Seminar: Numerical Methods for Hyperbolic PDEs: From Traffic Simulation to Earthquakes and Tsunamis

Kickoff

A. Breuer, O. Meister, M. Bader

17.04.2013
# Meetings: Date & Time

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Preliminary Schedule

• TUMOnline / Alternative A)
  – May 29
  – June 05
  – June 12

• Alternative B)
  – May 30
  – June 06
  – June 13

• Remark: Additional meetings are possible
Organization

• Seminar
  – Individual topics
  – 70% theory, 30% implementation
  – paper
  – presentation
Topics

1) High resolution: Advection
2) 1D traffic flow: exact solution: Z. Shan
3) 1D traffic flow: numerics: M. Homolya
4) Elastic wave equations
5) Euler equations: V. Mikerov
6) Local time stepping
7) Shallow water solvers (multiple topics): H. Stotz
8) Tsunami simulation: O. Annamanthadoo
9) Earthquake simulation (& Elastics): R. Kommajosyula