## MONDAY

8:00am-8:45am	Breakfast
8:45am-9:00am	Opening
Chair	Miloud Sadkane
9:00am-10:00am	Structured matrix polynomials and their sign characteristic Françoise Tisseur
10:00am-10:30am	Break
Chair	Zhaojun Bai
10:30am-11:00am	The unwinding matrix Nicholas Higham
11:00am-11:30am	Refining estimates of invariant and deflating subspaces for large and sparse matrices and pencils Eric Chu
11:30am-12:00am	Computing the distance to the nearest unstable quadratic pencil Alexander Malyshev
12:00am-12:30pm	Structured matrix geometric means: theory and algorithms Dario Bini
12:30pm	Lunch
Chair	David Watkins
5:00pm-5:30pm	What are the "natural" classes of scalar products? Steve Mackey
5:30pm-6:00pm	Gram-Schmidt process: from the standard to the non-standard inner product Miroslav Rozložnik
6:00pm-6:30pm	Modified symplectic Gram-Schmidt, Householder SR algorithm and structured matrices Ahmed Salam
6:30pm-7:00pm	Structured matrices and multivariate orthogonal polynomials Marc Van Barel
7:30pm	Dinner

# TUESDAY

8:00am-9:00am	Breakfast
Chair	Peter Benner
9:00am-10:00am	Exponential integrators: linear algebra aspects
	Marlis Hochbruck
10:00am-10:30am	Break
Chair	Bernhard Beckermann
10:30am-11:00am	On geometric integrators for polynomial Hamiltonian systems
	Elena Celledoni
11:00am-11:30am	Symmetric spaces and Lie triple systems in numerical analysis
	Antonella Zanna
11:30am-12:00am	A step towards a symplectic exponential integrator
11.30aiii-12.00aiii	Peter Benner
12:00am-12:30pm	Integral preserving Lie group integrators
12.00am-12.30pm	Brynjulf Owren.
12:30pm	Lunch
Chair	Antonella Zanna
	Matrix functions for exponential integrators via interpolation at
5:30pm-6:00pm	Leja points
	Alexander Ostermann
6:00pm-6:30pm	The construction and analysis of variational integrators
	Melvin Leok
6:30pm-7:00pm	Computational methods based on structured pseudospectra
	Matthias Voigt
7:30pm	Dinner

#### WEDNESDAY

8:00am-9:00am	Breakfast
Chair	Nick Higham
9:00am-10:00am	Structured backward errors for eigenvalues of Hermitian pencils
	Christian Mehl
10:00am-10:30am	Break
Chair	Miroslav Rozloznik
10:30am-11:00am	The Newton polygon and structured eigenvalue perturbation
	Julio Moro
11:00am-11:30am	Eigenvalue perturbation theory of classes of structured matrices
	under generic structured rank one perturbations
	André Ran
11:30am-12:00am	The error in the product QR decomposition and applications
	Erik Van Vleck
12:00am-12:30pm	On solving indefinite least squares-type problems via
	anti-triangular factorization
	Nicola Mastronardi
12:30pm	Lunch
7:30pm	Dinner

## THURSDAY

8:00am-9:00am	Breakfast
9:00am-12:30pm	Session in Honor of Axel Ruhe on his 70th Birthday
Chair	Daniel Kressner
9:00am-10:00am	Rational Krylov revisited
	Bernhard Beckermann
10:00am-10:30am	Break
Chair	Lothar Reichel
10:30am-11:00am	Rational Krylov – further developments and yet unsolved problems
	Axel Ruhe
11:00am-11:30am	Minimization principles of the linear response eigenvalue problem
	Zhaojun Bai
11:30am-12:00am	On a generalization of inverse iteration for eigenvector nonlinearities
11.50uiii 12.00uiii	Elias Jarlebring
12:00am-12:30pm	Structured matrices in the rational Lanczos method
	Lothar Reichel
12:30pm	Lunch
Chair	Nicola Mastronardi
5:00pm-5:30pm	A fast structured QZ method for colleague matrix pencils
5.00pm-5.50pm	Paola Boito
5:30pm-6:00pm	An extension of the multi-shift QZ-algorithm beyond the
	Hessenberg-upper triangular pencil
	Raf Vandebril
6:00pm-6:30pm	Fast computation of eigenvalues of companion, comrade,
	and related matrices
	David Watkins
6:30pm-7:00pm	Convergence of QR algorithm for normal matrices
	Hongguo Xu
8:00pm	Conference dinner

## FRIDAY

8:00am-9:00am	Breakfast
Chair	Steve Mackey
9:00am-10:00am	Differential equations for Hamiltonian and symplectic matrix
	nearness problems
	Christian Lubich
Chair	Ahmed Salam
10:00am-10:30am	Break
10:30am-11:00am	Symplectic information geometry of Toeplitz and Toeplitz-block-
	Toeplitz Hermitian positive definite matrices: Buseman barycen-
	ter and Frechet median by Berger/Mostow fibration
	Frederic Barbaresco
11:00am-11:30am	Matrix power means as the only affine family
	Miklós Pálfia
11:30am-12:00am	Blind image deconvolution via Hankel based method for
	computing the GCD of polynomials
	Skander Belhaj
12:00am-12:30pm	Subspace methods for computing the numerical range and
	associated quantities
	Daniel Kressner
12:30pm	Lunch