

Fakultät für Mathematik und Max-Planck-Institut
für Dynamik komplexer technischer Systeme laden ein:

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Recent Progress in Matrix Functions

Do, 26.04.2012 17:00

Sandtorstr. 1 (MPI), Seminarraum V0.05/2-3

$A \in \mathbb{C}^{n \times n}$:

Power series $I + A + \frac{A^2}{2!} + \frac{A^3}{3!} + \dots$	Limit $\lim_{s \rightarrow \infty} (I + A/s)^s$	Scaling and squaring $(e^{A/2^s})^{2^s}$
Cauchy integral $\frac{1}{2\pi i} \int_{\Gamma} e^z (zI - A)^{-1} dz$	Jordan form $Z \text{diag}(e^{\lambda_k}) Z^{-1}$	Interpolation $\sum_{i=1}^n f[\lambda_1, \dots, \lambda_i] \prod_{j=1}^{i-1} (A - \lambda_j I)$
Differential system $Y'(t) = AY(t), Y(0) = I$	Schur form $Q \text{diag}(e^{\tau_j}) Q^*$	Padé approximation $p_{km}(A) q_{km}(A)^{-1}$

