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

The seminar will combine multiple assignments. Each student has to prepare a handout and a presentation of her/his assigned subject in consultation with his/her advisor. Any results that will be presented must be generated by the student. This means, that for all topics some hands-on work with numerical solvers (i.e. implementation and execution) will be required. Copying results from external sources is not allowed.

Seminar outline

Preparation of handout and talk
Each student will have to prepare a paper on his or her topic. The goal is to give an overview of the topic in an understandable form. Appropriate use of images and graphs is encouraged as long as any external source is cited well. Any results must not be copied and have to be generated by the students. The extent of the paper should be approximately 8 pages. During preparation, we expect you to have at least two meetings with your advisor:

- 3 weeks before the talk: content outline of handout and talk must be prepared by then
- 1 week before the talk: preparation of the talk must be finished and the handout must be in a finishing state.

Presentation of the Talk
You are explicitly encouraged to coordinate the contents of your talks, if necessary and appropriate. The duration of the talks should be 30–40 minutes at most, allowing 10–15 minutes for questions (during and after the talks).

Schedule
Registration is mandatory, the deadline ends 1 week after the kickoff meeting in the beginning of the summer term. Further details will be announced in the future.

Submission
Papers have to be handed in to Oliver Meister in electronic form (PDF).
Grading

Each task of the seminar will be evaluated. The final grade for the seminar will be computed as a weighted average of the individual performances (handout, presentation slides and participation).

Important Note: Especially the grading of your paper will heavily consider your own work in summarising, outlining, and explaining the respective topics. The paper has to be a complete text that you have entirely worked out (and formulated) on your own. Just copies of slides or simply putting together excerpts from papers is not sufficient (even if cited properly).

Website

http://www5.in.tum.de/wiki/index.php/Numerical_Methods_for_Hyperbolic_PDEs:_From_Traffic_Simulation_to_Earthquakes_and_Tsunamis