.40	***B. MŰLLER:*** Stress-Displacement formulations for hyperelastic materials: Least-Squares Finite Element Method and Gauss-Newton iteration
15.40-16.10	**Coffee – Tea**

Monday, September 3, 2012

16.10-17.50	**Parallel 1, Chair: *D. SZYLD***
16.10-16.35	***M. GUTKNECHT:*** Basic facts and options of augmentation and deflation for linear solvers
16.35-17.00	***K. SOODHALTER:*** Krylov subspace recycling for families of shifted linear systems
17.00-17.25	***A. GAUL:*** Deflated MINRES for the Ginzburg-Landau problem
17.25-17.50	***K. AHUJA:*** Krylov subspace recycling for stochastic collocation based uncertainty quantification
16.10-17.50	**Parallel 2, Chair: *R. BLAHETA***
16.10-16.35	***M. PRANIC:*** Orthogonal rational functions and rational Krylov subspaces
16.35-17.00	***J. KOPAL:*** Generalized Gram--Schmidt-based approximate inverse preconditioning for the conjugate gradient method
17.00-17.25	***A. MIEDLAR:*** Hierarchically enhanced adaptive finite element methods for PDE eigenvalue/eigenvector approximations
17.25-17.50	
17.50-18.50	**ANLA Business meeting**
19.00-21.00	**Welcome Party- Barbecue *M. CHYTIL*** (director of ICS AS CR)

Tuesday, September 4, 2012

9.00-10.40	**Chair: *R. RANNACHER***
9.00-9.50	***M. VOHRALÍK:*** Adaptive inexact Newton methods with a posteriori stopping criteria for nonlinear diffusion PDEs
9.50-10.40	***M. ARIOLI:*** Iterative methods for symmetric quasi-definite linear systems
10.40-11.20	**Coffee – Tea**
11.20-12.35	**Chair: *M. ROZLOŽNÍK***
11.20-11.45	***G. STARKE:*** Stress-displacement formulations for hyperelastic materials: adaptive mixed FE aproximation
11.45-12.10	***O. AXELSSON:*** Efficient preconditioning techniques for phase-field models
12.10-12.35	***K. KAHL:*** Adaptive approaches to algebraic multigrid
12.35-14.00	**Lunch**
14.00-15.15	**Parallel 1, Chair: *M. FEISTAUER***
14.00-14.25	***R. RENAUT:*** Stability analysis of the split Bregman algorithm for determining optimal Lagrange parameters
14.25-14.50	***V. KUČERA:*** A priori error estimates for nonlinear convective problems
14.50-15.15	***M. FIEDLER:*** Some new classes of matrices
14.00-15.15	**Parallel 2, Chair *H. FAßBENDER***
14.00-14.25	***R. BLAHETA:*** Block factorization based preconditioners with applications
14.25-14.50	***J. DUINTJER TEBBENS:*** Can restarted GMRES exhibit any nonincreasing convergence curve ?
14.50-15.15	
15.20-18.30	**Trip to Mělník**
19.00-	**Workshop Dinner**

Wednesday, September 5, 2012

9.00-10.15	**Parallel 1, Chair: *M. GANDER***
9.00-9.25	***J. PAPEŽ:*** Distribution of the algebraic and discretization error in numerical solution of 1D Poisson model problem
9.25-9.50	***J. HRON:*** Monolithic solver for fluid-structure interaction problems
9.50-10.15	***M. BOLTEN:*** On special grid transfer operators for multigrid methods
9.00-10.15	**Parallel 2, Chair: *M. GUTKNECHT***
9.00-9.25	***M. SHAO:*** The parallel multishift QR algorithm with aggressive early deflation
9.25-9.50	***L. KRÄMER:*** Some improvements to the FEAST algorithm
9.50-10.15	***H. VOSS:*** Improving eigenpairs from AMLS with subspace iterations
10.15-10.45	**Coffee – Tea**
10.45-11.35	**Chair: *P. BENNER***
10.45-11.10	***D. SZYLD:*** The numerical solution of Riccati equations
11.10-11.35	***J. MÁLEK:*** Implicitly constituted materials: modeling, analysis and computation
11.35-11.45	**Closing: *P. BENNER, D. KRESSNER***
11.45-13.00	**Lunch**
13.00	**Bus departure for Prague**