Topics and references

Oscillatory problems and problems with low regularity

- Date: ??? Speaker: to be announced
  Error analysis of exponential integrators for oscillatory second-order differential equations
  Reference: [GH06]

- Date: ??? Speaker: to be announced
  Uniformly accurate numerical schemes for highly oscillatory Klein-Gordon and nonlinear Schrödinger equations
  Reference: [CCLM15]

- Date: ??? Speaker: ???
  On time-splitting methods for nonlinear Schrödinger equation with highly oscillatory potential
  Reference: [SZ20]

- Date: ??? Speaker: ???
  Uniformly accurate exponential-type integrators for Klein-Gordon equations with asymptotic convergence to the classical NLS splitting
  Reference: [BFS18]

- Date: ??? Speaker: to be announced
  Low Regularity Exponential-Type Integrators for Semilinear Schrödinger Equations
  Reference: [OS18]

Dynamical low-rank approximation

- Date: ??? Speaker: to be announced
  Dynamical low-rank approximation
  Reference: [KL07]

- Date: ??? Speaker: to be announced
  A projector-splitting integrator for dynamical low-rank approximation
  Reference: [LO14]

- Date: ??? Speaker: to be announced
  Time integration of symmetric and anti-symmetric low-rank matrices and Tucker tensors
Other topics

- **Date:** ???
  - On leapfrog-Chebyshev schemes
  - Reference: [CHS20]

Talks with the note “Speaker: ???” are still available.

Most of the papers can be downloaded from the webpage of the journal. Please make sure that you have the final version of the paper, not the preprint version. Talks (60-75 minutes) can be given in English or German. We strongly recommend that students discuss the concept of their talk (outline, draft of the materials, etc.) with T. Jahnke not later than three weeks before their presentation.

References


